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Territorial Autonomy and the Trade-Off Between Civil and Communal Violence: Online Data Supplement

All original data contributions are provided in the supplementary material (folder "original_data"). The R-scripts in folder "data_set_up_script" combine these original data with information from external sources, transform them into the data-frames used in the analyses, and create the main dependent and independent variables used throughout these. All tables and figures reported in the following pages are constructed in the supplementary R-replication script (file "___replication_master_file.R").

S1: The Significant Administrative Units Dataset (SAU) - Data on administrative boundaries and second-order majorities/minorities

A first data contribution of my article is the Significant Administrative Units Dataset, a **geo-coded, time-variant dataset of administrative units around the world between 1988 and 2018.** In each case, my analysis makes use of the data corresponding to the situation at the end of the given year (December 31st). For each of these units, I additionally calculate the expected demographic shares of ethnic groups and identify locally resident second-order majority and minority groups. In this section, I explain how I geocoded administrative units (S1.1). Then, I explain how I calculated ethno-demographic measures for each of these units. Finally, I give an overview on all instances where specific groups are institutionally designated as a unit's second-order majority, regardless of their regional demographic shares.

S1.1: Geo-coding of administrative units

S1.1.1: Identifying the level of geo-coding

For all 180 countries in the Ethnic Power Relations Dataset (Vogt et al. 2015), I assemble time-variant spatial information on administrative boundaries at the relevant level. The **default is the first-order administrative level, as given by the FIPS PUB 10-4 standard**, as coded by Law 2010 and the accompanying, up-to-date webpage: <http://www.statoids.com>. The only exception to this rule is the United Kingdom, where I code England, Scotland, Wales, and Northern Ireland as first-order constituent units, following Deiwiks (2011). Depending on country-specific naming conventions, this may correspond to states (United States, Nigeria, India, Mexico, Ethiopia, Sudan), provinces and territories (Canada), provinces (Iraq), cantons (Switzerland), autonomous communities (Spain), regions and autonomous regions (Italy), municipalities (Macedonia), or counties (Kenya).

If at least one unit with substantial autonomy exists at the next lower **subordinate level** (see section S2), I include the respective subordinate and 'rump' first-order units. For example, for Yugoslavia, I include Kosovo, Vojvodina, and 'rump' Serbia (Serbia minus the areas covered by Kosovo and Vojvodina). Table S1 lists all instances where administratively subordinate units entered my sample. Figure S1 illustrates this with the example of China in 2018, which has the highest number of subordinate autonomous units of any country in my sample.

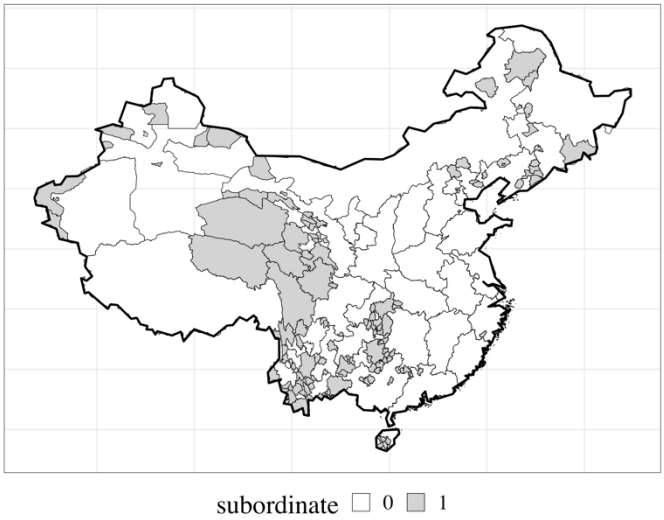


Figure S1. Internal administrative boundaries of China, 2018.
Note: First-order provinces, autonomous regions, and counties in white and subordinate autonomous prefectures, autonomous counties, and autonomous banners in grey.

Table S1. List of included subordinate administrative units.

Country	Subordinate administrative units
Nicaragua	Atlantico Sur/Caribe Sur (1988-1997), Atlantico Norte/Caribe Norte (1988-1997)
Panama	Kuna de Wargandi (2000-2018), Kunda de Madugandi (1996-2018)
Bolivia	Gran Chaco (2009-2018)
Spain	Val d'Aran (1990-2018)
Italy	Trentino (1972-2018), South Tyrol (1972-2018)
Croatia	Glina (1992-1996), Knin (1992-1996)
Yugoslavia	Kosovo (1946-2005), Vojvodina (1946-2005)
Bosnia	various Cantons below Federation (1995-2018)

USSR	Abkhaz (1945-1990), Adygey (1945-1990), Adzhar (1945-1990), Bashkir (1945-1990), Buryat (1958-1990), Chechen-Ingush (1945-1990), Chukotka (1945-1990), Chuvash (1945-1990), Dagestan (1945-1990), Evenk (1945-1990), Goro-Altai (1945-1990), Gorno-Badakhshan (1945-1990), Kabardin-Balkar (1945-1990), Kalmyk (1945-1990), Karakalpak (1945-1990), Karelskaya (1956-1990), Khakass (1945-1990), Khanty-Mansi (1945-1990), Komi (1945-1990), Komi-Permyak (1945-1990), Koryak (1945-1990), Mari (1945-1990), Nagorno-Karabakh (1945-1990), Nakhichevan (1945-1990), Nenets (1945-1990), North Ossetia (1945-1990), South Ossetia (1945-1990), Tatar (1945-1990), Taymyr (1945-1990), Udmurt (1945-1990), Ust-Orda Buryat (1945-1990), Yakut (1945-1990), Yamalo-Nenets (1945-1990), Yevrey (1945-1990), Karachay-Cherkess (1957-1990), Mordovia (1961-1990), Tuva (1961-1990), Agin-Buryat (1977-1990)
Ethiopia	Arhoba (1994-2018), Alaba (1994-2018), Basketo (1994-2018), Konso (1994-2018), Derashe (1994-2018), Burji (1994-2018), Alle (1994-2018), Amaro (1994-2018), Konta (1994-2018), Yem (1994-2018), Bahir Dar (1994-2018), Jimma (1994-2018)
South Africa	Gazankulu (1971-1993), Lebowa (1972-1993), Transkei (1956-1993), Bophutatswana (1961-1993), Venda (1969-1993), Ciskei (1961-1993), KaNgwane (1981-1993), KwaNdebele (1981-1993), KwaZulu (1970-1993)
China	Yulong Naxi (2002-2018), Beichuan Qiang (2003-2018), Dongxiang (1950-2018), Subei Mongol (1950-2018), Tianzhu Tibetan (1950-2018), Garz Tibetan (1950-2018), Gygu Tibetan (1951-2018), Eshan Yi (1951-2018), Longsheng Various Nationalities (1951-2018), Oroqin (1951-2018), Jinxiu Yao (1952-2018), Rongshui Miao (1952-2018), Sangjiang Dong (1952-2018), Yanbian Korean (1952-2018), Lancang Lahu (1953-2018), Liannan Yao (1953-2018), Longlin Various Nationalities (1953-2018), Menyuan Hui (1953-2018), Muli Tibetan (1953-2018), Zhangjiachuan Hui (1953-2018), Dehong Dai and Jingpo (1953-2018), Gannan Tibetan (1953-2018), Hainan Tibetan (1953-2018), Ngawa Tibetan and Qiang (1953-2018), Xishuangbanna Dai (1953-2018), Aksai Kazakh (1954-2018), Barkol Kazakh (1954-2018), Henan Mongol (1954-2018), Hoboksar Mongol (1954-2018), Hualong Hui (1954-2018), Huzhu Tu (1954-2018), Jiangcheng Hani and Yi (1954-2018), Menglian Dai, Lahu and Va (1954-2018), Mori Kazakh (1954-2018), Qapqal Xibe (1954-2018), Sunan Yugur (1954-2018), Taxkorgan Tajik (1954-2018), Tongdao Dong (1954-2018), Weining Yi, Hui and Miao (1954-2018), Xunhua Salar (1954-2018), Yanqi Hui (1954-2018), Brtala Mongol (1954-2018), Golog Tibetan (1954-2018), Haixi Mongol and Tibetan (1954-2018), Kizilsu Kirghiz (1954-2018), Dachang Hui (1955-2018), Du'an Yao (1955-2018), Gengma Dai and Va (1955-2018), Jianghua Yao (1955-2018), Mengcun Hui (1955-2018), Bama Yao (1956-2018), Chengbu Miao (1956-2018), Dorbod Mongol (1956-2018), Gongshan Derung and Nu (1956-2018), Ninglang Yi (1956-2018), Qian Gorlos Mongol (1956-2018), Shilin Yi (1956-2018), Songtao Miao (1956-2018), Weishan Yi and Hui (1956-2018), Xinhuang Dong Dongzu (1956-2018), Qiandongnan Miao and Dong (1956-2018), Sandu Shui (1957-2018), Dqn Tibetan (1957-2018), Xiangxi Tujia and Miao (1957-2018), Evenk (1958-2018), Morin Dawa Daur (1958-2018), Changbai Korean (1958-2018), Fuxin Mongol (1958-2018), Harqin Left Mongol (1958-2018), Xinbin Manchu (1958-2018), Xiuyan Manchu (1958-2018), Chuxiong Yi (1958-2018), Wenshan Zhuang and Miao (1958-2018), Lianshan Zhuang and Yao (1962-2018), Hekou Yao (1963-2018), Pingbian Miao (1963-2018), Ruyuan Yao (1963-2018), Zhenning Buyei and Miao (1963-2018), Cangyuan Va (1964-2018), Nanjian Yi (1965-2018), Ximeng Va (1965-2018), Ziyun Miao and Buyei (1966-2018), Mojiang Hani (1979-2018), Xundian Hui and Yi (1979-2018), Xinping Yi and Dai (1980-2018), Yuanjiang Hani, Yi and Dai (1980-2018), Guanling Buyei and Miao (1981-2018), Jishishan Bonan, Dongxiang and Salar (1981-2018), Qianxinan Buyei and Miao (1982-2018), Xiushan Tujia and Miao (1983-2018), Youyang Tujia and Miao (1983-2018), Enshi Tujia and Miao (1983-2018), Changyang Tujia (1984-2018), Ebian Yi (1984-2018), Fuchuan Yao (1984-2018), Jingning She (1984-2018), Luocheng Mulao (1984-2018), Mabian Yi (1984-2018), Pengshi Miao and Tujia (1984-2018), Shizhu Tujia (1984-2018), Wufeng Tujia (1984-2018), Yuping Dong (1984-2018), Jingdong Yi (1985-2018), Jinggu Dai and Yi (1985-2018), Jinping Miao, Yao and Dai (1985-2018), Luquan Yi and Miao (1985-2018), Pu'er Hani and Yi (1985-2018), Shuangjiang Lahu, Va, Blang and Dai (1985-2018), Yangbi Yi (1985-2018), Datong Hui and Tu (1986-2018), Minhe Hui and Tu (1986-2018), Weixi Lisu (1986-2018), Baisha Li (1987-2018), Baoting Li and Miao (1987-2018), Changjiang Li (1987-2018), Dahua Yao (1987-2018), Daozhen Gelao and Miao (1987-2018), Fengning Manchu (1987-2018), Huanjiang Maonan (1987-2018), Jingzhou Miao and Dong (1987-2018), Ledong Li (1987-2018), Lingshui Li (1987-2018), Qinglong Manchu (1987-2018), Qiongzhong Li and Miao (1987-2018), Wuchuan Gelao and Miao (1987-2018), Yanhe Tujia (1987-2018), Yinjiang Tujia and Miao (1987-2018), Zhijiang Dong and Dongzu (1987-2018), Lanping Bai and Pumi (1988-2018), Yitong Manchu (1989-2018), Benxi Manchu (1990-2018), Gongcheng Yao (1990-2018), Huanren Manchu (1990-2018), Kuancheng Manchu (1990-2018), Kuandian Manchu (1990-2018), Mayang Miao (1990-2018), Qingyuan Manchu (1990-2018), Weichang Manchu and Mongol (1990-2018), Zhenyuan Yi, Hani and Lahu (1990-2018)

India	Bodoland (2003-2018), Gorkhaland (2011-2018), Garo Hills (1952-2018), Khasi Hills (1952-2018), Dima Hasao (1970-2018), Karbi Anglong (1970-2018), Chakma (1972-2018), Jaintia Hills (1972-2018), Lai (1972-2018), Mara (1972-2018), Tripura Tribal Areas (1982-2018), Kargil (1995-2018), Leh (Ladakh) (1995-2018), Mising (1995-2018), Rabha Hasong (1995-2018)
Pakistan	Sherani (2006-2018), Amb (1985-2018), Chitral (1985-2018), Swat (1985-2018), Malakand PA (1985-2018), Dir (1985-2018), Dalbandin (1985-2018), Loralai (1992-2018), Sibi (1985-2018), Zhob (1988-2018), Kala Dhaka (1985-2018), Kohistan (1985-2018), Qilla Saifullah (1988-2018), Barkhan (1992-2018), Dera Ghazi Khan TA (1992-2018), Kholu (1992-2018), Musakhel (1992-2018), Rajan Pur TA (1992-2018), Shangla (1995-2018)
Myanmar	Kokang (2011-2018), Danu (2011-2018), Naga (2011-2018), Palaung (2011-2018), Pao (2011-2018), Wa (2011-2018)

S1.1.2: Time-variant geo-coding

I start off with the most recent first-order administrative unit polygons, which I take from the **Database of Global Administrative Areas (GADM)**.[1] In cases where I need to code subordinate units, I rely on information on second-order administrative unit polygons, again from GADM. In such cases, I use the polygons of subordinate units and the spatial difference from their respective first-order units (e.g., Val d'Aran and the spatial difference between Catalonia and Val d'Aran). I then consult additional sources to identify changes in these boundaries over time. For this purpose, I again follow Law (2010) and the accompanying webpage: <http://www.statoids.com>. To obtain polygons for historical internal administrative boundaries, I conduct three complementary procedures:

1) I apply a first procedure in cases where historical administrative units were the aggregate of administrative units coded by GADM. This is the case if regions or states were gradually split up into their constituent areas over time. In such cases, I **backwards-aggregated their polygons**, following the description by Law 2010 and the accompanying webpage: <http://www.statoids.com>. Figure S2 illustrates this procedure for two administrative boundary revisions in Nigeria. First, in 1996, Bayelsa state split from Rivers state. To obtain the historical boundaries of Rivers state before 1996, I merge the polygons of Bayelsa and Rivers as they were in 2018 per the GADM data. In Figure S2, the respective areas are highlighted in red. Second, in 1991, Bendel state was divided into Delta and Edo states. To obtain Bendel's boundaries before 1991, I merge the polygons of Delta and Edo states as they were after 1991 per the GADM data. In Figure S2, the respective areas are highlighted in blue.
2) If historical boundaries cannot be backwards-aggregated (see procedure 1 above) and were in place in 1998, I rely on **ESRI's Country Administrative Units 1998 Dataset**,[2] which comprises polygons of all first-order administrative units that existed in that year.
3) Finally, if neither of these two procedures were sufficient to obtain historical boundaries, I looked up and manually **geo-referenced historical maps**. To obtain images of such maps, I predominantly relied on the University of Texas at Austin's Perry-Castañeda Library (PCL) Map Collection,[3] David Rumsey Map Collection,[4] and Old Maps Online.[5] I then georeferenced these images in the geographical information software QGIS. Using QGIS, I manually coded polygons corresponding to the historical boundaries visible on these maps. Figure S3 shows the example of Côte d'Ivoire in 2004, for which I used a map from the US Central Intelligence Agency, which was made available by PCL. In this case, I had to rely on this source, as Côte d'Ivoire reorganized from nineteen regions into fourteen districts in 2011. Moreover, there were major reorganizations before as well between 1997-2000. Finally, Law (2010) indicates no clear 1:1 relationship

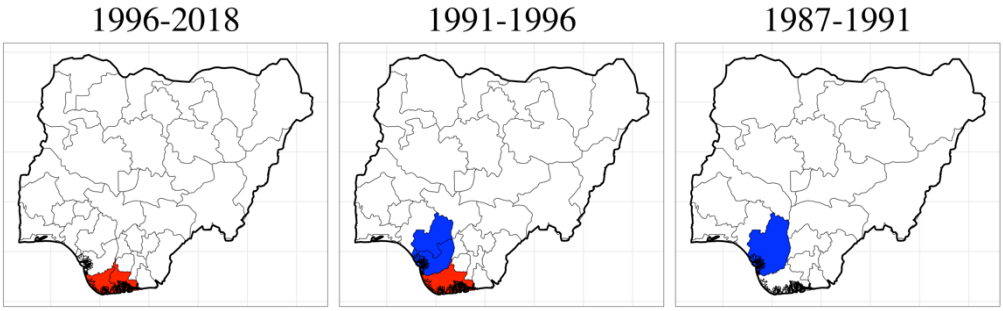


Figure S2. Internal administrative boundaries of Nigeria, 1991-2018.
Note: Illustration for backwards aggregation: Bayelsa state split from river state in 1996 (areas colored in red) and Bendel state split into Delta and Edo states in 1991 (areas colored in blue).

[1] Available at <http://gadm.org/data.html>.
[2] Available at <https://www.arcgis.com/sharing/rest/content/items/1ee881e919e1477a926f74586ddbdba9/info/metadata/metadata.xml?format=default&output=html>.
[3] Available at <https://maps.lib.utexas.edu/maps/index.html>.
[4] Available at <https://www.davidrumsey.com/>.
[5] Available at <https://www.oldmapsonline.org/>.

between administrative units before and after these revisions. Therefore, I was unable to rely on data by either ESRI or GADM, nor to backwards aggregate the polygons from 2018.

The result of these procedures is a set of 6011 geo-coded polygons, each of which represents a specific unit in a time period between 1988 and 2018.

S1.1.3: Data structure

The SAU dataset is made available in ESRI shapefile format (file "sau_v1.0_simplified.shp" in folder "original_data/administrative_boundaries" in the supplementary material). In addition to the polygons themselves, this file contains **additional information captured by the following unit-period-level variables**:

Figure S3. Geo-referenced map of Côte d'Ivoire in 2004. *Note:* Manually coded polygons overlaid in red.

- *ENGTYPE_1*: the type of administrative unit, given by the country-specific naming convention (e.g., province, region, state, autonomous region)
- *ADMIN_NAME*: the name of the administrative unit
- *CNTRY_NAME*: the name of the country
- *cow*: the country code, given by its unique Correlates of War project identifier
- *fips*: the administrative unit's unique Federal Information Processing System (FIPS) code; if the unit is not captured in the fips standard, as may be the case for subordinate regions, a manually created unique identifier consisting of the country's cowcode and a unique number
- *starty*: the year in which the administrative unit period starts
- *startm*: the month in which the administrative unit period starts
- *startd*: the day in which the administrative unit period starts
- *endy*: the year in which the administrative unit period ends
- *endm*: the month in which the administrative unit period ends
- *endd*: the day in which the administrative unit period ends
- *endy_real*: a dichotomous variable indicating whether the unit actually ended in the given year (1) or whether the unit period ended due to the data cut-off (31/12/2018) (0)
- *FO*: a dichotomous variable indicating whether the unit is a first-order administrative unit
- *AR*: a dichotomous variable indicating whether the unit is explicitly designated a special autonomous region
- *rump*: a dichotomous variable indicating whether this is the "rump" version of the unit, in cases where subordinate units within its area are included in the data (see section S1.1.2)
- *subunits*: a dichotomous variable indicating whether this unit has lower-level subordinate units included in the data
- *superunits*: a dichotomous variable indicating whether this unit has higher-level superordinate units included in the data
- *end_reason*: a nominal variable indicating the reason the unit period ended (takes values "*reorganization*" if the state engaged in wholesale restructuring of administrative units across its territory, "*split*" if the unit split into constituent areas, "*merger*" if the unit merged with other units, "*border*" if the unit was subject to minor border changes, "*name*" if the unit's name changed, "*type*" if the unit's administrative type changed, "*subunits*" if new subordinate units in the unit's territory were created or abolished, "*end of unit*" if the unit was abolished without replacement, "*secession*" if the unit's territory seceded from the state, and "*end of state*" if the unit period ended due to the state ceasing to exit as per the Correlates of War list

S1.2: Calculation of relative group size in each unit

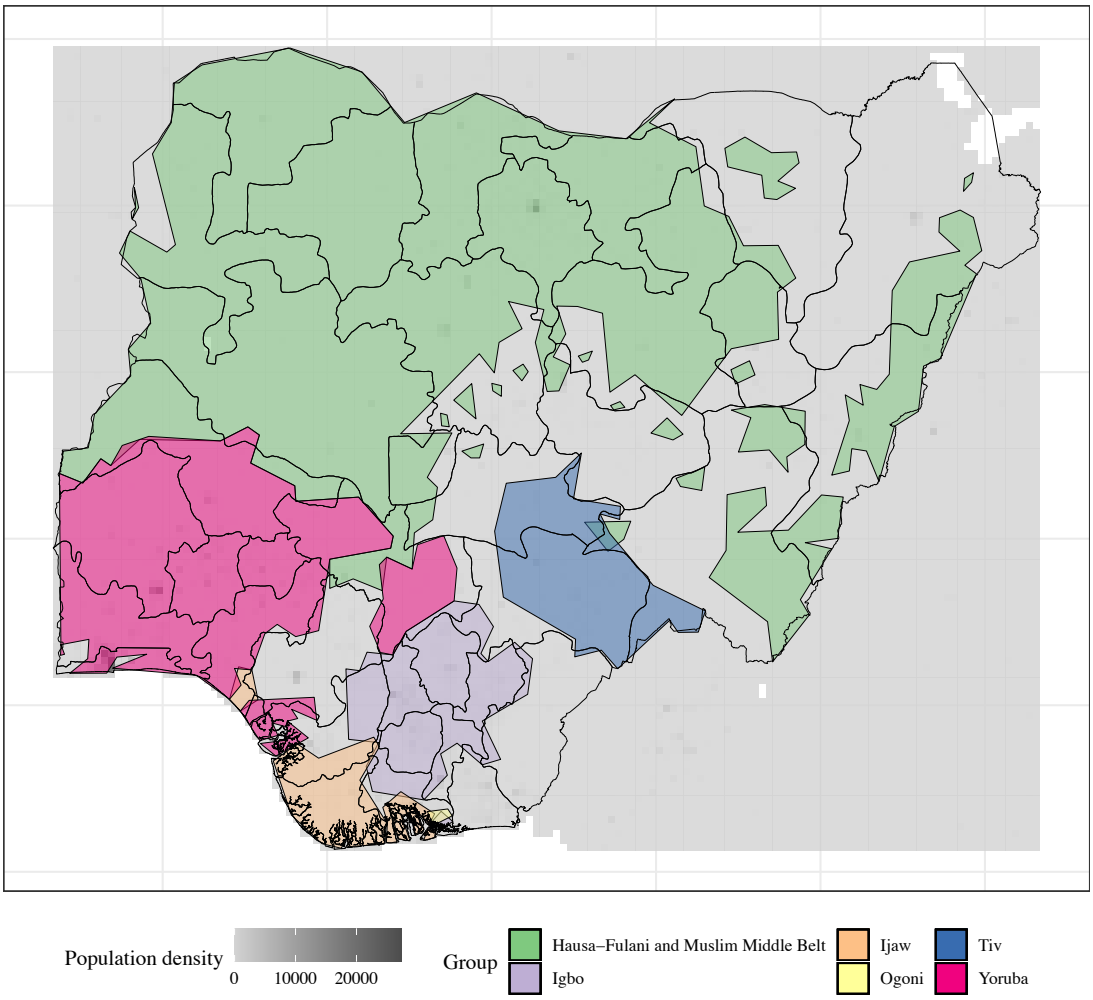


Figure S4. Intersections and population density: Example of Nigeria (2019).

To obtain estimates for each group's relative population shares in each administrative unit, I proceed as follows (see figure S4 for a graphical example of the underlying information used for this purpose):

- **Spatial intersection:** First, I intersect all geo-coded administrative units with each group's settlement patterns, provided by an augmented version of the Geo-EPR dataset (Vogt et al. 2015).[6] This yields the area of overlap. I exclude all intersections that do not overlap temporally.
- **Calculation of each intersection's area and population density:** Second, I calculate the area of each of these intersections. At the same time, I overlay them with a raster layer that contains information on the time-variant local population density, based on the History Database of the Global Environment (HYDE version 3.2, Klein Goldewijk et al. 2017), interpolated linearly for years without data. This allows me to adjust my estimates and account for large territorial units that nevertheless feature low populations (e.g. Alaska in the US).
- **Intersection of intersections and calculation of "share factor"**: Third, I intersect each intersection with all other intersections that exist in the same country year, according to the start and end dates of each administrative unit and ethnic settlement pattern. This enables me to calculate a "share factor" that accounts for the degree to which each group's spatial overlap with any territorial unit is *shared* territory with other groups (and weigh accordingly in the final formula):

$$share\ factor_{g,u} = \frac{size_g \times area_{g,u} \times density_{g,u}}{\sum_{g=1}^{G} size_g \times area_{g,u} \times density_{g,u}} \quad \text{(S1)}$$

where $size_g$ is the group's overall relative size at the national level as a share of the state's population (Vogt et al. 2015), $area_{g,u}$ is the area of the calculated intersection area in 1000's of square kilometers, and density is the average population per square kilometer in this area from HYDE.

[6] The data have been augmented by adding an "other" group with a statewide settlement pattern, whose size corresponds to 1-the sum of all coded groups' sizes and at least 0.005. Moreover, a small number of additional, constitutionally-recognised groups have been added to ensure congruence to the Constitutional Power-Sharing Dataset (Juon 2020). These additions are important, to ensure that the relative sizes of groups within each administrative unit are correctly calculated even in cases where EPR does not code the largest group(s) in a unit as "politically relevant" at the national level. The augmented version of this data is available in the article's replication material.

- **Calculation of 'absolute' group size in each territorial unit in each year:** The resulting information enables me to calculate the 'absolute' group size in each unit for a given year, as a fraction of the state's total population. To this ends, I employ the following formula:

$$abs.size_{g,u} = \frac{size_g \times area_{g,u} \times density_{g,u} \times share\ factor_{g,u}}{\sum_{u=1}^{U} size_g \times area_{g,u} \times density_{g,u} \times share\ factor_{g,u}} \text{ (S2)}$$

This yields an estimate, ranging between 0 and 1 of a group's 'absolute' size (as a fraction of the state's total population) in a given unit and year. In a final step, I adjusted this estimate to make sure the sum of these estimates adds up to the group's total size as given by the EPR dataset to account for rounding errors. Groups whose settlement patterns do not overlap with an administrative unit but are still in my sample (for being located in a 50km radius of the unit) are assigned *abs. size* 0.

Using this measure of absolute group size, I can calculate a group's share of each unit's population in relative terms ($rel.size_{g,u}$), which I use in the article to identify second-order majorities and second-order minorities and to create my unit-demographic control variables:

$$rel.size_{g,u} = \frac{abs.size_{g,u}}{\sum_{g=1}^{G} abs.size_{g,u}} \text{ (S3)}$$

S1.3: Institutionally-designated second-order majority groups

As stated in the main article, I distinguish between second-order majorities and minorities within each administrative unit predominantly by relying on each group's relative size in each unit (section S1.2). In most cases, I identify the group with the largest size in a unit as the second-order majority. However, in a small number of cases, a unit is **formally designated the "homeland" of a specific group**. In such cases, I identify this group as the unit's second-order majority and all other groups as second-order minorities.[7] I identified cases of institutionally designated ethnic homelands by relying on two sources: First, state constitutions and any autonomy statutes embedded in them (see section S2.1). Second, I rely on the names of administrative units and identify cases of where this matches a group name in the EPR dataset or a synonym thereof. Table S2 gives an overview on all units in my sample that are identified as the homeland of a specific group where the designated group differs from the group with the largest calculated size. Information on each administrative unit's institutionally-designated second-order majority group(s) is available in file "sa_admin_unit_level_all_indicators.csv" in folder "original_data/territorial_autonomy" in the supplementary material.

Table S2. List of units designated as ethnic homelands where designated group differs from largest group.

administrative unit	group
Panama	
Emberá	Choco (Embera-Wounan)
Kuna de Madugandí	Kuna
Kuna de Wargandí	Kuna
Ngöbe Buglé	Ngobe-Bugle
United Kingdom	
Wales	Welsh
Italy	
Friuli-Venezia Giulia	Friulians
Sardegna	Sardinians
South Tyrol	German speakers (Austrians)
Trentino	German speakers (Austrians)
Valle d'Aosta	Aostans (French speakers)
Russia/USSR	
Abkhaz ASSR	Abkhaz
Adygey	Adyghe
Aga Buryat	Buryats
Agin-Buryat Okrug	Buryats
Altay	Altai
Bashkir ASSR	Bashkirs
Bashkortostan	Bashkirs
Buryat	Buryats
Buryat ASSR	Buryats
Gorno-Altai	Altai
Karelia	Karelians
Karelskaya ASSR	Karelians
Kazakhskaya SFSR	Kazakhs
Khakass	Khakass
Khanty-Mansi Autonomous Okrug	Mansi
Khanty-Mansiy	Mansi
Komi ASSR	Komi
Mari ASSR	Mari
Mariy-El	Mari
Mordovia	Mordva
Mordovian ASSR	Mordva
Tatar ASSR	Tatars
Udmurt	Udmurt
Udmurt ASSR	Udmurt
Ust-Orda Buryat Autonomous Okrug	Buryats
Yevrey	Jews
Georgia	
Abkhazia	Abkhazians
Congo, DRC	
Kasaï	Luba Kasai
Kasaï-Cent	Luba Kasai
Kasaï-Occidental	Luba Kasai
Shaba	Luba Shaba
Ethiopia	
Alaba	Other (non-relevant)
Alle	Other (non-relevant)
Amaro	Other (non-relevant)
Argoba	Argobba
Bahir Dar Special Zone	Other (non-relevant)
Basketo	Other (non-relevant)
Burji	Other (non-relevant)
Derashe	Other (non-relevant)
East Harerge	Harari
Gambela Peoples	Nuer
Harar	Harari
Harari People	Harari
Harerge	Harari
Jimma	Other (non-relevant)
Konso	Other (non-relevant)
Konta	Other (non-relevant)
Yem	Other (non-relevant)
Namibia	
Damaraland	Damara
Hereroland East	Herero, Mbanderu
Hereroland West	Herero, Mbanderu
Sudan	
Central Darfur	Fur
Darfur	Fur
East Darfur	Fur
North Darfur	Fur
South Darfur	Fur
West Darfur	Fur
China	
Aksai Kazakh	Kazakh
Baisha Li	Li
Bama Yao	Yao
Baoting Li-Miao	Li

[7] In case this applies to multiple groups, I identify the titular group with the largest population share. For example, in China's Jinping Miao, Yao and Dai autonomous county, the Miao are the largest titular group and are hence coded as the second-order majority.

administrative unit	group
Barkol Kazakh	Kazakh
Changjiang Li	Li
Chengbu Miao	Miao
Chuxiong Yi	Yi
Dahua Yao	Yao
Dehong Dai and Jingpo	Jingpo
Dêqên Tibetan	Tibetans
Dongxiang	Dongxiang
Du'an Yao	Yao
Ebian Yi	Yi
Enshi Tujia and Miao	Tujia
Eshan Yi	Yi
Fuchuan Yao	Yao
Fuxin Mongol	Mongolians
Gannan Tibetan	Tibetans
Garzê Tibetan	Tibetans
Gengma Dai and Va	Wa
Golog Tibetan	Tibetans
Gongcheng Yao	Yao
Gongshan Derung and Nu	Derung
Guangxi	Zhuang
Guanling Buyei and Miao	Bouyei
Gyêgu Tibetan	Tibetans
Hainan Tibetan	Tibetans
Haixi Mongol and Tibetan	Mongolians
Haixi Mongol and Tibetan	Tibetans
Hekou Yao	Yao
Henan Mongol	Mongolians
Huanjiang Maonan	Maonan
Huzhu Tu	Tu
Jiangcheng Hani and Yi	Hani
Jianghua Yao	Yao
Jingdong Yi	Yi
Jinggu Dai and Yi	Yi
Jingning She	She
Jingzhou Miao and Dong	Miao
Jinxiu Yao	Yao
Kizilsu Kirghiz	Kirghiz
Lancang Lahu	Lahu
Lanping Bai and Pumi	Bai
Ledong Li	Li
Liannan Yao	Yao
Lianshan Zhuang and Yao	Yao
Luocheng Mulao	Mulam
Luquan Yi and Miao	Yi
Mabian Yi	Yi
Mayang Miao	Miao
Menglian Dai, Lahu and Va	Wa
Menyuan Hui	Hui (proper)
Minhe Hui and Tu	Tu
Mojiang Hani	Hani
Mori Kazak	Kazakh
Morin Dawa Daur	Daur
Muli Tibetan	Tibetans
Nanjian Yi	Yi
Nei Mongol	Mongolians
Ngawa Tibetan and Qiang	Tibetans
Pingbian Miao	Miao
Pu'er Hani-Yi	Hani
Qapqal Xibe	Xibe
Qiandongnan Miao and Dong	Miao
Qianxinan Buyei and Miao	Bouyei
Qiongzhong Li and Miao	Li
Rongshui Miao	Miao
Sandu Shui	Shui
Shilin Yi	Yi
Shuangjiang Lahu, Va, Blang and Dai	Lahu
Songtao Miao	Miao
Subei Mongol	Mongolians
Sunan Yugur	Yugur
Taxkorgan Tajik	Tajik
Tianzhu Tibetan	Tibetans
Weining Yi, Hui and Miao	Hui (proper)
Weishan Yi and Hui	Hui (proper)
Wenshan Zhuang and Miao	Zhuang
Ximeng Va	Wa
Xinhuang Dong Dongzu	Dong
Xinjiang Uygur	Uyghur
Xinping Yi and Dai	Yi
Xiushan Tujia-Miao	Miao
Xiuyan Manchu	Manchu
Xizang	Tibetans
Xundian Hui and Yi	Hui (proper)
Yanbian Korean	Koreans
Yangbi Yi	Yi
Youyang Tujia-Miao	Tujia
Yuanjiang Hani, Yi and Dai	Yi
Zhenning Buyei and Miao	Bouyei
Zhenyuan Yi, Hani and Lahu	Hani
Zhijiang Dong Dongzu	Dong
Ziyun Miao and Buyei	Bouyei
Ninglang Yi	Yi
India	
Bodoland	Bodo
Dima Hasao	Scheduled Tribes
Garo Hills	Scheduled Tribes
Gorkhaland	Other (non-relevant)
Jaintia Hills	Scheduled Tribes
Karbi Anglong	Scheduled Tribes
Kargil	Scheduled Tribes
Khasi Hills	Scheduled Tribes
Lai	Scheduled Tribes
Leh (Ladakh)	Scheduled Tribes
Mara	Scheduled Tribes
Mising	Scheduled Tribes
Rabha Hasong	Scheduled Tribes
Tripura Tribal Areas	Scheduled Tribes
Pakistan	
Baluchistan	Baluchis
Myanmar	
Arakan	Buddhist Arakanese
Danu	Danu
Karenni	Karenni (Red Karens)
Kayah	Karenni (Red Karens)
Mon	Mons
Naga	Naga
Palaung	Palaung
Pao	Pa-O
Rakhine	Buddhist Arakanese
Cambodia	
Kâmpóng Cham	Cham and Malays
Indonesia	
Jawa Barat	Javanese

S2: Data on the unit-wise degree of territorial autonomy

A second data contribution of this article is the **coding of fine-grained information on the formal, institutional degree of autonomy enjoyed by each administrative unit** identified in S1.1. In this section, I explain how I obtained this unit-level measure for territorial autonomy. I then describe trends in this variable over time and across units and illustrate the coding by way of several examples that figured prominently in my article's theoretical argument and its model-testing small-N analysis. Next, I validate my data by comparing it with existing information on fiscal decentralization, the Regional Authority Index, and de-facto group-level autonomy coded by EPR. Finally, I list the territorial autonomy scores of all unique autonomous government tiers in my sample.

S2.1: Coding and aggregation of autonomy components and indicators

To obtain information on each administrative unit's degree of autonomy, I start off by identifying "candidate" autonomy arrangements. For this purpose, I read and assess all constitutional texts that were operative at any time point for my sample. I checked all **constitutional events coded by the Comparative Constitutions Project** (Elkins, Ginsburg & Melton 2014). I obtained original texts for each of these constitutional events, predominantly relying on Hein Online's World Constitutions Illustrated database[8] and the Constitute Database.[9] In these texts, I identify arrangements that the constitution calls "confederal", "federal", "decentralized", or "autonomous". Information on "candidate" autonomy arrangements is available in file "sa_country_level_candidate_financial_guarantees.csv" in folder "original_data/territorial_autonomy" in the supplementary material.

I then assess, based on the obtained **constitutions and any autonomy statutes** referenced by it, each "candidate" unit's degree of autonomy. For autonomous units covered by the Hooghe et al. book (2016), I also rely on their detailed case descriptions for autonomy statutes as additional information to code my underlying indicators and subindicators. However, when doing so, I aim to only consider information on legal texts, as opposed to their de facto implementation, in line with my overall legalistic approach. I code seven indicators, each normalized to a range from 0 to 1, which I aggregate in several steps into an overall measure for each unit's degree of autonomy. Similar to the Regional Authority Index (RAI) (Hooghe et al. 2016), these indicators are grouped along three components (see figure S5):

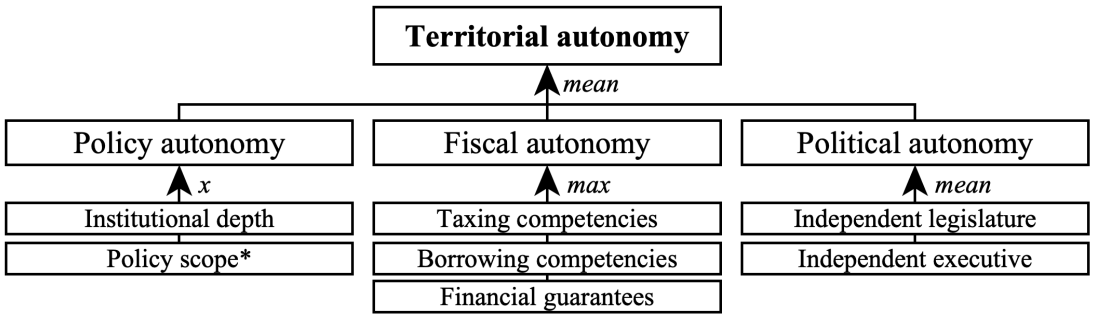


Figure S5. Territorial autonomy: components and indicators.

Note: All indicators and components are normalized to a range from 0 to 1. *Policy scope = weighted average of competencies over matters related to economy (weight = 1), welfare (1), culture (1), military (2), police (2), judiciary (2), institutional set-up (2), residual powers (3), community (3), secession rights (3).

- The first component, **policy autonomy**, captures each unit's competence to formulate its own policies. I capture this with two indicators: First, *institutional depth*, which refers to the degree to which a unit's decisions are independent from or circumscribed by central government interference. Second, *policy scope*, which captures the number and relative importance of issue areas that a unit may legislate on. As both aspects are jointly necessary for a unit to enjoy substantial policy autonomy, I multiply these indicators to arrive at an overall measure for *policy autonomy*.
- The second component, **fiscal autonomy**, encompasses financial measures that enable a unit to effectively take up its competencies. I capture this with three indicators: *taxing competencies* over the rate and base of minor and major taxes, *borrowing competencies*, depending on the need for central government authorization and restrictions, and *financial guarantees*, in the form of guarantees for financial redistribution (for instance through fiscal transfers from the center) and guarantees to keep local income (for instance natural resource rents). As *taxing competencies* and *financial guarantees* represent substitutable alternatives for endowing a unit with financial resources, I take their maximum first. Then, I average the resulting measure with my indicator for *borrowing competencies* to arrive at an overall measure for a unit's degree of *fiscal autonomy*.
- The third component, **political autonomy**, refers to a unit's ability to select its own governing institutions. I capture this with two indicators: *independent legislature* and *independent executive*. I conceive of these aspects

[8] Available at <https://home.heinonline.org/content/world-constitutions-illustrated/>.
[9] Available at <https://www.constituteproject.org/>.

as mutually reinforcing but not jointly necessary. I hence take their mean to arrive at an overall measure for *political autonomy*.

In a final step, I aggregate these components into an overall, unit-level measure for *territorial autonomy*, ranging from 0 to 1 by taking their average. Tier-/unit-wise values, coding comments, and constitutional articles for these indicators is available in the files "sa_admin_unit_level_all_indicators.csv" and "sa_country_level_candidate_financial_guarantees.csv" in folder "original_data/territorial_autonomy" in the supplementary material. The same folder also contains information on each unit's value for each of these indicators, in file "sa_admin_unit_level_all_indicators.csv".

S2.2: Measurement of territorial autonomy indicators

Table S3. Measurement of territorial autonomy indicators.

Indicator	Values
1. Policy autonomy	
1.1 Institutional depth (*id*)	{0,3}, 0 = no autonomous decision-making (e.g., no institutionalized autonomy or deconcentrated tier that implements central government decisions); 1 = decision-making subject to ex-ante central government approval; 2 = decision-making subject to ex-post central government veto; 3 = decision-making not subject to either central government approval or veto.
1.2 Policy scope (*ps*)	{0,20}, weighted sum of competencies coded as binary sub-indicators; includes competencies over matters related to economy (weight = 1), welfare (1), culture (1), military (2), police (2), judiciary (2), institutional set-up (2), residual powers (3), community (3), secession rights (3).
2. Fiscal autonomy	
2.1 Taxing competencies (*fa*)	{0,4}, 0 = none; 1 = competency to set the rate of minor taxes; 2 = competency to set base and rate of minor taxes; 3 = competency to set the rate of major taxes; 4 = competency to set base and rate of major taxes. *Note: major taxes include personal income, corporate, value added, and sales taxes.*
2.2 Borrowing competencies (*ba*)	{0,3}, 0 = none; 1 = borrowing possible under ex-ante authorization by the central government; 2 = borrowing possible without ex-ante authorization, but with restrictions; 3 = borrowing possible without authorization or restrictions.
2.3 Financial guarantees (*income_keep* / *income_redib*)	{0,4}, maximum of guarantees for financial redistribution and guarantee to keep local income, each of which is the sum of: 1. explicit targeting of unit with guarantee (1 = vague, e.g. provisions that "all subnational units" are entitled to the financial guarantee; 2 = explicit, e.g. provision that "specific unit X" is entitled to the financial guarantee) and 2. type of financial guarantee (1 = minor, 2 = major). *Note: major financial guarantees include income from major taxes, as defined above, explicitly-specified percentages of natural resource rents accruing in the unit's territory, and explicitly-specified percentages of total national income redistributed to the unit.*
3. Political autonomy	
3.1 Independent legislature (*rep_leg*)	{0,2}, 0 = subnational legislature does not exist or is fully appointed by the central government; 1 = subnational legislature is partly selected by the local population or local elites, partly appointed by the central government; 2 = subnational legislature is fully selected by the local population or local elites.
3.2 Independent executive (*rep_ex*)	{0,2}, 0 = subnational executive does not exist or is fully appointed by the central government; 1 = subnational executive is partly selected by the local population or local elites, partly appointed by the central government; 2 = subnational executive is fully selected by the local population or local elites.

Note: All indicators are subsequently normalized to a range between 0 and 1 before aggregation. Details on tier-level territorial autonomy coding, including indicator-level values, comments, and references to relevant constitutional articles and autonomy statutes are included in the coding comments attached to the dataset.

S2.3: Correlation between territorial autonomy components

Table S4. Correlation of territorial autonomy components.

	Territorial autonomy	Policy autonomy	Fiscal autonomy	Political autonomy
Territorial autonomy	1	0. 821	0. 792	0. 742
Policy autonomy	0.821	1	0. 552	0. 463
Fiscal autonomy	0.792	0.552	1	0.269
Political autonomy	0.742	0.463	0. 269	1

Note: Based on all unique units included in my sample.

S2.4: Territorial autonomy data description

Two key observations can be drawn from a descriptive look at the resulting *territorial autonomy* data. First, around the world, the **degree of autonomy has been increasing steadily between 1988 and 2018**, with numerous countries adopting territorial autonomy in the form of federalism, decentralized state structures, or autonomous regions limited to part of the state territory. Between 1988 and 2018, more than 40% of countries in my sample employed a territorial autonomy arrangement at least once (44.86%). Illustrating this trend, figure S6 shows that the average degree of autonomy around the world has risen substantially from 0.13 in 1988 to 0.21 in 2018. Highlighting the spatial distribution of this development, figure S7 maps the degree of autonomy around the world in the first year of the analysis, 1988. A comparison with the equivalent map in 2018 (see figure 3 in the main article) again highlights that the degree of autonomy has been rising world-wide. Substantial increases are visible especially in Africa and Latin America (limited to the non-federal countries in that region). This echoes observations of a wave of decentralization in Africa (Boone 2003; Fombad 2018).

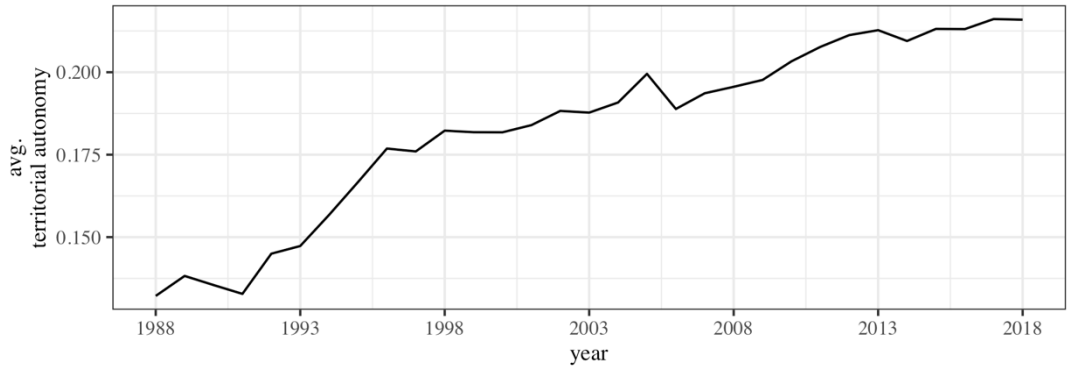


Figure S6. Global average degree of territorial autonomy over time, 1988-2018.
Note: Two step-calculation: first, population weighted average degree of autonomy across units within each country; second, average across all countries within given year.

Second, **more than half of the countries that ever institutionalized territorial autonomy (23.24% of the total) employed an arrangement that was at least partly asymmetric**. Thereby, in a substantial fraction of countries in my sample, autonomy was either confined to a part of the state's territory or awarded to different administrative units in different degrees (see also examples in S2.5):

- In the former category (**arrangement limited to part of the state territory**) are, *inter alia*: Fiji (Rotuma), Finland (Aland), Georgia (Abkhazia and Adjaria), Indonesia (Aceh, Papua, and Yogyakarta), Moldova (Gagauzia and Transnistria), Panama (autonomous comarcas), Serbia (Kosovo and Vojvodina), Tajikistan (Gorno-Badakshan), Trinidad and Tobago (Tobago), Ukraine (Crimea), and the United Kingdom (Northern Ireland, Scotland, and Wales).
- In the latter category (**different degree of autonomy for different administrative units**) are, *inter alia*: Canada (provinces/territories/Québec), Ethiopia (special Woredas and Zones/states), India (states with different degrees of autonomy/autonomous regions/tribal areas), Italy (regions with normal and special autonomy statutes), Malaysia (territories/states/Sabah/Sarawak), Myanmar (regions/states/self-administered areas), Pakistan (states/tribal areas/former princely states), Papua New Guinea (provinces/Bougainville), Russia (republics with different bilateral treaties/autonomous areas), Spain (provinces and autonomous regions with different arrangements), Sudan ("ordinary" states/Darfur/South Kordofan and Blue Nile states/South Sudan), and Yugoslavia (republics/Kosovo/Vojvodina).

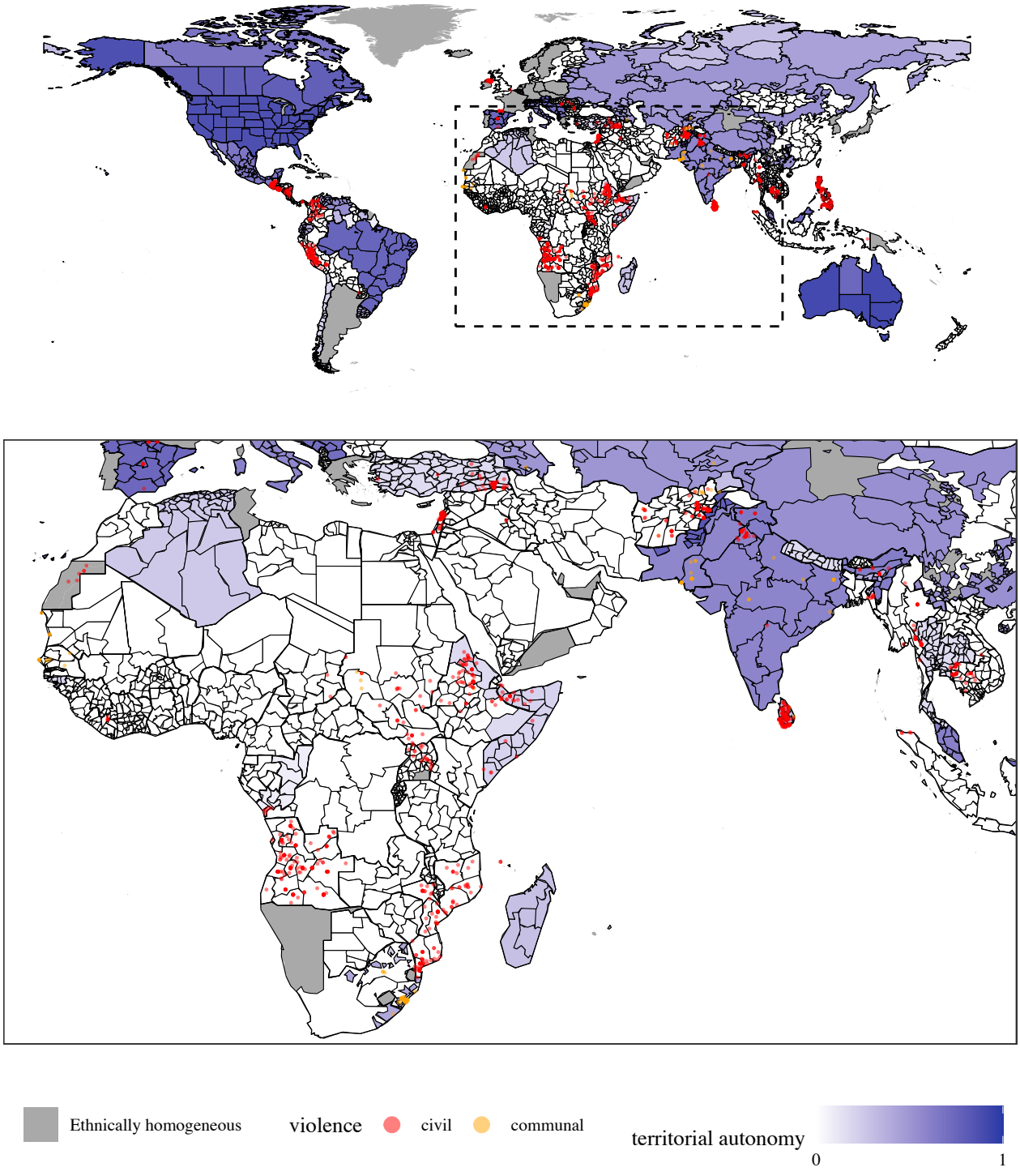


Figure S7. Administrative units, territorial autonomy, and civil and communal violence in 1989.

S2.5: Examples for territorial autonomy indicator coding

In this section, I illustrate the data coding procedure by presenting several examples thereof, corresponding to **six cases that figured prominently in my theoretical argument and in my model-testing small-N analysis**: Ethiopia (1994-2018), Nigeria (1999-2018), Indonesia (2007-2018), Uganda (1995-2004), Pakistan (1985-1998), and Sudan (2005-2010). In each case, I cite the relevant constitutional articles and, if applicable, sections from relevant autonomy statutes and peace agreements embedded in the constitution as well. Moreover, I provide a map of the situation at the respective endpoint of the discussed period, which shows the boundaries of all administrative units entering my sample as well as their degree of autonomy. Notes in equivalent format are made available for each autonomous government tier in my sample as part of the dataset release. These can be found, for each indicator and year, at the level of the unique autonomy tier and administrative unit respectively, in the files "sa_admin_unit_level_all_indicators.csv" and "sa_country_level_candidate_financial_guarantees.csv" in folder "original_data/territorial_autonomy" in the supplementary material.

S2.5.1: Ethiopia (1994-2018)

[Federal or decentralized | Autonomous territories]: There is a formal federal state structure. Ethiopia is divided in a number of ethnically-based states. There are several special zones and special woredas, all of which are ethnically-based. Every nationality has the right to political autonomy, including to secede. While these rights are formulated on the group-level, their implementation proceeds on the territorial level, on which autonomy was thus coded. *(Arts. 1; 8; 50.8; 88; 46)*

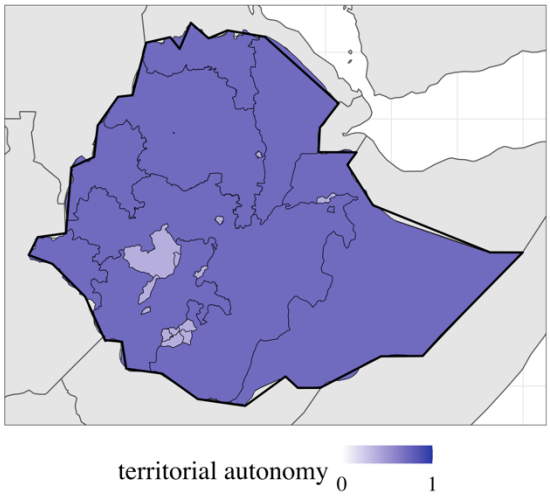


Figure S8. Administrative units and territorial autonomy in Ethiopia, 2018.

States

- **Policy Autonomy: Institutional Depth [3]:** The central government and state governments shall «respect» one another's laws, which implies no veto right by the center over state decision-making. Intervention is possible for the central government in cases where state governments violate the constitution, however. **Policy Scope [4: Economy, Culture, Welfare, Police, Judiciary, Institutions, Residual powers, Secession]:** The federal government is responsible for overall economic, social and development matters. It sets standards for education, health, science, and technology and conducts the monetary and economic policy. It is also responsible for defense and foreign policy, transport, and commerce. The states are responsible for the rest and hold residual powers. They are explicitly given the right to establish their own administration, give themselves their own constitution, and have their own economic, social, and development policies. They can also administer their land and resources, create their own budget, have their own civil service and a state police force. States also have their own supreme courts. This is a fairly broad policy scope covering most areas except for community/citizenship rights. *(Arts. 50.8; 51; 52; 62.9; 78)*
- **Fiscal Autonomy: Taxing Competencies [2]:** The states are guaranteed a measure of taxing autonomy, including income taxes on their local state employees, land rights, farming income, transport income, housing, and own enterprises as well as mining and licensing fees. The states also have concurrent taxing power over sales, excise and personal income taxes on jointly established taxes, on company profits and dividends, and income from large-scale mining, petroleum and gas operations It seems then, that the criterion of being able to set the base and rate of minor taxes is fulfilled. The provision that all other taxes are set by law indicates that major taxes will be set by the central government. **Borrowing Competencies [1]:** Only the federal government can borrow from external sources. The federal government sets the terms by which the state governments are allowed to borrow from internal sources. **Financial guarantees [0]:** There are no financial guarantees for Ethiopia's states. *(Arts. 51.7; 52; 96-98)*
- **Political Autonomy: Legislature [2]:** Each state elects its own state council, which is directly elected. **Executive [2]:** While the constitution is not explicit, it implies that the state administration, which is the executive, is selected by the state council. *(Art. 50)*

Addis Abeba / Dire Dawa

- **Policy Autonomy: Institutional Depth [1]:** Addis Ababa and Dire Dawa are deconcentrated government outposts, whose administrations are constitutionally responsible to the central government. **Policy Scope [0]:** While Addis Ababa and Dire Dawa are granted «full measure of self-government», the direct control of the administration by the federal government means there is no meaningful autonomous policy scope. *(Art. 49)*
- **Fiscal Autonomy: Taxing Competencies [0]:** While Addis Ababa and Dire Dawa are granted «full measure of self-government», the direct control of the administration by the federal government means there is no meaningful taxing autonomy. **Borrowing Competencies [0]:** While Addis Ababa and Dire Dawa are granted «full measure of self-government», the direct control of the administration by the federal government means there is no borrowing autonomy. **Financial guarantees [0]:** There are no financial guarantees for Addis Abeba and Dire Dawa. *(Arts. 43; 49; 89)*
- **Political Autonomy: Legislature [0]:** While their city councils are directly elected, the requirement that the governments of the cities are responsible to the central government necessitates a coding of no meaningful local selection of their legislature. Indeed, the federal legislature seems to take most decisions as regards Addis Ababa and Dire Dawa. **Executive [0]:** While

their city councils seem to be directly elected, the requirement that the governments of the cities are responsible to the central government necessitates a coding of no meaningful local selection of their executive. Indeed, the federal legislature seems to take most decisions as regards Addis Ababa and Dire Dawa. *(Art. 49)*

Special Woredas and Zones

- **Policy Autonomy: Institutional Depth [2]:** Each nationality has the right for a «full measure of self-government», including the right to establish institutions of government in its territory. These take the form of special Woredas or special zones. While they have their separate administration, there is no constitutional safeguard against intervention from superior levels, however, as is evidenced by the possibility of them being split or abolished by unilateral central government decision. A veto right by the center over policies by special Woredas and Zones was thus coded. **Policy Scope [1: Culture, Secession]:** It seems that special Woredas and Zones predominantly have rights in the educational-cultural domain. Formally, they have secession rights as well. *(Art. 39)*
- **Fiscal Autonomy: Taxing Competencies [0]:** It appears that the special Woredas and Zones depend on government transfers as their financial resources. **Borrowing Competencies [0]:** Only the federal government can borrow from external sources. Given the small degree of fiscal independence of the special Woredas and Zones, it appears that they have no borrowing autonomy either. **Financial guarantees [0]:** Each Nation, Nationality and People has the right to improved living standards. The least advantaged ones are entitled to special assistance in economic and social development. However, these guarantees are provided to the respective ethnic groups directly, rather than to the territorial units controlled by them. *(Arts. 43; 51.7; 89)*
- **Political Autonomy: Legislature [2]:** It appears that the special Woredas and Zones are free to choose their own legislative government form. **Executive [2]:** It appears that the special Woredas and Zones are free to choose their own executive government form. *(Art. 39)*

S2.5.2: Nigeria (1999-2018)

[Federal or decentralized]: Nigeria has a formal federal structure. It is divided into several states (36 according to the constitution) and a capital territory. *(Arts. 1; 2; 3)*

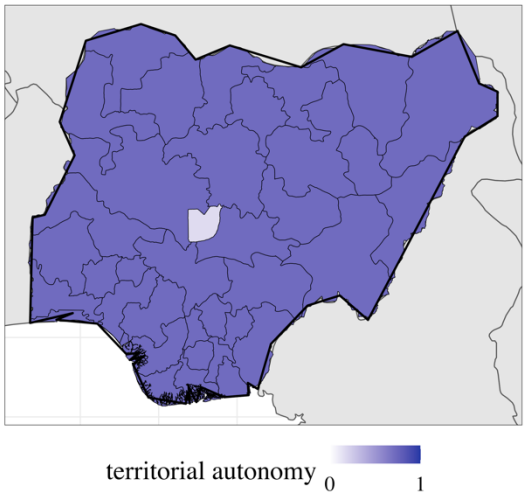


Figure S9. Administrative units and territorial autonomy in Nigeria, 2018.

States

- **Policy Autonomy: Institutional Depth [3]:** The constitution is above state law and state law adopted that contradicts the constitution is void. However, it indicates that the federal government has no veto rights as regards state legislation and cannot directly interfere, except in cases of state of emergency, mostly during war. The federal government is responsible for the creation of new states. No veto was hence coded. **Policy Scope [3: Economy, Culture, Welfare, Judiciary, Institutions, Residual powers]:** The division between state and federal powers is prescribed by the constitution. The federal list includes aviation, banks, census, construction and vital infrastructure, citizenship and immigration, monopolies, capital issues, copyright, monetary policy, defense and foreign policy, the ratification of treaties, insurance, labor policy, maritime shipping and navigation, mines and minerals, nuclear energy, pensions, the police, post and telecommunication, prisons, professional occupations, quarantine, the setting of educational minimum standards and university education, marriages except those under Islamic and customary law, trade and commerce. The concurrent list includes antiquities and monuments, archives, tax collection, electric power, cinematograph films. Industrial, commercial and agricultural development, including health, safety and welfare standards, the regulation of ownership, research for agricultural studies, and the financing of agricultural projects, research, statistics, and education. States cannot have their own police forces; these are subordinate to the federal government. They have their own high courts, Sharia courts, and customary courts, however. The states have residual powers. *(Arts. 1; 4; 214; 215; 270; 271; Schedule 2)*
- **Fiscal Autonomy: Taxing Competencies [2]:** The federal government is responsible for all major taxes, including private and corporate income taxes, capital taxes, customs, excise, export, and stamp duties. States are responsible for other taxes, which hence exclusively correspond to minor ones. **Borrowing Competencies [1]:** States cannot borrow from either within or outside Nigeria. They are, however, explicitly allowed to borrow from the federal state. This amounts to a procedure of ex-ante approval. **Financial guarantees [4]:** Income going to the Federation Account is to be distributed among the Federation and the States in a manner that the National Assembly requires. It shall take into account allocation principles based on population, equality of states, internal revenue generation, land mass, terrain, and population density. At least 13% of revenue accruing from natural resources are to be given to the states. Income from personal income, capital gains and stamp duty taxes is distributed among the states on the basis of derivation. Together, this amounts to explicit guarantees that states obtain financial resources from major sources of revenue. *(Arts. 17; 17; 162; 163; 166; Schedule 2)*
- **Political Autonomy: Legislature [2]:** Each state has a House of Assembly, which is directly elected in a number of single-member districts. **Executive [2]:** Each state has a directly-elected governor, who needs at least one-third of all votes in at least two-thirds of local government areas in the state. The governor appoints commissioners of the state government as well as a chairman. *(Arts. 90; 100; 112; 117; 176-178; 192; 196; 197)*

Federal Capital Territory

- **Policy Autonomy: Institutional Depth [1]:** The Federal Capital Territory is a deconcentrated unit. All legislative and executive powers are vested in the National Assembly. Its land is owned by the Federal Government. **Policy Scope [0]:** Being a

deconcentrated administration under control of the federal government, the federal capital territory has no autonomous policy scope. *(Arts. 297-299)*

- **Fiscal Autonomy: Taxing Competencies [0]:** Being a deconcentrated administration under control of the federal government, the federal capital territory has no taxing competencies. **Borrowing Competencies [0]:** Being a deconcentrated administration under control of the federal government, the federal capital territory has no borrowing autonomy. **Financial guarantees [4]:** Formally designated a state, it appears the Federal Capital Territory enjoys the same financial guarantees as the other states.
- **Political Autonomy: Legislature [0]:** Being a deconcentrated administration under control of the federal government, the federal capital territory has no independent legislature. **Executive [0]:** Being a deconcentrated administration under control of the federal government, the federal capital territory has no independent executive.

S2.5.3: Indonesia (2007-2018)

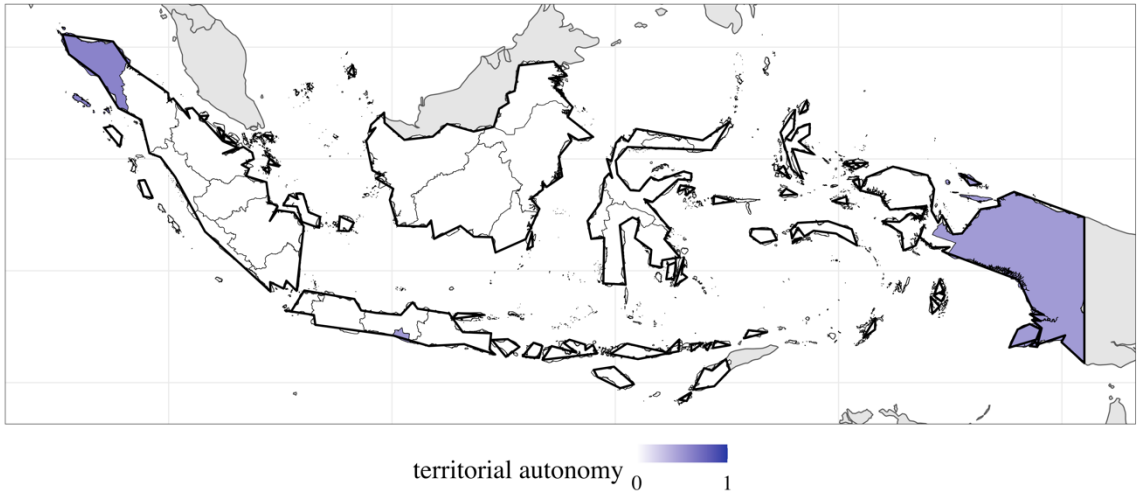


Figure S10. Administrative units and territorial autonomy in Indonesia, 2018.

[Autonomous territories]: Indonesia is formally a unitary state and does not attribute supremacy to local or regional law. It is divided into provinces, these in turn into regencies, and in turn in municipalities. The state recognizes and respects units of regional authorities that are special and distinct. Yogyakarta (since 1950), Aceh, and Papua (since 2002) are autonomous regions. *(Preamble; Arts. 18; 18B)*

Aceh

- **Policy Autonomy: Institutional Depth [3]:** Aceh is not formally guaranteed formal independence over its decision-making process; however, the central government is constitutionally heavily constrained in its interventions. No veto was hence coded. **Policy Scope [3: Economy, Culture, Welfare, Police, Judiciary, Residual powers]:** Aceh has limited discretion in economic development, welfare, cultural-educational policies. The list also includes control over agricultural and animal husbandry, fisheries, local education and libraries, forestry, urban planning, homeless shelters, workers welfare and unemployment welfare. Since 2004, Aceh has had detailed competences in economic development, health and social services, and education. It has residual powers over competences not taken up by the lower administrative levels. Aceh has the authority to introduce Sharia law and has authority over the courts and the police. In 2004 Aceh gained the authority over self-government in culture, education, and welfare. It also has exceptional permits to allow for province-wide political parties and greater natural resource revenue control. Since 2007, Aceh is exempt from the national ban on regional parties and is the only province allowed to field political candidates from non-national parties. *(Undang-Undang 11/2006; Undang-Undang 18/2001; Undang-Undang 32/2004)*
- **Fiscal Autonomy: Taxing Competencies [1]:** Aceh can introduce taxes as approved by the regional parliament within the bounds of national law. It can set the rate for four pre-allocated taxes. These are minor taxes and their base is given by the national government. Aceh receives special autonomy funds and can keep a greater proportion of local tax revenues from natural resources, but does not have special control over base of taxes. **Borrowing Competencies [1]:** Aceh seems to have no special borrowing regulations and is subject to ex-ante authorization, similar to the provinces. **Financial guarantees [0]:** There are no specific financial guarantees for Aceh. *(Undang-Undang 25/1999; Undang-Undang 33/2004; Undang-Undang 34/2000)*
- **Political Autonomy: Legislature [2]:** The legislature of Aceh is directly elected. In contrast to other provinces, local candidates can run for office. **Executive [2]:** The governor of Aceh is directly elected. *(Undang-Undang 11/2006; Undang-Undang 22/1999)*

Papua

- **Policy Autonomy: Institutional Depth [2]:** Papua has a special autonomy agreement although this is explicitly circumscribed by a central government veto. **Policy Scope [3: Culture, Welfare, Institutions]:** Papua has powers focusing primarily on cultural protection and representation. In principle, the special autonomy law grants Papua jurisdiction over all matters except foreign policy, defense, monetary and fiscal policy, religion and justice. Since 2004, Papua has obtained more competences over its institutional set up, cultural-education and welfare policies than other provinces. *(Undang-Undang 21/2001; Undang-Undang 32/2004)*
- **Fiscal Autonomy: Taxing Competencies [1]:** Papua can introduce taxes as approved by the regional parliament within the bounds of national law. It can set the rate for four pre-allocated taxes. These are minor taxes and their base is given by the

national government. Papua receives special autonomy funds and can keep a greater proportion of local tax revenues from natural resources, but does not have special control over base and rates of taxes. **Borrowing Competencies [1]:** Papua seems to have no special borrowing regulations and is subject to ex-ante authorization, similar to the provinces. **Financial guarantees [0]:** There are no specific financial guarantees for Papua. *(Undang-Undang 25/1999; Undang-Undang 33/2004; Undang-Undang 34/2000)*

- **Political Autonomy: Legislature [2]:** The legislature of Papua is directly elected. Papua has a second chamber reserved for indigenous Papuans. **Executive [2]:** The governor of Papua is directly elected. *(Undang-Undang 21/2001; Undang-Undang 22/1999)*

Yogyakarta

- **Policy Autonomy: Institutional Depth [2]:** Yogyakarta is given special autonomy rights. There is a central government veto over its decisions, however. De-facto the provinces, and thus including Yogyakarta, became more circumscribed after 1974 until 2001, but it appears that de-jure their position was unchanged. **Policy Scope [3: Economy, Culture, Welfare, Institutions]:** Yogyakarta has limited discretion in economic development, welfare, cultural-educational policies. Since 1951, it also control agricultural and animal husbandry, fisheries, local education and libraries. Since 1957 it additionally oversees forestry and since 1958 urban planning, homeless shelters, workers welfare and unemployment welfare. Since 2004, the provinces, including Yogyakarta, have detailed competences in economic development, health and social services, and education. They have residual powers over competences not taken up by the lower administrative levels. Yogyakarta has additional control over its institutional setup. *(Undang-Undang 2/1999; Undang-Undang 5/1974; Undang-Undang 1/1957; Undang-Undang 3/1950; Undang-Undang 19/1950; Undang-Undang 32/2004,)*
- **Fiscal Autonomy: Taxing Competencies [1]:** Yogyakarta can introduce taxes as approved by the regional parliament within the bounds of national law. It can set the rate for four pre-allocated taxes. These are minor taxes and their base is given by the national government. **Borrowing Competencies [1]:** Subnational governments including Yogyakarta are allowed to borrow from both domestic and international sources, but there are tight limits on debt-revenue and debt service-revenue rations. There are also ceilings on short term limits and borrowing can only be done for revenue-generating investments. In addition, long- or medium-term borrowing requires prior approval by the ministry of finance. Yogyakarta seems to have no special borrowing regulations and is subject to ex-ante authorization, similar to the provinces. **Financial guarantees [0]:** There are no specific financial guarantees for Yogyakarta. *(Undang-Undang 25/1999; Undang-Undang 33/2004; Undang-Undang 34/2000)*
- **Political Autonomy: Legislature [2]:** Yogyakarta has an elected provincial assembly. **Executive [2]:** Yogyakarta is ruled by its sultan, who after its accession to Indonesia became its gubernor, and its prince, who became its vice-governor. *(Arts. Undang-Undang 3/1950)*

S2.5.4: Uganda (1995-2004)

[Federal or decentralized]: Uganda consists of Kampala and the districts of Uganda. The constitution designates it as decentralized. *(Arts. 5)*

Districts

- **Policy Autonomy: Institutional Depth [2]:** Districts have autonomy, but this is circumscribed by the explicitly-stated central government ability to interfere. District boundaries can be changed at any time by Parliament. Parliament can also create or abolish districts. Districts can furthermore be taken over by the President if two-thirds of Parliament agrees. A veto was hence coded. **Policy Scope [2: Culture, Residual powers]:** Any competence not reserved for the central government is given to the districts. Among the reserved matters for central government are security and defense, banking, taxation, citizenship and immigration, land and resources, holidays, foreign relations and trade, energy policy, transport, the judiciary, education, national surveys, industrial policy, health policy, agricultural policy. It thus appears that the autonomous policy scope of districts is severely circumscribed. *(Arts. 5; 179; 189; Schedule 6)*
- **Fiscal Autonomy: Taxing Competencies [2]:** Districts have the power to levy, charge, collect and appropriate taxes and fees, in particular rents, rates, royalties, stamp duties, cess, and registration fees. This corresponds to the ability to set base and rate of minor taxes. **Borrowing Competencies [1]:** Districts can get conditional grants from the government. With the ex-ante approval of the government, they can also borrow money from other sources. **Financial guarantees [3]:** There is an unconditional grant paid to every district to run local government services. There is furthermore an equalization grant for the least developed districts. *(Arts. 191; 193; 195)*

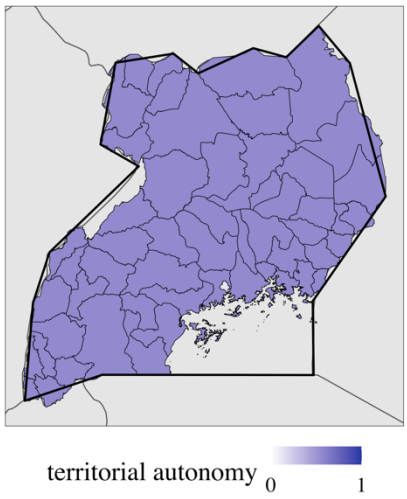


Figure S11. Administrative units and territorial autonomy in Uganda, 2004.

- **Political Autonomy: Legislature [2]:** There are local government councils that are locally elected for five-year terms. **Executive [2]:** There are District Chairpersons that are directly elected. S/he can be removed by a two-thirds vote of the council. S/he appoints an executive committee, although the approval of the council is required. *(Arts. 180; 181; 182; 183; 186)*

Kampala

- **Policy Autonomy: Institutional Depth [1]:** Kampala is directly administered by the central government. **Policy Scope [0]:** Being deconcentrated, Kampala does not have any independent policy scope. *(Art. 5)*
- **Fiscal Autonomy: Taxing Competencies [0]:** Being deconcentrated, Kampala does not have fiscal autonomy. **Borrowing Competencies [0]:** There are no provisions enabling Kampala any borrowing autonomy. **Financial guarantees [3]:** Kampala obtains the same financial guarantees as the other districts. *(Art. 5)*

- **Political Autonomy: Legislature [0]:** Being deconcentrated, Kampala does not have its own legislature. **Executive [0]:** Being deconcentrated, Kampala does not have its own executive. *(Art. 5)*

S2.5.5: Pakistan (1985-1998)

[Federal or decentralized | Autonomous territories]: Pakistan is federal. It consists of several provinces, the capital territory, tribal areas and other states. The Federally Administered Tribal Areas are a quasi-autonomous region. *(Arts. 1; 246; 143)*

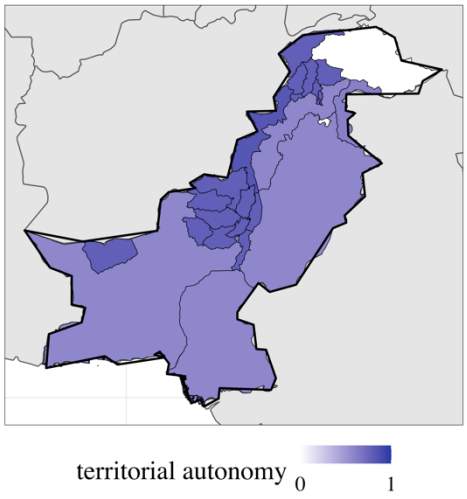


Figure S12. Administrative units and territorial autonomy in Pakistan, 1998.

Provinces

- **Policy Autonomy: Institutional Depth [3]:** Federal legislation is superior to provincial one, but the central government does not seem to have an explicit veto right over provincial decisions, also evidenced by their autonomy in choosing their government representatives freely. **Policy Scope [3: Economy, Culture, Welfare, Police, Residual powers]:** The division of federal and provincial competences is constitutionally regulated via two lists, a federal one and a concurrent one. The provinces have residual powers over any item not included in the lists. They also have their own high court, which is appointed by the President, however. The federal list includes defense, external affairs, citizenship and immigration, post and telecommunication, monetary policy, libraries and museums, research, nuclear energy, quarantine, maritime shipping, aircraft, import and export across customs and inter-provincial trade, insurance law, corporation regulations, economic coordination, federal infrastructure, census, standards, jurisdiction and powers of all courts except the supreme courts, railways, mineral oil and natural gas, industrial development. The concurrent list includes the administration of criminal and civil law, marriage and divorce, bankruptcy laws, arbitration, medicine, environmental pollution and ecology, population planning and social welfare, labor welfare and regulation, trade unions, unemployment insurance, electricity, newspapers, education planning, Islamic education, legal, medical and other professions. Overall, it appears that provincial authority in most fields is slim, but the residual powers do give districts limited autonomy in a multitude of policy fields. *(Arts. 142; 143; 148; 149; 192; Schedule 4)*
- **Fiscal Autonomy: Taxing Competencies [2]:** The federal government is responsible for customs and export duties, excise duties (including salt but not alcohol and narcotics), property succession duties, estate duties, income taxes except agricultural income, corporation taxes, sales and purchase taxes, taxes on the capital value of assets, mineral oil and gas taxes, production taxes and duties, terminal taxes, and fees. Provinces can impose taxes on persons engaged in professions, trades, callings and employments which are not income taxes. The partial control of provinces over income (from agriculture) is not enough to indicate substantial autonomy over major taxes, however. **Borrowing Competencies [2]:** Provinces are free to borrow, but they are only authorized to do so from within Pakistan. The federal government can make loans to provinces or give guarantees for their debt. If there are outstanding loans to the federal government, a province requires the assent of the federal government before making any borrowing. **Financial guarantees [2]:** Taxes on income, sales and purchases, export duty, and other duties are distributed between the central government and the provinces. The final decision rests with the President, however. Income from natural gas and hydropower is to be paid to the provinces where the gas or hydropower plants are situated. There is a commission that seeks to ensure a balanced regional development and regional equity. *(Arts. 156; 160; 161; 163; 167; Schedule 4)*
- **Political Autonomy: Legislature [2]:** Each province has an elected provincial assembly (with 40 members for Baluchistan, 80 for the North West Frontier Province, 240 for the Punjab, 100 for Sind). There are quotas for Christian, Hindu, Sikh, Buddhist, Parsi and Scheduled Castes (specified, but in total 3 in Baluchistan, 3 in NWFP, 8 in Punjab, 9 in Sind). 5% of seats are reserved for women for a specified period. **Executive [0]:** Each province has a governor who is appointed by the President. Each also has a chief minister who is appointed by the governor and who in turn appoints provincial ministers. The governor can only dissolve the assembly on the advice of the chief minister. The governor cannot block any decisions of the assembly. *(Arts. 101; 106; 107; 112; 116; 129; 130; 131; 132)*

Azad Jammu and Kashmir

- **Policy Autonomy: Institutional Depth [2]:** The relationship between Pakistan and Jammu and Kashmir state is determined «in accordance with the wishes of the people of that State». The relationship between Pakistan and Jammu and Kashmir state is determined «in accordance with the wishes of the people of that State». It appears that through various instruments, especially the dominant institution of the Council, the central state retains strong veto rights over Azad Jammu and Kashmir **Policy Scope [4: Economy, Culture, Welfare, Police, Judiciary, Institutions, Residual powers, Community]:** Azad Jammu and Kashmir has a wide policy scope. It has its own supreme court, though its members are appointed by its President. The powers of Azad Jammu and Kashmir's council are explicitly enshrined in a list and include citizenship and immigration, post and telecommunication, nuclear energy, aircraft, copyright, banking, insurance, stock-exchanges, corporation policies, economic planning, highways and major infrastructure, census, standards, railways, mineral oil and natural gas, industrial development, prisons and police, population planning and social welfare, electricity, newspapers, education, and tourism. The powers of the assembly include any other item not on that list, except for powers that are given exclusively to Pakistan: Defense and security, monetary policy, and external affairs. *(Arts. 211; 257; Schedule 4; Azad Jammu and Kashmir Interim Constitution Act (VIII of 1974), Arts. 31, 42)*
- **Fiscal Autonomy: Taxing Competencies [4]:** Azad Jammu and Kashmir has full fiscal autonomy, at least nominally. The council has the right to levy customs and export duties, income taxes except agricultural income, corporation taxes, taxes on the capital value of assets, production taxes and duties, terminal taxes, and minor fees. While the council is partly controlled

by the federal government, this formally gives AJK the authority to set both base and rate of major taxes. **Borrowing Competencies [2]:** It is unclear how much borrowing autonomy Azad Jammu and Kashmir has, as its constitution contains no explicit provision. The same degree was coded as for the other provinces. **Financial guarantees [2]:** Taxes on income, sales and purchases, export duty, and other duties are distributed between the central government and the provinces. The final decision rests with the President, however. Income from natural gas and hydropower is to be paid to the provinces where the gas or hydropower plants are situated. There is a commission that seeks to ensure a balanced regional development and regional equity. *(Arts. 156; 160; 161; Schedule 4)*

- **Political Autonomy: Legislature [1]:** The legislature is of a dual nature: On the one hand, there is an assembly of directly elected representatives of the natives of Azad Kashmir and refugees settled in Pakistan. There are 41 + at least 5 women members. It can be dissolved by the President on the advice of the Prime Minister. On the other, there is the Council, which is also entitled to make laws. As the Council's powers seem supreme and are more prominently enshrined constitutionally, this was coded as the main, indirectly elected and dual legislature. **Executive [1]:** Azad Jammu and Kashmir has a dual executive. On the one hand, a president who is elected by the assembly. Furthermore, a prime minister who is also elected by the assembly and a government of ministers appointed by him. On the other hand, there is the Azad Jammu and Kashmir Council, who consists of the Prime Minister of Pakistan, the President of AJK, five members nominated by the Prime Minister of Pakistan, the Prime Minister of AJK, and six members elected by the assembly. It is the council that has the more far-reaching powers, while the President seems to have more of an administrative role. *(Azad Jammu and Kashmir Interim Constitution Act (VIII of 1974), Arts. 5, 6, 12, 13, 14, 20, 21, 22, 28, 31)*

Federal Capital

- **Policy Autonomy: Institutional Depth [1]:** There are no constitutional provisions dealing with the autonomy of the Federal Capital (Islamabad). The coding from the previous constitutional period, namely deconcentration with virtually no autonomy, was taken over. **Policy Scope [0]:** It appears that the Parliament can make laws as regards the Federal Capital as regards any policy, meaning there is no autonomous policy scope.
- **Fiscal Autonomy: Taxing Competencies [0]:** Being purely deconcentrated areas, the Federal Capital has no fiscal autonomy. **Borrowing Competencies [0]:** Being purely deconcentrated areas, the Federal Capital has no borrowing autonomy. **Financial guarantees [2]:** The federal capital appears to obtain the same financial guarantees as the other states. *(Arts. 156; 160; 161; 163; 167; Schedule 4)*
- **Political Autonomy: Legislature [0]:** Being purely deconcentrated areas, the Federal Capital has no independent executive. **Executive [0]:** Being purely deconcentrated areas, the Federal Capital Territories have no independent legislature.

Federally-administered tribal Areas (in Baluchistan and North-West Frontier)

- **Policy Autonomy: Institutional Depth [3]:** The federally-administered tribal areas in Baluchistan and the North-West Frontier Province include those adjoining Peshawar, Kohat, Bannu and Dera Ismail Khan districts, Bajaur, Orakzai, Mohmand, Khyber, Kurram, North Waziristan and South Waziristan Agencies. Constitutionally, they are under an unclear legal status, officially under executive authority of the Province of West Pakistan. According to the constitution, no law made by the federal or provincial state applies to any tribal area. It appears, however, that the governor, with approval from the president, has the power to make ad-hoc regulations and rule on which laws should apply. The president can at any time dissolve a tribal area. Legally, they are governed through the Frontier Crimes Regulation of 1901, which Pakistan has left in place following its independence and which gives them a large degree of autonomy. It is a form of indirect rule, whereby the tribal areas are free to govern themselves under oversight from the local governor. **Policy Scope [4: Economy, Culture, Welfare, Police, Judiciary, Institutions, Residual powers, Community]:** The tribal areas have far-reaching autonomy in civil and criminal law and most federal laws do not apply to them. It appears they even have local migration competences. *(Arts. 246; Frontier Crimes Regulation of 1901)*
- **Fiscal Autonomy: Taxing Competencies [4]:** As federal laws do not normally apply to them, tribal areas are coded as having full fiscal autonomy. **Borrowing Competencies [3]:** As federal laws do not normally apply to them, tribal areas are coded as having full borrowing autonomy. **Financial guarantees [2]:** The federally-administered tribal areas appear to obtain the same financial guarantees as the provinces. *(Arts. 156; 160; 161; 163; 167; Schedule 4)*
- **Political Autonomy: Legislature [2]:** Tribal areas have their own informal legislature, a large, round-table-style Jirga. **Executive [1]:** Tribal areas have their own executive, the maliki, who is the link between the local agent of the federation and the tribal areas. This was coded as a dual executive.

Provincially-administered tribal Areas (in Baluchistan and North-West Frontier)

- **Policy Autonomy: Institutional Depth [3]:** The provincially-administered tribal areas in Baluchistan and the North-West Frontier Province include the Tribal Area in Kohistan district, Malakand Protected Area, the Tribal Area adjoining Mansehra district, Zhob district, Loralai district (excluding Duki Tehsil), Dalbandin Tehsil of Chagai district and Marri and Bugti tribal territories of Sibi district. Constitutionally, they are under an unclear legal status, officially under executive authority of the Province of West Pakistan. According to the constitution, no law made by the federal or provincial state applies to any tribal area. It appears, however, that the governor, with previous approval from the president, has the power to make ad-hoc regulations and rule on which laws should apply. The president can at any time dissolve a tribal area. Legally, they are governed through the Frontier Crimes Regulation of 1901, which Pakistan has left in place following its independence and which gives them a large degree of autonomy. It is a form of indirect rule, whereby the tribal areas are free to govern themselves under oversight from the local governor. It appears that, in contrast to the federally-administered ones, the provincially-administered tribal areas are more integrated legally into Pakistan, with a hybrid of «settled» and tribal law being the rule of the land. Citizens have the right to vote and a normal court system as well as other institutions that prevail in the rest of the country. **Policy Scope [3: Economy, Culture, Welfare, Police, Judiciary, Institutions, Residual powers]:** The tribal areas have far-reaching autonomy in civil and criminal law and most federal laws do not apply to them. It appears they even have local migration competences. *(Arts. 246; Frontier Crimes Regulation of 1901)*
- **Fiscal Autonomy: Taxing Competencies [4]:** As federal laws do not normally apply to them, tribal areas are coded as having full fiscal autonomy. **Borrowing Competencies [3]:** As federal laws do not normally apply to them, tribal areas are

coded as having full borrowing autonomy. **Financial guarantees [2]:** The provincially-administered tribal areas appear to obtain the same financial guarantees as the provinces. *(Arts. 156; 160; 161; 163; 167; Schedule 4)*

- **Political Autonomy: Legislature [2]:** Tribal areas have their own informal legislature, a large, round-table-style Jirga. **Executive [1]:** Tribal areas have their own executive, the maliki, who is the link between the local agent of the federation and the tribal areas. This was coded as a dual executive.

Former Princely States of Amb, Chitral, Dir, and Swat

- **Policy Autonomy: Institutional Depth [3]:** Constitutionally, the former princely states of Amb, Chitral, Dir and Swat are subsumed under the category of (provincially-administered) «Tribal Areas» and treated equivalently. They are «provincially administered». According to the constitution, no law made by the federal or provincial state applies to them. It appears, however, that the governor, with previous approval from the president, has the power to make ad-hoc regulations and rule on which laws should apply. The president can at any time dissolve a tribal area, and thus also the former princely states. **Policy Scope [3: Economy, Culture, Welfare, Police, Judiciary, Institutions, Residual powers]:** The policy scope of the former princely states was coded equivalently to the provincially-administered tribal areas that are in the same legal category. *(Art. 246)*
- **Fiscal Autonomy: Taxing Competencies [4]:** The fiscal autonomy of the former princely states was coded equivalently to the one of the provincially-administered tribal areas which are in the same legal category. **Borrowing Competencies [3]:** The borrowing autonomy of the former princely states was coded equivalently to the one of the provincially-administered tribal areas which are in the same legal category. **Financial guarantees [2]:** The formerly princely states appear to obtain the same financial guarantees as the provinces. *(Arts. 156; 160; 161; 163; 167; Schedule 4)*
- **Political Autonomy: Legislature [2]:** The legislature of the former princely states was coded equivalently to the one of the provincially-administered tribal areas which are in the same legal category. It appears that the princely states were able to keep their previous institutions at least intermittently. **Executive [1]:** The executive of the former princely states was coded equivalently to the one of the provincially-administered tribal areas which are in the same legal category. It appears that the princely states were able to keep their previous institutions at least intermittently.

S2.5.6: Sudan (2005-2010)

[Federal or decentralized | Autonomous territories]: Sudan is constitutionally a decentralized state with substantial autonomy provided to the states. South Sudan is a superordinate autonomous region that is granted extensive self-government and that stands outside of the federal arrangement. Southern Kordofan and Blue Nile States are given special autonomy rights. Abyei is an administrative area that is granted special autonomy. *(Preamble; Arts. 2; 24; 26; 159; 183; c; d; e; Schedule sa; b)*

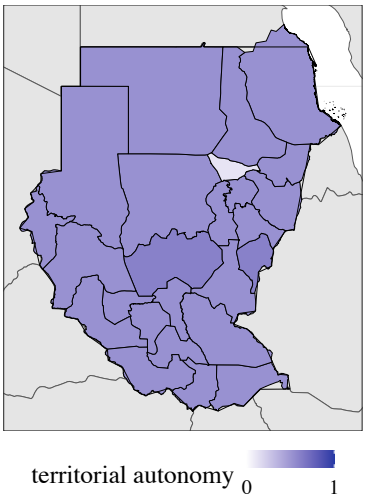


Figure S13. Administrative units and territorial autonomy in Sudan, 2010.

States

- **Policy Autonomy: Institutional Depth [3]:** The constitution foresees a collaborative federalism, with the states being the primary level of devolution, at least in the country's North. The constitutions of the states as well as their laws have to comply with the national constitution. Their boundaries can be determined and amended by the National Legislature. State powers can be limited by the President in a state of emergency. No veto was hence coded. **Policy Scope [3: Economy, Culture, Welfare, Police, Judiciary, Institutions]:** The distribution of powers between the different levels of government is regulated via several lists of competences The national powers include defence, foreign affairs, citizenship and immigration, currency and monetary policy, the national police, postal services, aviation, maritime shipment, national natural resources, standards, intellectual property rights, international treaties, inter-state and international transport, national economic policy and planning. The state list includes the drafting of their constitutions, police and prisons, local government, state media, social welfare including pensions, civil service, state judiciary, state land and resources, culture and religion, health care, including hospitals, registration of marriage, death and divorce, primary and secondary schools, agriculture, intrastate transport and roads, population policy and family planning, pollution control, town and rural planning, traditional and customary law, and irrigation. Concurrent powers include the economic and social development in Southern Sudan, legal professions, tertiary education, health policy, urban development, trade, commerce, banking and insurance, river transport, electricity generation, environmental protection, relief and reconstruction, financial and economic policies, women and gender issues, pastures, land and tenure and usage. Residual powers are not clearly defined, with the simple provision that they should be dealt with «according to their nature». *(Arts. 3; 25; 26; 177; 178; 179; 180; 181; 211; Schedule C; Schedule D; Schedule E; Schedule F)*
- **Fiscal Autonomy: Taxing Competencies [3]:** Some taxes are reserved for the central government, some for the states. The federal government can levy national personal income taxes, corporate profit tax, custom duties and import taxes, sea-ports and airport revenue, service charges, oil revenues, value added taxes on goods and services, and excise duties. The states can levy state land property tax and royalties, service charges, licenses, state personal income tax, tourism levies, stamp duties, agricultural taxes, excise duties, and others. While income taxes are a major tax, it appears that in combination with the national income tax, this is a change in rate rather than autonomy over its base. **Borrowing Competencies [3]:** States can loan and borrow. There are some restrictions by the Central Bank, but foreign borrowing is explicitly allowed. Borrowing must not undermine «national macroeconomic policies» and be «consistent with the objective of maintaining external financial viability. **Financial guarantees [2]:** The state enhances regional economic integration. Oil revenue is to be shared on a 50-50 basis between Southern Sudan and the states in Northern Sudan. All oil producing states are further entitled to at least 2% of the oil revenue. There are provisions for the equitable sharing of resources between the states, with an obligation to

transfer wealth to the least developed areas. The national government is further obliged to provide further financial assistance. *(Arts. 10; 32; 185; 193; 195; 200; 203)*

- **Political Autonomy: Legislature [1]:** Each state has a legislature that is directly elected. Prior to elections to be held no later than 4 years after the promulgation of the constitution (effectively in 2010), the legislature has to be composed of representatives of the National Congress Party (70% in the North, 10% in the South), the Sudan People's Liberation Movement (70% in the South, 10% in the North) and 20% by other local forces. **Executive [0]:** Each state has a Governor who is directly elected; s/he can be removed by a three-quarters majority in the legislature. The Governor in turn appoints a state council of ministers. Prior to elections to be held no later than 4 years after the promulgation of the constitution (effectively in 2010), governors are appointed by the President of the Republic in consultation with the First Vice President. In Southern Sudan, the President of Southern Sudan in consultation with his Vice President appoints them. At least one Governor and one Vice Governor in Southern Sudan has to be a nominee of the National Congress Party. Furthermore, in the same period, the government has to be composed of representatives of the National Congress Party (70% in the North, 10% in the South), the Sudan People's Liberation Movement (70% in the South, 10% in the North) and 20% by other local forces. *(Arts. 178; 179; 184; 216)*

Southern Kordofan and Blue Nile States

- **Policy Autonomy: Institutional Depth [3]:** Southern Kordofan and Blue Nile states have special regulations, as given by the Agreement on the Resolution of the Conflict in Southern Kordofan and Blue Nile States. Overall, the autonomy given to them in the agreement is similar as the one given to other states, however. **Policy Scope [3: Economy, Culture, Welfare, Police, Judiciary, Institutions]:** It appears that Southern Kordofan and Blue Nile States have the same powers as the other states. *(Arts. 179; 180; 181; 182; Schedule C; Schedule D; Schedule E; Schedule F; Southern Kordofan and Blue Nile States Peace Agreement, 2004, Schedule A, Schedule B)*
- **Fiscal Autonomy: Taxing Competencies [3]:** Southern Sudan and Blue Nile states appear to have the same fiscal autonomy as the other states. **Borrowing Competencies [3]:** Southern Sudan and Blue Nile states appear to have the same borrowing autonomy as the other states. **Financial guarantees [3]:** Oil revenue is to be shared on a 50-50 basis between Southern Sudan and the states in Northern Sudan. Southern Kordofan and Blue Nile each get 2% of the oil produced in the given state. There are provisions for the equitable sharing of resources between the states, with an obligation to transfer wealth to the least developed areas. The national government is further obliged to provide further financial assistance. *(Arts. 32; 185; 192; 193; 195; 203; Southern Kordofan and Blue Nile States Peace Agreement, 2004, Art. 8)*
- **Political Autonomy: Legislature [1]:** Prior to elections to be held no later than 4 years after the promulgation of the constitution (effectively in 2010), the legislatures in Southern Kordofan and Blue Nile states have to be composed in accordance with the peace agreement. The agreement states that the legislature be composed of 55% going to the National Congress Party and 45% to the SPLM. After the transition period, the state legislature is directly elected. **Executive [1]:** Prior to elections to be held no later than 4 years after the promulgation of the constitution (effectively in 2010), the executives in Southern Kordofan and Blue Nile states have to be composed in accordance with the peace agreement. The agreement states that the legislature be composed of 55% going to the National Congress Party and 45% to the SPLM. Furthermore, the governorship is to rotate between the NCP and the SPLM during the transition period. After the transition period, the governor shall be directly elected and in turn appoint the ministers. *(Arts. 184; 216; Southern Kordofan and Blue Nile States Peace Agreement, 2004, Arts. 4, 5, 6, 11)*

Khartoum

- **Policy Autonomy: Institutional Depth [1]:** Khartoum is guaranteed its own representative administration. It appears that this is, however, a deconcentrated unit controlled by the central government. **Policy Scope [0]:** Due to its deconcentrated nature, Khartoum does not have any independent policy scope. *(Arts. 152; 153)*
- **Fiscal Autonomy: Taxing Competencies [0]:** Due to its deconcentrated nature, Khartoum does not have any fiscal autonomy. **Borrowing Competencies [0]:** Due to its deconcentrated nature, Khartoum does not have any borrowing autonomy. **Financial guarantees [2]:** Khartoum appears to have the same financial guarantees as the other states. *(Art. 153)*
- **Political Autonomy: Legislature [0]:** There are no provisions for any independent legislature in Khartoum. **Executive [0]:** There is to be an administration of Khartoum which is «representative» and in which all the parties signatory to the CPA are represented. The representation is, however, decided by the Sudanese Presidency. *(Art. 153)*

Abyei

- **Policy Autonomy: Institutional Depth [1]:** Abyei is a special administrative area. It can, in a referendum, choose whether to join Souther Sudan or retain its special status in the North. It appears that its status if fully in the hands of the Sudanese presidency, which can determine its powers fully. Due to the simultaneous initial appointment of its leadership by the national state, a deconcentrated status was coded. **Policy Scope [1: Secession]:** The Abyei executive council is tasked with supervising security and with proposing development and urbanization projects. The Area Council is tasked with issuing local enactments, especially on customary matters, and on reconstruction, development and urbanization plans. There is to be a referendum in Abyei whether it seeks to join Southern Sudan or retain its status in the North. Due to its deconcentrated status, Abyei has only secession rights, but no other autonomous policy scope. *(Arts. 183; Abyei Agreement, 2004, Arts. 1.3, 2.5, 4.3)*
- **Fiscal Autonomy: Taxing Competencies [0]:** Due to its deconcentrated nature, Abyei does not have any fiscal autonomy. **Borrowing Competencies [0]:** Due to its deconcentrated nature, Abyei does not have any borrowing autonomy. **Financial guarantees [4]:** Net oil revenues in Abyei are divided as follows: 50% for the national government, 42% to the government of Southern Sudan, 2% to Bahr el Ghazal, 2% to Western Kordofan, 2% to the Ngok Dinka and 2% to the Misseriya people. There are provisions for the equitable sharing of resources between the states, which apply to the Abyei special administrative region especially, with an obligation to transfer wealth to the least developed areas. The national government is further obliged to provide further financial assistance. *(Arts. 32; 185; 192; 195)*
- **Political Autonomy: Legislature [0]:** There is to be an Abyei Area Council that is elected and composed of not more than twenty members. Prior to elections, it is to be appointed by the Sudanese Presidency. **Executive [0]:** There is to be a local

Abyei executive council, to be elected by the residents of Abyei. Prior to the elections, the initial members are, however, appointed by the national Presidency. *(Abyei Agreement, 2004, Arts . 1.2, 2.2, 4.1, 4.12)*

South Sudan

- **Policy Autonomy: Institutional Depth [3]:** The constitution creates an additional, supra-level government in Southern Sudan that is superordinate to the states in its area. The constitution of South Sudan as well as its laws have to comply with the national constitution. The boundaries of Southern Sudan are fixed as per its boundaries of January 1, 1956. **Policy Scope [4: Economy, Culture, Welfare, Military, Police, Judiciary, Institutions, Residual powers, Secession]:** South Sudan has the same powers as the states and can give itself its own interim constitution. It appears that it also has residual powers. Southern Sudan also has its own autonomous judiciary. It also has secession rights, with the issue to be determined in a local referendum. Furthermore, it also has its own police, security and military forces (in the interim period) and can coordinate over the states in its area with regards to health, welfare, police, prisons, state public services, the judiciary, business and trade, tourism, environmental policy, resources, electricity, and local government. *(Arts. 3; 26; 132; 145; 159; 160; 161; 170; 171; 172; 177; 219; 222; Schedule A; Schedule B; Schedule C; Schedule D; Schedule E; Schedule F; Comprehensive Peace Agreement, 2005; South Sudan Interim Constitution, 2005)*
- **Fiscal Autonomy: Taxing Competencies [3]:** In addition to the taxes given to the states, South Sudan can also levy additional taxes and service charges, taxes and levies on small and medium businesses, excise duties on luxury consumable, personal income tax in Southern Sudan, and others. While income taxes are a major tax, it appears that in combination with the national income tax, this is a change in rate rather than autonomy over its base. **Borrowing Competencies [3]:** South Sudan can loan and borrow. There are some restrictions by the Central Bank, but foreign borrowing is explicitly allowed. Borrowing must not undermine «national macroeconomic policies» and be «consistent with the objective of maintaining external financial viability. **Financial guarantees [4]:** The state enhances regional economic integration. There is a Southern Sudan Reconstruction and Development Fund to construct infrastructure. Oil revenue is to be shared on a 50-50 basis between Southern Sudan and the states in Northern Sudan. Net oil revenues in Abyei are divided as follows: 50% for the national government, 42% to the government of Southern Sudan, 2% to Bahr el Ghazal, 2% to Western Kordofan, 2% to the Ngok Dinka and 2% to the Misseriya people. *(Arts. 10; 32; 185; 192; 193; 194; 195; 200; 203; Comprehensive Peace Agreement, 2005, Chapter 3)*
- **Political Autonomy: Legislature [1]:** There is to be a Southern Sudan Legislative Assembly which is directly elected and which contains a number (at least 25%) of women and possibly quotas for other categories to be determined by law. Prior to elections, the assembly is appointed by the President of Southern Sudan, with the Sudan People's Liberation Movement getting 70% of the seats, the National Congress Party 15% and other Southern political forces 15%. **Executive [1]:** The president of Southern Sudan is to be elected directly for a five year term. He in turn appoints a vice president, who needs to be confirmed by the assembly with a two-thirds majority, and a council of ministers. Prior to elections, the Sudan People's Liberation Movement's Chairman is the President. Within the government, the Sudan People's Liberation Movement gets 70% of the seats, the National Congress Party 15% and other Southern political forces 15%. *(Arts. 160; 163; 164; 165; 169; 176; South Sudan Interim Constitution, 2005, Art. 107; South Sudan Interim Constitution, 2005, Arts. 57, 58)*

S2.6: Territorial autonomy data comparison and validation

My hypotheses require data on the degree of autonomy for each administrative unit year, for each multi-ethnic country in the time period between 1988 and 2018. Relying on fiscal decentralization data (e.g. IMF 2022; World Bank 2001; OECD/UCLG 2022; cf. Treismann 2007) is hence not possible, as these are generally collected on the country-level, may not cover the most conflict-prone countries, and feature missing years especially during periods of conflict. While the more widely-used and impressively detailed Regional Authority Index (Hooghe et al. 2016) is available at the unit year-level, it poses problems for my purpose, as it does not provide information for many of the most conflict-prone countries either. For example, it does not cover the African continent. The measure for group-based autonomy provided by the Ethnic Power Relations Dataset (Vogt et al. 2015) is available for all countries in my analysis. However, it is coded on the group-, rather than unit-level, often does not cover territorial autonomy arrangements whose boundaries are not directly aligned with ethnic settlement areas (e.g., federalism in Argentina), and, most importantly, would make it difficult to assess the status of second-order minorities in their respective regions. There are other impressive data collections on territorial autonomy, whose use would not be feasible for my purpose for similar reasons. For instance, Niessen's (2022) impressive and detailed data collection focuses on Belgium, Spain, and the United Kingdom. Data on federalism and autonomy in the comprehensive Database of Political Institutions (Beck et al. 2001) is available only at the country-level and would not permit me to distinguish between different units' degree of autonomy. Finally, Benedikter's (2007) list of "World's Modern Autonomy Systems" predominantly focuses on arrangements that are limited to part of the state territory.

Relying on standardized, formal data from state constitutions and autonomy statutes hence allows me to collect fine-grained information on each unit's degree of autonomy in a given year, while also guaranteeing that the collection of this information remains **feasible and based on standardized, legal sources**. Nevertheless, relying on de-jure institutional data may pose its own problems. For example, it might systematically overestimate the degree of autonomy in cases where de-jure autonomy is heavily circumscribed by dominant or authoritarian governments in practice.

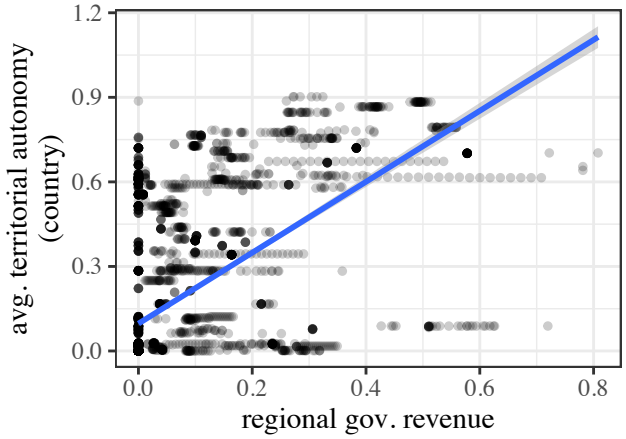
To address this issue, I probe the validity of my data by **comparing it with existing information from three established sources**: 1. country-level fiscal decentralization in terms of regional revenue and expenditure expressed as a percentage of total government revenue and expenditure, based on data from the IMF, World Bank, and the OECD/UCLG; 2. an alternative unit-level autonomy index given by the Regional Authority Index self-rule dimension; and 3. de-facto ethnic group-level autonomy based on EPR.

S2.6.1: Comparison with fiscal decentralization data

First, I compare my coding with two country-level measures for **fiscal decentralization that capture the de-facto revenue and expenditure** accruing to regional government tiers, expressed as a percentage {0,1} of total government revenue and expenditure. To create these measures, and to maximize spatial coverage, I rely on information from three sources: The **International Monetary Fund (2022) Government Finance Statistics, the World Bank (2001) Decentralization Database, and the OECD/UCLG (2022) World Observatory on Subnational Government Finance and Investment Database**. For each country year, I employ IMF (2022) data if available; otherwise, I use World Bank (2001) data that is itself based on earlier data by the IMF with wider geographic coverage; finally, if neither was available, I rely on the new, up-to-date data provided by OECD UCLG. In a subsequent step, I inter- and extrapolate missing years, but only do so for consecutive time periods during which the same constitution and the system type (unitary, federal, autonomous regions) remained in place. This ensures, for example, that I do not extrapolate high degrees of fiscal decentralization to previous periods of unitary state structures and vice versa.

I start by comparing these country-level measures for fiscal decentralization with my territorial autonomy coding. For this purpose, I need to aggregate my unit-level measure territorial autonomy onto the country-year level. I do so by calculating the average, size-weighted territorial autonomy across all units. The correlations between my measure and the two fiscal decentralization measures are moderately high (**r = 0.60 with revenue and r = 0.63 with expenditure**). Figure S14 graphically shows this correlation, by plotting each country year as a separate dot.

a) regional government revenue



b) regional government expenditure

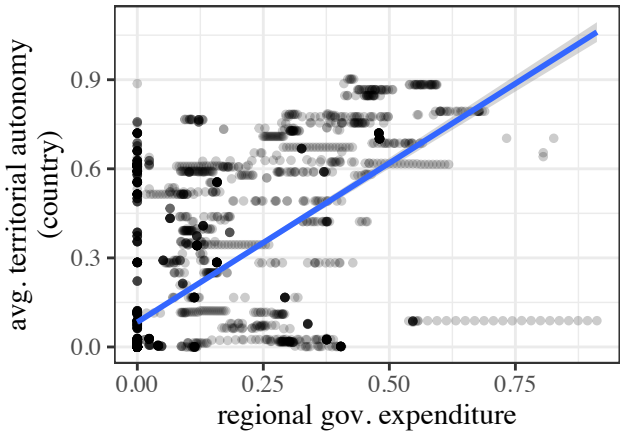


Figure S14. Correlation between regional government revenue/expenditure.

Note: Expressed as a fraction of total government revenue/expenditure) and average territorial autonomy across all administrative units (population-weighted average).

For my robustness checks (see appendix 3.7.3), I "transfer" this variable to the unit level, on which I conduct my analyses. I do so by taking it over for all units with any autonomous governing body (executive or legislature), which can conceivably profit from fiscal competencies the state provides to regional administrations. Conversely, I set it to 0 for all other units that do not have an autonomous governing body. Table S5 shows the correlation of my original unit-level *territorial autonomy* index with the resulting, adjusted unit-level measures for fiscal decentralization. Again, the correlations remain high, even when only considering units with an autonomous government (table S5, row 1, columns 2-5). Overall, these moderately high correlations again reassure me that my coding taps into a similar overarching concept as these more established measures, although differences are to be expected given the different underlying assumptions and approaches (see Treisman 2007).

Table S5. Correlation of unit-level territorial autonomy with fiscal decentralization and regional authority index self-rule.

	Territorial autonomy	Revenue (all)	Expenditure (all)	Revenue (autonomous)	Expenditure (autonomous)	Self-rule (RAI)
Territorial autonomy	1	0.734	0.784	0.450	0.453	0.448
Revenue (all)	0.734	1	0.950	NA	NA	0.287
Expenditure (all)	0.784	0.950	1	NA	NA	0.259
Revenue (autonomous)	0.450	NA	NA	1	0.914	0.145
Expenditure (autonomous)	0.453	NA	NA	0.914	1	0.085
Self-rule (RAI)	0.448	0.287	0.259	0.145	0.085	1

S2.6.2: Comparison with regional authority index (self-rule dimension)

Second, I compare my territorial autonomy measure with the unit-level **Regional Authority Index (RAI) self-rule dimension** (Hooghe et al. 2016). As stated in the main article, this measure has a similar underlying conceptual basis as my variable. However, my measure focuses on each unit's formal de-jure competencies, whereas the RAI self-rule dimension is more sensitive to changes in the de-facto autonomy enjoyed by a unit. For instance, it considers central government interference, even if this contradicts the formal autonomy guarantees provided in the constitution or entailed autonomy statutes. To compare my territorial autonomy variable with RAI self-rule, I normalize the latter to a value between 0 and 1 by dividing it by 18. Table S4 shows that the unit-level correlation between my coding and this more established measure is again moderately high (**r = 0.45**, see row 1, column 6). While this points to differences, possibly due to my more legalistic coding that omits de-facto infringements on autonomy

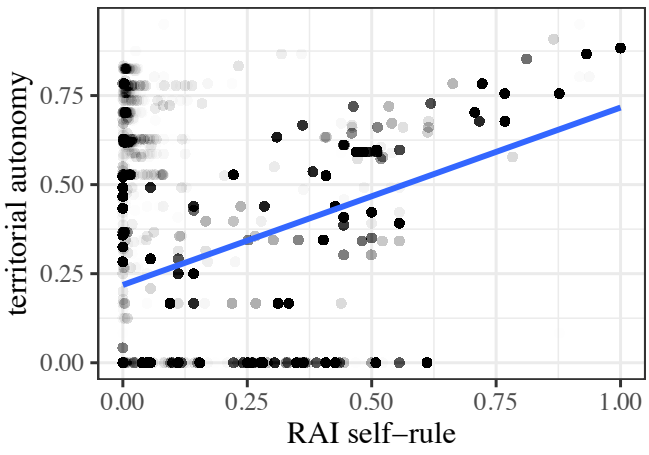


Figure S15. Correlation between RAI self-rule dimension and territorial autonomy.

and due to differences in aggregation, this again reassures me that my measure taps into a similar overarching dimension of autonomy as the more established Regional Authority Index. Figure S15 shows each unique unit year's degree of autonomy coded by my measure and its corresponding value on the Regional Authority Index self-rule dimension.

S2.6.3: Comparison with de-facto group autonomy

Finally, I compare my unit-level, institutional measure for the degree of autonomy with **information provided by the Ethnic Power Relations Dataset** (Vogt et al. 2015) **on group-wise de-facto autonomy**. Conceptually, this measure more substantially diverges from my variable. Besides focusing on the ethnic group rather than territorial units, it considers the de-facto, and not de-jure degree of autonomy, and does so by coding this in a dichotomous, rather than continuous manner. Moreover, in many cases, ethnic groups are not coded as autonomous by EPR if territorial units are not aligned with ethnic boundaries, for example if a national (non-ethnic) federal system is in place (e.g., Argentina). Hence, substantial differences are to be expected between this measure and my territorial autonomy variable. For the purpose of this comparison, I calculate the local size-weighted, group-wise average degree of my territorial autonomy measure and compare it with the dichotomous measure coded by EPR. In spite of the expected differences, the point-biserial correlation between the two measures at the group-year level reaches a moderately high level: **r = 0.43**. Reassuringly, this points to a statistically significant difference in the degree of territorial autonomy between groups that EPR codes as autonomous and those it codes as non-autonomous at the 0.01-level. Figure S16 graphically shows this correlation, by plotting each group year as a separate dot.

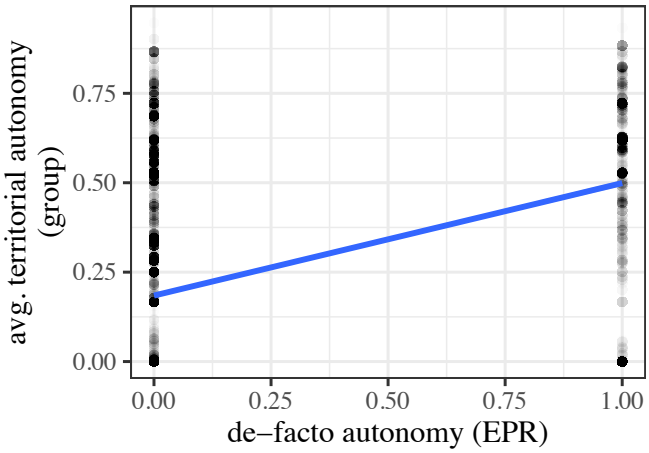


Figure S16. Correlation between group year-level de-facto autonomy and group-wise average territorial autonomy across all administrative units (population-weighted average).

S2.7: Aggregate territorial autonomy scores in sample

Table S6. List of autonomy tiers and scores in sample.

Albania
Regions [0.25] (2000-2018)
Algeria
Territorial collectivities [0.25] (1988)
Territorial collectivities [0.17] (1989-2018)
Angola
Provinces [0.18] (1992-2009)
Provinces [0.29] (2010-2018)
Australia
Northern Territory [0.74] (1988-1994)
States [0.91] (1988-1994)
Capital [0.74] (1989-1994)
Capital [0.68] (1995-2018)
Northern Territory [0.68] (1995-2018)
States [0.85] (1995-2018)
Austria
States [0.78] (1988-1996)
States [0.73] (1997-2018)
Belgium
Provinces [0.42] (1993-2018)
Bhutan
Dzongkhags [0.36] (2005-2018)
Bolivia
Departments [0.17] (1994-2008)
Departments [0.59] (2009-2018)
Departments [0.67] (2009-2018)
Gran Chaco [0.52] (2009-2018)
Bosnia
Cantons [0.72] (1995-2018)
Republika Srpska [0.87] (1995-2018)
Brcko [0.66] (1999-2007)
Brcko [0.78] (2008-2018)
Brazil
Distrito Federal [0.69] (1988-2018)
States [0.76] (1988-2018)
Cameroon
Regions [0.28] (1996-2018)
Canada
Northwest Territories [0.67] (1988-2018)
Provinces [0.78] (1988-2018)
Quebec [0.78] (1988-1990)
Yukon [0.58] (1988-2001)
Quebec [0.83] (1991-2018)
Nunavut [0.67] (1999-2018)
Yukon [0.64] (2002-2018)
Cape Verde
Local authorities [0.42] (1992-1998)
Praia [0.09] (1992-2018)
Central African Republic
Prefectures [0.17] (2015-2018)
Chad
Regions [0.53] (1996-2018)
Chile
Regions [0.21] (1988-1990)
Regions [0.29] (1991-2004)
Regions [0.31] (2005-2008)
Regions [0.4] (2009-2018)
China
Autonomous Regions [0.53] (1988-2018)
Colombia
Capital District [0.49] (1991-2018)
Territorial entities [0.6] (1991-2018)
Territorial entities [0.64] (1991-2018)
Comoros
Islands [0.29] (1988-1991)
Islands [0.44] (1992-1995)
Islands [0.4] (1996-2000)
Autonomous Islands [0.59] (2001-2008)
Autonomous Islands [0.52] (2009-2017)
Autonomous Islands [0.5] (2018)
Congo
Regions [0.08] (1988-1990)
Croatia
Autonomous Districts [0.49] (1992-1996)
Czechoslovakia
Czech Socialist Republic [0.57] (1988-1989)
Slovak Socialist Republic [0.57] (1988-1989)
Czech Socialist Republic [0.73] (1990-1992)
Slovak Socialist Republic [0.73] (1990-1992)
Democratic Republic of the Congo
Regions [0.33] (1994-1996)
Provinces [0.69] (2005-2010)
Provinces [0.52] (2011-2018)
Ecuador
Provinces [0.39] (1988-1995)
Galapagos [0.12] (1988-1995)
Provinces [0.39] (1996-1997)
Galapagos [0.38] (1996-1997)
Provinces [0.3] (1998-2007)
Galapagos [0.39] (1998-2007)
Provinces [0.41] (2008-2018)
Galapagos [0.39] (2008)
Galapagos [0.31] (2009-2018)
Egypt
Governorates [0.33] (2007-2010)
Governorates [0.33] (2012-2018)
Ethiopia
Autonomous Regions [0.17] (1988-1990)
Special Woredas and Zones [0.38] (1994-2018)
States [0.72] (1994-2018)
Fiji
Rotuma [0.42] (1990-2008)
Rotuma [0.42] (2013-2018)
Finland
Aland [0.79] (1988-2018)
Gambia
Local administrations [0.44] (1996-2018)
Georgia
Abkhazia [0.41] (1991)
Adjaria [0.41] (1991)
Abkhazia [0.46] (1992-1994)
Adjaria [0.46] (1992-1994)
Abkhazia [0.38] (1995-1999)
Adjaria [0.46] (1995-2003)
Abkhazia [0.37] (2000-2018)
Adjaria [0.28] (2004-2018)
Ghana
Regions [0.25] (1992-2018)
Guatemala
Departments [0.29] (1988-2018)
Guinea-Bissau
Regions [0.19] (1988-1995)
Regions [0.25] (1996-2018)
Haiti
Departments [0.36] (1989-2018)
India
Jammu and Kashmir [0.64] (1988-2018)
Mizoram [0.63] (1988-2018)
Nagaland [0.63] (1988-2018)
Puducherry UT [0.32] (1988-2018)
States [0.59] (1988-2018)
Arunachal Pradesh, Assam, Jammu and Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Himachal Pradesh, Uttarakhand [0.63] (1988-2018)
Tribal Areas [0.12] (1988-2018)
Tribal Areas (in Assam, Meghalaya, Tripura, and Mizoram) [0.37] (1988-2018)
Union Territories [0.04] (1988-2018)
Delhi UT [0.31] (1991-2018)
Indonesia
Yogyakarta [0.55] (1988-2000)
Aceh [0.49] (2001-2003)
Papua [0.44] (2001-2003)
Yogyakarta [0.45] (2001-2003)
Aceh [0.54] (2004-2005)
Papua [0.48] (2004-2018)
Yogyakarta [0.49] (2004-2018)
Aceh [0.6] (2018)
Iraq
Governorates [0.43] (2004)
Governorates [0.56] (2005-2018)
Italy
Bozen-Südtirol/Bolzano-Alto Adige [0.61] (1988-1996)
Friuli-Venezia Giulia [0.61] (1988-1996)
Ordinary Regions [0.57] (1988-1989)
Sardegna [0.61] (1988-1996)
Sicilia [0.61] (1988-1996)
Trentino [0.61] (1988-1996)
Valle d'Aosta [0.61] (1988-1996)
Ordinary Regions [0.57] (1990-1996)
Bozen-Südtirol/Bolzano-Alto Adige [0.64] (1997)
Friuli-Venezia Giulia [0.64] (1997)
Ordinary Regions [0.61] (1997)
Sardegna [0.64] (1997)
Sicilia [0.64] (1997)
Trentino [0.64] (1997)
Valle d'Aosta [0.64] (1997)
Bozen-Südtirol/Bolzano-Alto Adige [0.68] (1998-2000)
Friuli-Venezia Giulia [0.68] (1998-2000)
Ordinary Regions [0.65] (1998)
Sardegna [0.68] (1998-2000)
Sicilia [0.68] (1998-2000)
Trentino [0.68] (1998-2000)
Valle d'Aosta [0.68] (1998-2000)
Ordinary Regions [0.65] (1999-2000)
Bozen-Südtirol/Bolzano-Alto Adige [0.74] (2001-2018)
Friuli-Venezia Giulia [0.74] (2001-2018)
Ordinary Regions [0.7] (2001-2018)
Sardegna [0.74] (2001-2018)
Sicilia [0.74] (2001-2018)
Trentino [0.74] (2001-2018)
Valle d'Aosta [0.74] (2001-2018)
Kenya
Counties [0.59] (2010-2018)
North Macedonia
Municipalities [0.43] (1991-2000)
Municipalities [0.47] (2001-2004)
Municipalities [0.52] (2005-2018)
Madagascar
Provinces [0.29] (1988-1991)
Provinces [0.48] (1992-1994)
Provinces [0.56] (1995-1997)
Autonomous Provinces [0.53] (1998-2006)
Regions [0.42] (2007-2009)
Provinces [0.5] (2010-2018)
Malaysia
Federal Territories [0.17] (1988-2018)
Negeri [0.61] (1988-2018)
Sabah [0.72] (1988-2018)
Sarawak [0.72] (1988-2018)
Maldives
Atolls [0.57] (2008-2018)
Rodrigues [0.38] (2001-2018)
Mexico
Distrito Federal [0.27] (1988-1995)
States [0.66] (1988-1995)
Distrito Federal [0.28] (1996)
States [0.68] (1996)
Distrito Federal [0.61] (1997-2018)
States [0.68] (1997-2018)
Moldova
Gagauzia [0.39] (1995-2018)
Transnistria [0.28] (2005-2018)
Mongolia
Aimak and Ulan Bator [0.28] (1992-2018)
Morocco
Regions [0.38] (2011-2018)

Table S6. List of autonomy tiers and scores in sample [continued].

Myanmar
Regions [0.36] (2008-2018)
States [0.36] (2008-2018)
Self-administered areas [0.34] (2011-2018)
Nepal
Zones [0.17] (1988-1989)
Provinces [0.46] (2015-2018)
New Zealand
Chatham Islands [0.54] (1995-2018)
Nicaragua
Autonomous Regions [0.58] (1988-2018)
Nigeria
Federal Capital Territory [0.17] (1989-1998)
States [0.69] (1989-1992)
States [0.22] (1993-1998)
Federal Capital Territory [0.17] (1999-2018)
States [0.72] (1999-2018)
Pakistan
Azad Jammu and Kashmir [0.61] (1988-1998)
Federally-administered tribal Areas [0.83] (1988-1998)
Former Princely States [0.78] (1988-1998)
Provinces [0.58] (1988-1998)
Provincially-administered tribal Areas [0.78] (1988-1998)
Azad Jammu and Kashmir [0.61] (2002-2018)
Federally-administered tribal Areas [0.83] (2002-2018)
Former Princely States [0.78] (2002-2018)
Provinces [0.58] (2002-2018)
Provincially-administered tribal Areas [0.78] (2002-2018)
Panama
Embera-Wouna'an [0.27] (1988-2018)
Kuna Yala [0.27] (1988-2018)
Madugandí [0.18] (1996-2008)
Ngöbe-Buglé [0.27] (1997-2018)
Wargandí [0.18] (2000-2008)
Madugandí [0.2] (2009-2010)
Wargandí [0.2] (2009-2010)
Papua New Guinea
Provinces [0.44] (1988-2018)
Bougainville [0.68] (2001-2003)
Bougainville [0.72] (2001-2003)
Bougainville [0.81] (2004-2018)
Paraguay
Departments [0.52] (1992-2018)
Peru
Departments / Regions [0.49] (1993-2018)
Philippines
Provinces [0.54] (1988-1990)
Provinces [0.59] (1991-2018)
Poland
Municipalities [0.39] (1997-2018)
Romania
Counties [0.34] (1991-2018)
Russia
Autonomous Okrugs and Oblasts [0.37] (1991-1992)
Krays and oblasts [0.37] (1991-1992)
Republics [0.55] (1991-1992)
Federal Subjects [0.76] (1993-1995)
Federal Subjects with a bilateral treaty [0.82] (1993-2005)
Republics [0.82] (1993-1994)
Republics with a bilateral treaty [0.82] (1993-2005)
Bashkortostan [0.88] (1994-1995)
Tatarstan [0.88] (1994-1995)
Republics [0.82] (1995)
Bashkortostan [0.82] (1996-2004)
Federal Subjects [0.7] (1996-1999)
Republics [0.77] (1996-1997)
Tatarstan [0.82] (1996-2006)
Republics [0.77] (1998-1999)
Federal Subjects [0.7] (2000-2004)
Republics [0.7] (2000-2004)
Federal Subjects [0.62] (2005-2018)
Republics [0.62] (2005-2006)
Republics [0.62] (2007-2018)
Tatarstan [0.69] (2007-2018)
Serbia
Autonomous Province of Kosovo [0.81] (2006-2007)
Autonomous Province of Vojvodina [0.52] (2006-2018)
Somalia
Regions [0.21] (1988-2003)
Regions [0.17] (1988-2003)
South Africa
KaNgwane, KwaNdebele, Lebowa [0.23] (1988-1993)
Gazankulu [0.24] (1988-1993)
Bophutatswana, Ciskei, KwaZulu, Transkei, Venda [0.41] (1988-1993)
Provinces [0.63] (1993-1995)
Provinces [0.69] (1996-2018)
South Sudan
States [0.74] (2011-2018)
Spain
Andalucia [0.74] (1988-1992)
Cataluna [0.74] (1988-1992)
Ceuta [0.59] (1988-1994)
Comunidades Autonomas [0.74] (1988-1992)
Galicia [0.74] (1988-1992)
Melilla [0.59] (1988-1994)
Navarra AC [0.78] (1988-1992)
Pais Vasco [0.74] (1988-1992)
Provinces [0.59] (1988-2018)
Val d'Aran [0.37] (1990-2002)
Andalucia [0.78] (1993-1995)
Cataluna [0.78] (1993-1995)
Comunidades Autonomas [0.78] (1993-1995)
Galicia [0.78] (1993-1995)
Navarra AC [0.78] (1993-2018)
Pais Vasco [0.74] (1993-2018)
Ceuta [0.76] (1995)
Andalucia [0.78] (1996-2018)
Cataluna [0.78] (1996-2018)
Ceuta [0.76] (1996-2018)
Comunidades Autonomas [0.78] (1996-2000)
Galicia [0.78] (1996-2018)
Comunidades Autonomas [0.78] (2001-2008)
Val d'Aran [0.37] (2003-2018)
Comunidades Autonomas [0.78] (2009-2018)
Sri Lanka
Provinces [0.34] (1988-2018)
Sudan
Northern States [0.51] (1998-2004)
Southern States [0.51] (1998-2004)
Khartoum [0.12] (2005-2018)
Southern Kordofan and Blue Nile States [0.61] (2005-2010)
States [0.52] (2005-2010)
Southern Kordofan and Blue Nile States [0.78] (2011-2018)
States [0.78] (2011-2014)
Darfur Regional Authority [0.64] (2015-2018)
States [0.61] (2015-2018)
Suriname
Districts [0.32] (1988-2018)
Switzerland
Cantons [0.88] (1988-2018)
Syria
Provinces [0.17] (2012-2018)
Tajikistan
Gorno-Badakshan [0.41] (1991-1993)
Gorno-Badakshan [0.51] (1994-2018)
Thailand
Changwats [0.17] (1988-1990)
Changwats [0.25] (1991-1996)
Changwats [0.44] (1997-2013)
Changwats [0.43] (2017-2018)
Togo
Regions [0.17] (1992-2018)
Trinidad & Tobago
Tobago [0.33] (1988-1995)
Tobago [0.59] (1996-2018)
Turkey
Provinces [0.17] (1988-2018)
Uganda
Districts [0.56] (1995-2018)
Kampala [0.12] (1995-2018)
Ukraine
Autonomous Republic of the Crimea [0.43] (1991)
Republic of the Crimea [0.41] (1992-1994)
Autonomous Republic of the Crimea [0.33] (1995)
Autonomous Republic of the Crimea [0.31] (1996-1997)
Autonomous Republic of the Crimea [0.39] (1998-2018)
United Kingdom
Northern Ireland [0.62] (1998-2006)
Scotland [0.71] (1998-2011)
Wales [0.34] (1998-2010)
Northern Ireland [0.59] (2007-2018)
Wales [0.47] (2011-2018)
Scotland [0.71] (2012-2018)
United States
District of Columbia [0.74] (1988-1994)
States [0.87] (1988-2018)
District of Columbia [0.15] (1995-2000)
District of Columbia [0.74] (2001-2018)
Uruguay
Departments [0.35] (1988-2018)
Departments [0.39] (1988-2018)
USSR
Autonomous Oblast and Okrug [0.31] (1988-1990)
Autonomous Republics [0.44] (1988-1990)
Union Republics [0.5] (1988-1990)
Uzbekistan
Karakalpakstan [0.41] (1991)
Karakalpakstan [0.47] (1992)
Karakalpakstan [0.44] (1993-2018)
Venezuela
Federal District [0.17] (1988-1998)
States [0.55] (1988)
Territories [0.33] (1988-1991)
States [0.63] (1989-1993)
States [0.64] (1994-1998)
Capital District [0.17] (1999-2008)
States [0.67] (1999-2008)
Capital District [0.17] (2009-2018)
States [0.63] (2009-2018)
Yugoslavia
Autonomous Provinces [0.7] (1988-1989)
People's Republics [0.7] (1988-1991)
Autonomous Provinces [0.41] (1990-1991)
Montenegro [0.8] (1992-2002)
Serbia [0.8] (1992-2002)
Autonomous Province of Kosovo [0.7] (2003-2005)
Autonomous Province of Vojvodina [0.41] (2003-2005)
Montenegro [0.95] (2003-2005)
Serbia [0.95] (2003-2005)
Zimbabwe
Metropolitan Provinces [0.21] (2013-2018)
Provinces [0.21] (2013-2018)

S3: Ethnic violence attribution

A third data contribution of my article, required for investigating the theorized trade-off in how territorial autonomy affects civil and communal violence, is the **ethnic attribution of global data on non-state and one-sided violence based on the widely-used UCDP datasets**. In this section, I explain this ethnic attribution procedure. Moreover, to validate my coding, I compare my communal violence data with two existing sources that provide ethnically-attributed information on non-state violence in Africa. Ethnically attributed data for non-state and one-sided violence is available in the files "nsv/NonState_v20_1_ethnic_attribution.csv" and "osv/EMM_osv_coding_edited.csv" in folder "original_data/ethnically_attributed_violence " in the supplementary material.

S3.1: Ethnic attribution of communal and one-sided violence events

For my analytical purposes, I needed to ethnically attribute two datasets. First, for my main analyses of communal violence, I had to ethnically attribute actors on both sides of each non-state conflict coded by the UCDP Non-State Conflict Dataset (version 20.1, cf. Pettersson et al. 2019; Sundberg et al. 2012). Second, for my analyses of my hypothesized mechanisms (appendix 5.2), I had to attribute the perpetrators of each act of one-sided violence in the Ethnic One-Sided Violence Dataset (Fjelde et al. 2021), which already provides ethnically-attributed information on their victims.

In both cases, I focused on the **ethnic identity of the UCDP actors or their members** to link them to the EPR dataset, **rather than on official statements** by involved actors, as is commonly done for datasets linking civil violence to ethnic groups (Vogt et al. 2015). The reason is that participants in subnational conflicts, especially informally organized identity groups, rarely make such official statements in the first place; hence I preferred to err on the side of inclusivity and adopt an encompassing coding that is based on actor identity (cf. Bhavnani and Lacina 2015: 771). To ethnically attribute both datasets, I hence proceeded as follows:

- If the UCDP actor in question was a **formal organization** (relevant for formally-organized acts of non-state violence and for perpetrators in all acts of one-sided violence), I proceeded as follows:
    - First, I relied on existing information by the **ACD2EPR dataset, wherever possible** (Vogt et al. 2015). This codes, for each organization that ever engaged in state-based violence against the national government between 1946 and 2021, whether it is connected to a specific ethnic group in the EPR list through organizational claims and recruitment. Using this data, it was possible to account for the ethnic identity of all UCDP actors that were simultaneously, previously, or subsequently engaged in rebellion against the national government. For example, the Gerkan Aceh Merdeka (Free Aceh Movement), which repeatedly committed violence against Aceh's highland minorities, is linked to the "Acehnese" EPR group in the ACD2EPR data. Similarly, the Mohajir Qaumi Movement (MQM), which engaged in one-sided and communal violence against Sindhi in Sindh, is linked to the "Mohajir" EPR group in the ACD2EPR data.
    - Second, if the organization was not included in ACD2EPR, I **manually checked whether its membership was ethnically delimited in membership** by relying on the actor/dyad/conflict narratives provided by the UCDP conflict encyclopedia (UCDP 2021). For example, the South Lebanon Army (SLA) (*side b* in Lebanon's Hezbollah-SLA conflict in the UCDP NSV dataset) was linked to the "Maronites" EPR group, as the UCDP conflict encyclopedia stated that it had its roots in efforts by Maronite villages to coordinate armed militias.[10] Similarly, the Forces of Amanullah Khan, which repeatedly engaged in non-state violence against forces of other warlords, were linked to the "Pashto" EPR group, as the UCDP conflict encyclopedia stated that Khan was of Pashtun ethnicity and that one of his stated goals has been to fight for the inclusion of Pashtuns in Afghanistan's western provinces.[11]
- Second, if the actor in question was an **informally organized group** that "shares a common identification along ethnic, clan, religious, national or tribal lines" (as per the codebook in the UCDP Non-State Violence Dataset), I manually coded links between the UCDP actors and the EPR groups by name. Similar to Wig and Kromrey (2018), I proceeded as follows:
    - First, I linked actors that have a **direct (identical) match** in the EPR dataset. For example, the Masalit (*side a* in Sudan's Masalit-Rizeigat Abbala conflict in the UCDP NSV dataset) were linked to the EPR group of the same name.
    - Second, I looked for direct matches with identifying names that are similar but **spelled differently**. For example, the Karimojong (*side a* in Uganda's Karimojong-Pkoto conflict in the UCDP NSV dataset) were linked to the "Karamojong" group in the EPR dataset.
    - Third, I use databases on ethnic groups, such as the EPR encyclopedia,[12] and the actor/dyad/conflict narratives provided by the UCDP conflict encyclopedia (UCDP 2021) to find **synonyms** for these names and match by synonyms. For example, the Fulani (*side b* in Mali's Dogon-Fulani conflict in the UCDP NSV dataset) were linked to the group encompassing the "Peul" in the EPR dataset.

[10] Cf. <https://ucdp.uu.se/actor/827>.
[11] Cf. <https://ucdp.uu.se/actor/377>.
[12] Available at <https://growup.ethz.ch/>.

- Fourth, I match actors to the larger **umbrella EPR group** of which they are subgroups using the same databases. For example, the Kikuyu (*side b* in Kenya's Kalenjin-Kikuyu conflict in the UCDP NSV dataset) were linked to the "Kikuyu-Meru-Emb" group in the EPR dataset.
- Finally, I match actors to a **closely related EPR group** if such connections are explicitly stated in these databases. For example, the Dogon (*side a* in Mali's Dogon-Fulani conflict in the UCDP NSV dataset) were a dark-skinned tribe and henced matched to Mali's "Blacks (Mande, Peul, Voltaic etc.)" EPR group.

S3.2: Communal violence data description I: Temporal trends and spatial distribution

Figure S17 shows the temporal evolution of my coded communal violence events over time. Only considering non-state conflicts in my sample that included EPR groups on both sides, it shows the fraction of countries that experienced at least one communal violence event in a given year. It shows that communal violence, during the period studied, was subject to **cyclical fluctuations**: a steady decrease in the 1990s and early 2000s, a clear dip in 2008 and 2009, followed by a return to higher levels in the 2010s.

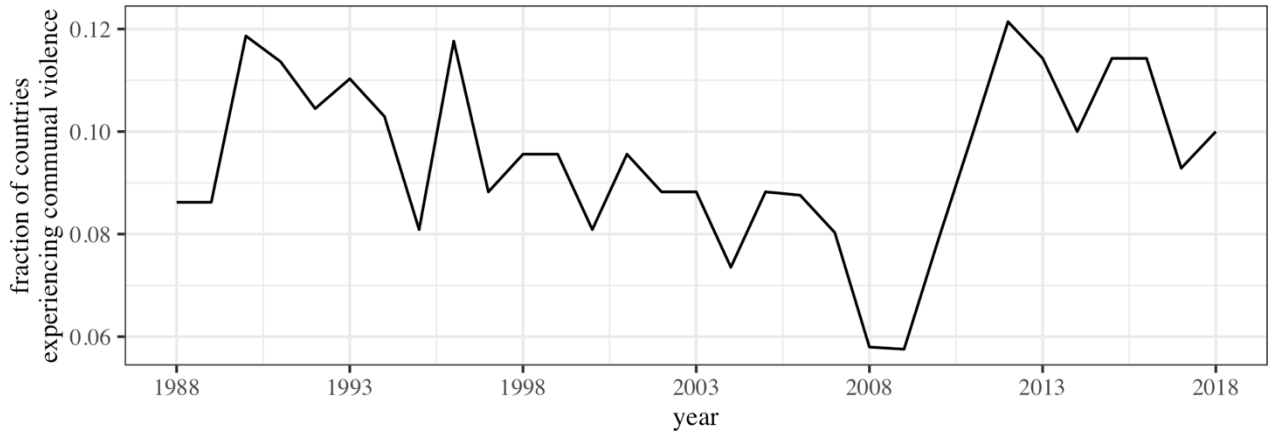


Figure S17. Fraction of countries experiencing at least one communal violence event in a given year, 1988-2018.

Figure S18 maps the spatial distribution of communal violence events across countries. Again only considering non-state conflicts in my sample that included EPR groups on both sides, it shows the location of all such events between 1988 and 2018, superimposed on international borders of 2018. The figure highlights a **clear spatial concentration of communal violence in specific world regions: sub-Saharan Africa, South and South-East Asia, the Middle East, and the Balkans**. Conversely, the Western hemisphere did not experience any communal violence event in the period analyzed. This highlights the potential utility of considering subsamples, as I do in my robustness checks in appendix 3.7.2.

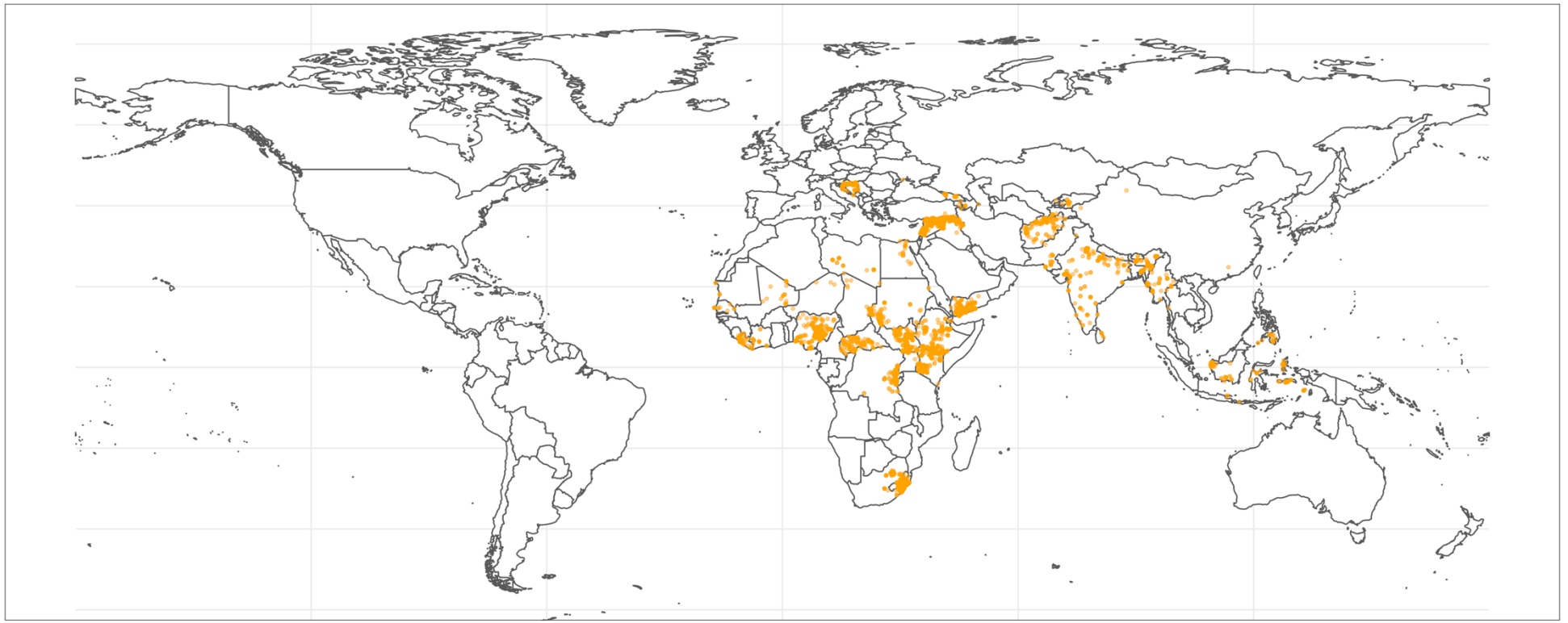


Figure S18. Location of all communal violence events between 1988 and 2018, superimposed on international borders of 2018.

S3.3: Communal violence data description II: Communal violence events involving groups outside their "core" settlement area coded by GeoEPR

In my main analyses, I include all groups whose settlement area lies within 50km of an administrative unit's boundaries. As I state, this is for two reasons: First, GeoEPR codes the area in which the majority of a group's membership lives. This does not rule out that group members settle, and become involved in violence, in other parts of the country. Second, pockets of group members often settle in boundary areas adjoining the administrative units controlled by their kin. In line with my argument, such groups may mobilize in favor of regional boundary changes. My results are robust to limiting the sample to groups whose "core" settlement area coded by GeoEPR overlaps with an administrative unit (appendix 3.7.2). In this section, for transparency, I provide an overview on **all groups in my sample that become involved in communal violence outside their "core" settlement area coded by EPR** (table S7).

Table S7. Communal violence involving groups outside their "core" settlement area coded by GeoEPR.

group	year/period	administrative unit
USSR		
Ossetes	1990	Azerbaydzhanskaya SSR
Côte d'Ivoire		
Kru	2011	Abidjan
Guinea		
Malinke	2010	Yamou
Liberia		
Gio	1991-1993	Bong
Gio	1993-1994	Grand Bassa
Gio	1993	Grand Gedeh
Gio	1993	River Cess
Krahn (Guere)	1993-1994	Grand Bassa
Krahn (Guere)	1993	Maryland
Krahn (Guere)	1993	River Cess
Mandingo	1995	Montserrado
Mano	1991-1992	Lofa
Mano	1993	Grand Gedeh
Mano	1993	River Cess
Nigeria		
Hausa-Fulani and Muslim Middle Belt	2004-2018	Benue
Ijaw	2005	Anambra
Tiv	1995-2017	Kaduna
Tiv	2017	Kogi
Yoruba	2005	Enugu
Central African Republic		
Baya	2013-2016	Nana-Grébizi
Goula	2010-2018	Haute-Kotto
Yakoma	2013	Lobaye
Democratic Republic of the Congo		
Lunda-Yeke	2016	Kasaï
Uganda		
Karamojong	2002	Kapchorwa
Kenya		
Kalenjin-Masai-Turkana-Samburu	2011	Meru
Kikuyu-Meru-Emb	2006	Coast
Somali	2010-2017	Turkana
Ethiopia		
Amhara	1990	Dire Dawa
Somali (Ogaden)	1999-2017	Afar
South Africa		
Coloreds	1988-1992	Transkei
Libya		
Tuareg	2013-2017	Wadi al Hayat
Sudan		
Beja	2018	Al Qadarif
Dinka	2010	West Equatoria
Nuba	1990-1996	Junglei

Nuer	2009	South Kurdufan
Nuer	2009-2010	Warap
Other Southern groups	1999-2001	Unity
Shilluk	1995-1996	Jungoli
Shilluk	1997-2001	Unity
South Sudan		
Dinka	2011	West Bahr-al-Ghazal
Egypt		
Coptic Christians	1999	Suhaj
Coptic Christians	2005-2008	Qina
Coptic Christians	2010	Helwan
Coptic Christians	2012	Al Qahirah
Coptic Christians	2012-2013	Al Qalyubiyah
Syria		
Christians	2014-2018	Ar Raqqah
Kurds	2012-2018	Hamah
Lebanon		
Druze	1988	Beirut
Sunnis (Arab)	2012-2014	Beirut
Yemen		
Northern Shafi'i	2009-2017	Al Jawf
Northern Shafi'i	2009-2011	Sa`dah
Northern Shafi'i	2013	Abyan
Northern Shafi'i	2014-2018	`Adan
Northern Shafi'i	2014-2017	Abyan
Northern Zaydis	2013	Abyan
Southern Shafi'i	2013	Ibb
Southern Shafi'i	2013-2018	Ma'rib
Southern Shafi'i	2017	Ibb
Afghanistan		
Hazara	1993	Kabul
Tajiks	1988-2001	Kunduz
Tajiks	1996-2002	Sari Pul
Turkmen	1996-2002	Sari Pul
India		
Bodo	2011	Assam
Hindi (non-SC/ST)	2012	Bihar
Naga	2008	Dima Hasao
Pakistan		
Punjabi	1989	Sind
Myanmar		
Buddhist Arakanese	2000	Bago
Buddhist Arakanese	2005	Magway
Muslim Arakanese	2005	Magway
Philippines		
Christian lowlanders	2001	Sulu
Christian lowlanders	2005	Sulu
Indonesia		
Javanese	1998	Kalimantan Timur

S3.4: Communal violence data validation

To validate my coding, I compare my communal violence data with two existing datasets that ethnically attributed the UCDP Non-State Violence to the EPR group list in a similar fashion: First, with the **group year-level data assembled by Hillesund (2019)** (which captures whether a group was involved in communal violence in a given year); and, second, with **group-level data collected by Wig & Kromrey (2018)** (which codes whether a group was ever involved in communal violence between 1989 and 2013). In both cases, the data only cover the subset of African countries and exclusively focus on informally organized instances of non-state violence. Hence, I report the correlations of these external measures with the group-year/group level equivalents of my communal violence variable for the same sample, respectively, focusing on informally organized instances thereof. A limitation of this comparison is that the EPR group classification has changed in several countries since these data have been collected, which means some groups coded by Hillesund (2019) and Wig & Kromrey (2018) lack equivalents in my data or may be mismatched. Nevertheless, and reassuringly, my measures are strongly correlated with both, yielding a Pearson's correlation coefficient of **r = 0.61** (correlation at the group year-level with data by Hillesund 2019) and **r = 0.66** (correlation at the group-level with data by Wig & Kromrey 2018).

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