



# **Access to Power, Political Institutions and Ethnic Favoritism**

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# Access to Power, Political Institutions and Ethnic Favoritism \*

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## Abstract

We use a dataset which codes executive power for 564 ethnic groups in 130 countries on a seven-point scale to show that ethnic groups that gain political power benefit economically. This effect holds for groups that enter government, the extensive margin, and for groups that concentrate more power onto themselves, the intensive margin. Both these effects disappear in the presence of strong political constraints on executive power. Institutional constraints are even effective in preventing favoritism when groups concentrate all power in the executive onto themselves.

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# 1 Introduction

A large literature in development economics has analysed the role played by ethnic politics for economic development.<sup>1</sup> A central part of the argument has been that economic and political conflict often organises around ethnic lines<sup>2</sup> and there is now ample empirical evidence that this is indeed the case.<sup>3</sup> A part of this literature explains conflict by the fact that ethnic groups regard the nation state as a resource that can be captured and through which resources can be distributed. Evidence for ethnic favoritism, the distribution of state resources towards coethnics, is therefore a possible key ingredient to understand how ethnic politics hinders economic development.

In this article we contribute to this literature by showing that ethnic groups with access to executive power seem to benefit economically. In addition, we show that this effect is muted when strong institutional constraints are present at the country level. More specifically, we use data on 564 ethnic groups in 130 countries in the period 1992-2010 to show that night light intensity per capita increases systematically when an ethnic group gains access to executive power and that this effect is dampened by institutional constraints on the executive. A special feature of the data we use is that it does not only measure access to executive power, the extensive margin, but also the intensity to which an ethnic group concentrates executive power, the intensive margin. We use this feature of the data to show that holding more concentrated executive power implies significantly higher night light emissions. When a group holds a monopoly over executive power, for example, it becomes significantly better off than if it shares political power as a senior partner. Similarly, if a group is a junior partner in government it loses less light relative to the most powerful ethnic group than a group which is excluded from government. Again, all these effects at the intensive margin go away when institutional constraints on executive power are in place. Our results are robust to several definitions of institutional constraints and different sample restrictions.

Ethnic favoritism has recently received close attention. [Burgess et al. \(2015\)](#) explore the link between access to power, political institutions and inequality in the allocation of public investments. They provide evidence for ethnic favoritism using variation in political leadership

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<sup>1</sup>See, for example, [Easterly and Levine \(1997\)](#), [Alesina et al. \(1999\)](#) and [Alesina et al. \(2015\)](#). For a review see [Alesina and Ferrara \(2005\)](#).

<sup>2</sup>[Fearon and Laitin \(2000\)](#), [Esteban and Ray \(2008\)](#), [Caselli and Coleman \(2013\)](#)

<sup>3</sup>[Montalvo and Reynal-Querol \(2005\)](#), [Esteban et al. \(2012\)](#), [Michalopoulos and Papaioannou \(2016\)](#)

and data on road building in Kenyan districts across the 1963-2011 period. In addition, they show that this favoritism in road investments vanishes during periods of democracy. The authors argue that, in the African context where presidential power is based on ethnicity, even weak democratic institutions translate into a decrease in favoritism towards groups in power as political leaders are forced to share public goods across the wider population. [Hodler and Raschky \(2014\)](#) use data on the birthplace of political leaders and night-light data from 38,427 sub-national regions from 126 countries to provide evidence for ethnic favoritism. They also show that this favoritism is most prevalent in countries with weak political institutions and poorly educated citizens. We follow both papers in our identification strategy by using panel regressions with group fixed effects and country-year fixed effects. However, we also expand the existing findings in two directions. Firstly, we show that favoritism exists at the level of ethnic groups for a large number of countries, i.e. we generalize the findings in [Burgess et al. \(2015\)](#). The larger sample of countries allows us to explore robustness with respect to the measure of political institutions. Secondly, we use different changes in executive power to identify its effect on the economy and the mediating role played by political institutions. Whereas both [Hodler and Raschky \(2014\)](#) and [Burgess et al. \(2015\)](#) focus on the identity of the political leader, we look at different degrees of control over the executive.<sup>4</sup> In our dataset we observe not only whether a group is in power but also how concentrated this power is. In addition, we can see whether a group which is not in power has at least some access to the executive, is completely powerless or is even actively prevented from taking power.

We believe that these results are particularly important in the context of a literature which tries to explain the outbreak of violent ethnic conflict. [Esteban and Ray \(2008\)](#) take the position that “prize-grabbing” on a large scale is frequently at the heart of ethnic conflict. [Caselli and Coleman \(2013\)](#) argue that ethnic markers help enforce group membership which facilitates the organisation of conflict effort. [Goldstone et al. \(2010\)](#) show that political discrimination of ethnic groups is a key variable for predicting the onset of political instability. [Cederman et al. \(2013\)](#) provide the data we use to argue that disadvantaged and advantaged ethnic groups have a higher propensity of entering into conflict but only when there is also inequality in access to power. They also show that a recent loss of power or outright discrimination increases the risk of conflict even further.<sup>5</sup> In this context, favoritism is part of a contest for resources and power which

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<sup>4</sup>This also sets us apart from a recent working paper by [De Luca et al. \(2015\)](#).

<sup>5</sup>[Buhaug et al. \(2014\)](#) test the scale dependence of these results. The authors show that countries with very poor (compared to the national average) ethnic groups and those with large discriminated groups from national politics are more likely to experience an armed conflict.

is fought between different groups inside a country. Most recently, similar data has been used by [Michalopoulos and Papaioannou \(2016\)](#) to show that groups which are split by a national boundary are much more likely to be politically discriminated by the central state. They also argue that political discrimination could form part of the link between partitioned groups and violence.

A possible mediating factor of this contest for resources and power are political institutions. [Rodrik \(1999\)](#) argues, for example, that economic shocks trigger conflict in countries which do not have strong political institutions which can mediate an intensified competition for resources. [Collier and Hoeffler \(2000\)](#) argue that fractionalization has negative effects on growth and productivity only in nondemocratic regimes. [Acemoglu and Robinson \(2005\)](#) argue that the adoption of democratic institutions can prevent violent unrest. [Besley and Persson \(2011\)](#) present a theoretical framework in which fighting for control of the state is an important reason for entering in conflict. They argue that conflict is particularly likely if there are no political constraints on how resources can be redistributed. Our study delivers some support for the mechanism suggested by their theoretical framework. We find that even extreme concentrations of executive power do not translate into an increase in economic inequality when executive constraints are present.<sup>6</sup>

The remainder of this article is organized as follows. Section II presents the data and methodology. Section III, presents our main findings and robustness checks. Section IV concludes.

## 2 Data and Methodology

The dataset we use is the unified platform for geographical research on war ( $GROW^{up}$ ) ([Girardin et al., 2015](#)) which merges and updates data on Ethnic Power Relations (EPR) from [Cederman et al. \(2010\)](#) with data on night light emissions ([NOAA-NGDC, 2013](#)).<sup>7</sup> We use night light per capita intensity as a proxy for economic activity at the ethnic group level.<sup>8</sup> Night light data has the benefit of being available on a yearly basis and of being measured at the local level where there is poor availability of statistical data. In order to calculate light emissions per capita we

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<sup>6</sup>A complementary interpretation of these findings is that executive constraints (often strong parliaments) work as a deliberation mechanism which prevents the escalation of conflict. This sort of mechanism finds some support in [Blattman et al. \(2014\)](#).

<sup>7</sup>The dataset covers all countries except failed states, overseas colonies and countries with less than 500,000 inhabitants. All politically relevant ethnic groups are included in the dataset. An ethnic group is classified as relevant if at least one political organization claims to represent it in national politics or if its members are subjected to state-led political discrimination.

<sup>8</sup>In this we follow [Henderson et al. \(2012\)](#).

interpolated population data between 10-year periods at the ethnic group level.

The GROW<sup>up</sup> dataset captures access to power through the participation of members of relevant ethnic groups in the executive (representation in the presidency, cabinet, and senior posts in the administration, including the army) and codes it in seven subcategories: discriminated, powerless, self-excluded, junior partner, senior partner, dominant and monopoly.<sup>9</sup> These categories capture how well the group is represented in the executive. For example, if a group is coded as having a *monopoly*, elite members from this group hold monopoly power in the executive to the exclusion of members of other ethnic groups. If the group is a *junior partner*, then representatives of that group share access to executive power with a more powerful group (the *senior partner*).

In Table 1 we show the example of Kenya. The table shows the seven point scale coding for the seven relevant Kenyan ethnic groups from 1963 to 2013 (which includes the period studied by Burgess et al. (2015)). For simplicity, we have aggregated the yearly data into 6 episodes with constant values. The power status reaches from 1 (discrimated) to 5 (senior partner) and there is both a lot of heterogeneity between groups and across time within the same ethnic group. Transitions from and to democracy took place in 1969 and 1992, i.e. these changes are not reflected by changes in the access to executive power as captured by the EPR data. For comparison we also report the ethnicity of the Kenyan political leader as a blue shade. This is the variation used by Burgess et al. (2015) and Hodler and Raschky (2014).

Table 1: Ethnic groups power access in Kenya

Ethnic groups	1963-1966	1967-1978	1979-2002	2003-2005	2006-2007	2008-2013
Kalenjin-Masai- Turkana-Samburu	4	4	5	4	4	4
Kamba	4	4	4	4	4	4
Kikuyu-Meru-Emb	5	5	1	5	5	5
Kisii	4	4	4	2	2	4
Luhya	4	4	4	4	4	4
Luo	4	1	1	4	1	5
Mijikenda	2	2	4	4	4	4

Notes: This table displays variable "status pwrrank" in GROW<sup>up</sup> dataset for relevant ethnic groups in Kenya from 1963 to 2013. It gives the political status of each ethnic group, ranked on a 7 point scale: 1 (Discriminated), 2 (Powerless), 3 (Self-excluded), 4 (Junior Partner) and 5 (Senior Partner) in government. The ethnic group of the leader is marked by the (blue) shade for each period. First president Jomo Kenyatta (ethnic kikuyu) was in power from 1963 to 1978. He was replaced by Daniel arap Moi (ethnic Kalenji) who stayed in power from 1979 to 2002 followed by Mwai Kibaki (ethnic Kikuyu) who stayed in office from 2003 to 2013. Kenya experienced a first transition from autocracy to democracy (in December 1969) under president Kenyatta. It switched back to democracy in December 1992 under president Moi.

<sup>9</sup>For the coding of this variable, the experts focus on the most relevant part of the executive (e.g., in a military dictatorship, power over the army; in presidential systems, the senior cabinet). They look at absolute access to power irrespective of the question of under- or overrepresentation relative to the demographic size of an ethnic category. See the appendix for a more detailed description of the different subcategories.

Our first main question is whether executive power translates into economic favoritism. Our dataset allows us to test this on three dimensions. First, we analyse how the change of groups into and from executive power affects the local economy. For this purpose we code the variable  $leader_{i,j,t}$  which takes a value of 1 for the ethnic group  $j$  with the maximum executive power in country  $i$  and year  $t$ . This can be either a group that has a monopoly on executive power, is dominant or is a senior partner in government. Secondly, we can look at changes at the intensive margin because we can split the variable  $leader_{i,j,t}$  up into its three subcomponents and add them separately. Thirdly, we can look at the downside of having no access to executive power by using dummies for groups who are junior partners, powerless, discriminated or self-excluded.

Our econometric specification assumes that log night light emissions per capita in country  $i$ , group  $j$  and year  $t$  are given by:

$$\log(light\ per\ capita)_{i,j,t} = \beta * leader_{i,j,t} + C_{i,t} + \eta_j + \epsilon_{i,j,t}$$

where  $\log(light\ per\ capita)_{i,j,t}$  is the logarithm of per capita night light intensity for ethnic group  $j$  in country  $i$  at time  $t$ . The coefficients  $C_{i,t}$  capture a set of country-year dummies to control for shocks and changes that are common to all ethnic groups within any given country, as well as for changes in satellites and their sensor settings. Importantly, this implies that the coefficient on  $leader_{i,j,t}$  needs to be interpreted in relative terms, i.e. in comparison to the average in the same country and year.<sup>10</sup> We also include ethnic group fixed effects to control for ethnic groups permanent unobserved characteristics.

The mechanism we have in mind builds on the previous findings in [Burgess et al. \(2015\)](#) and [Hodler and Raschky \(2014\)](#). Our empirical specification assumes that gaining power will not affect economic growth in a region but will instead change the relative level of output up and above country-wide changes in economic output. This would be in line with the idea that public spending gets reallocated but is not effective in generating a different growth trend. In other words, we propose that groups which manage to redirect funding to their areas do not use this spending systematically to improve growth but instead to boost (state) consumption.

We identify the effect of political power from changes at the ethnic group level. Table 2 displays the full variation of the seven-point scale at this level. Rows display access to power of group  $j$  in period  $t$  while columns display access to power of the same group in period  $t + 1$ .

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<sup>10</sup>Our results are also robust to using lagged values of the right-hand-side variables

The number in each cell displays the count of transitions between the different levels of access to power in our data. There were, for example, 3616 transitions from "powerless" to "powerless", 46 transitions from "powerless" to "junior" and 25 transitions from "junior" to "powerless". Table 2 clearly indicates a dominance of transitions within the same category. A group that has no access to power in year  $t$  has most likely no access to power in year  $t + 1$  as well. In addition, large jumps in the access to power are rare. Most transitions are between adjacent categories, i.e. from powerless to junior or from junior to senior. This is important to keep in mind as our identification strategy relies on these transitions.

The last two columns of Table 2 provide summaries. The column "transitions out" displays the number of transitions from a power status in  $t$  to another power status in  $t + 1$  while "transitions into" are the number of transitions from another access to power in  $t$  to the respective category in  $t + 1$ . For example, in our data we have 32 ethnic groups which escape being discriminated and 19 groups who become discriminated. Overall we have 232 changes in the access to power in over 9000 observations. This is important as it implies that changes in power are rare and important events for which we might expect changes in policies. The downside is that we have few transitions in some categories. The effect of holding a monopoly of power, for example, will be estimated from just 14 transitions.

Table 2: Transitions

		access to power in t+1							transitions out	transitions to
		self excluded	discriminated	powerless	junior	senior	dominant	monopoly		
power in t	<b>monopoly</b>	0	1	0	1	3	6	493	11	3
	<b>dominant</b>	0	0	1	8	17	647	0	26	20
	<b>senior</b>	0	2	6	18	1134	10	2	38	58
	junior	0	7	25	2120	20	2	1	55	85
	powerless	1	9	3616	46	11	1	0	68	45
	discriminated	1	734	12	11	7	1	0	32	19
	self excluded	211	0	1	1	0	0	0	2	2

Notes: This table displays changes in access to political power for all ethnic groups in our sample. For definitions see the text. The ordering reflects roughly the extent of executive power a group has. Bold indicate categories which we code as "leaders" in the first part of our analysis. Rows display access to power in period  $t$  while columns display access to power in period  $t+1$ . There were, for example, 3616 transitions from the status "powerless" to the status "powerless", 46 transitions from "powerless" to "junior" and 25 transitions from "junior" to "powerless". The last two columns provide summaries of the table. "transitions out" are the total number of transitions from a power status in  $t$  to another power status in  $t+1$ . "transitions into" are the total number of transitions from another power status in  $t$  to the respective power status in  $t+1$ .

We merge this data with data on political institutions from the Polity IV dataset (Marshall and Gurr, 2013). To capture democratic institutions we add an interaction effect with a dummy for strong executive constraints in country  $i$  and year  $t$ ,  $constraints_{i,t}$ , to the regression above. We define strong executive constraints through the variable  $xconst$  from Polity IV. This variable captures the extent of institutionalized constraints on the decision-making powers of chief executives. Such limitations may be imposed by any "accountability groups". In Western democracies these are usually legislatures. Other kinds of accountability groups are the ruling party in a one-party state or an independent judiciary.



Conceptually, this should be the right variable in a setting in which we want to study the effect of a concentration of executive power while at the same time varying the level of institutional constraints on the use of this power. The idea is that even concentrated executive power cannot be translated into economic favoritism when strong constraints are in place.<sup>11</sup> In our baseline specification, we define strong executive constraints through a value of *xconst* equal to 6 or 7 and run robustness checks with *xconst* equal to 7. A value of 7 indicates a situation in which accountability groups have effective authority equal to or greater than the executive in most areas of activity. A value of 6 is an intermediate step which adds additional observations to the camp of strong executive constraints without changing the definition substantively. However, we will also run robustness checks with other dimensions of political institutions by using the competitiveness of executive recruitment and the openness of executive recruitment from the Polity IV dataset. Table 3 provides summary statistics for all the variables used in our analysis including the additional institutional measures.

Table 3: Summary Statistics of Main Variables

Variables	Obs	Mean	SD	Min	Max
log light per capita	9210	-4.331	2.019	-19.928	0.972
self excluded	9210	0.023	0.150	0	1
discriminated	9210	0.082	0.275	0	1
powerless	9210	0.398	0.490	0	1
junior partner	9210	0.240	0.427	0	1
senior partner	9210	0.130	0.336	0	1
dominant	9210	0.073	0.259	0	1
monopoly	9210	0.054	0.226	0	1
leader	9210	0.256	0.437	0	1
strong executive constraint	9210	0.374	0.484	0	1
high competitiveness of executive recruitment	9210	0.379	0.485	0	1
high openness of executive recruitment	9210	0.790	0.408	0	1

### 3 Results

Table 4 shows our main results. In Column (1) we find that, relative to other ethnic groups in the same country and year, light per capita increases by about 6.6 percent when a group starts to control executive power. If we assume a log relationship between GDP and light as in [Henderson et al. \(2012\)](#) this implies that GDP per capita increases by about 2.2 percent.<sup>12</sup> In Column (2)

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<sup>11</sup>In this context it is worth stressing that discrimination in our coding above is discrimination in the access to power and not a policy outcome.

<sup>12</sup>[Hodler and Raschky \(2014\)](#) show that this relationship also holds for subnational regions.

we add the interaction term  $leader_{i,j,t} \times constraints_{i,t}$  and find that the effect of executive power on local economies is significantly lower when strong executive constraints are present. Moreover, the sum of the coefficients reported in column 2 is not statistically different from 0 which implies that there is evidence of ethnic favoritism only in absence of constraints on the executive power.

Next, we decompose the variable  $leader_{i,j,t}$  into its three subcomponents (senior partner, dominant and monopoly) and check whether effects of leadership are heterogeneous according to how concentrated executive power is. Column (3) shows that there is a perfect match between the concentration of power and favoritism in terms of per capita light. Ethnic groups that enjoy a political monopoly on power receive 13.5 percent more night light per capita. Groups with dominant access to power and senior partners in government receive respectively 8.2 and 5.4 percent more light per capita.<sup>13</sup> The more concentrated executive power, the more does the ethnic group benefit economically. Note, that some of this effect could come from changes in light emissions in excluded categories. The definition of a monopoly of executive power, for example, directly implies that other groups will be powerless. We will return to this point below.

In column (4) of the same table, we add interaction effects between the different categories of power and our measure of political constraints. A lot of the variation here is driven by changes in constraints which, as the example of Kenya makes clear, do not generally coincide with changes in executive power. The results we find here are striking. Under weak executive constraints the magnitude of the effect of power amplifies for all three categories. A monopoly over executive power, for instance, increases light per capita by 21.6 percent in country/years with weak executive constraints. If we use the elasticity proposed by [Henderson et al. \(2012\)](#) this suggests that groups with a monopoly of power experience a relative expansion of GDP per capita by about 7 percent compared to the national average. However, we cannot reject the hypothesis that this difference completely vanishes under strong executive constraints, again for all three categories. Under strong executive constraints, there are no differences in night light per capita between the control group and groups with a monopoly, dominant power status, or senior partners.<sup>14</sup> In Column (5) we show that results also do not change if we control for area, population and urbanization time trends.

Our seven point measure of access to political power also allows us to look at the absence

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<sup>13</sup>The difference between the coefficients on monopoly and senior partner is significant at 1%.

<sup>14</sup>Groups with monopoly of power can be found in countries with strong executive constraints. We have 14 such countries in our sample: Albania, Austria, Bulgaria, Chile, Cyprus, Ecuador, Greece, Hungary, Japan, Paraguay, Poland, Slovakia, Turkey and Uruguay.

Table 4: Executive Power and Ethnic Favoritism

VARIABLES	(1) light per capita	(2) light per capita	(3) light per capita	(4) light per capita	(5) light per capita
leader	0.066*** (0.018)	0.093*** (0.022)			
leader * strong executive constraints		-0.070*** (0.016)			
senior partner			0.054*** (0.018)	0.064*** (0.024)	0.064*** (0.024)
dominant			0.082** (0.032)	0.094** (0.043)	0.091** (0.043)
monopoly			0.136*** (0.040)	0.216*** (0.048)	0.222*** (0.047)
senior partner * strong executive constraints				-0.037* (0.020)	-0.035* (0.021)
dominant * strong executive constraints				-0.062** (0.032)	-0.065** (0.031)
monopoly* strong executive constraints				-0.265*** (0.059)	-0.273*** (0.059)
Observations	9,210	9,210	9,210	9,210	9,177
R-squared	0.991	0.991	0.991	0.991	0.991
Country-Year FE	YES	YES	YES	YES	YES
Group FE	YES	YES	YES	YES	YES
(population, area and urbanisation) x trend	NO	NO	NO	NO	YES

Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . "light per capita" is the ln of night light emissions per capita. "senior partner", "dominant" and "monopoly" are dummies that capture increasing executive power of the ethnic group. "leader" is a dummy that takes 1 if ethnic group has the highest level of access to power in the country/year ("senior partner", "dominant" or "monopoly"). "strong executive constraints" is a dummy which captures values of  $xconst > 5$ . Regressions use population weights.

of political power: junior partners in government, powerless groups, discriminated groups and groups that are self-excluded. Consistent with the findings in Table 4 we find lower night light per capita when looking at these groups. Table 5, column (1) shows that junior groups receive 4.9 percentage points less light on average than groups in power. This decreases to 12.8 percent less light for discriminated groups.<sup>15</sup> In column (2) we show that, in line with our earlier results, these effects are stronger under weak executive constraints than under strong executive constraints. Under weak executive constraints, discriminated groups receive 14 percent less light per capita than the average. Under strong executive constraints, it makes no difference whether a group is a junior partner in government, powerless or discriminated. In column (3) we show that these results are robust to the inclusion of area, population and urbanization time trends.

A possible concern about the identification of ethnic favoritism in our empirical framework

<sup>15</sup>The coefficients on self-excluded groups are identified of only a handful of transitions and we therefore do not discuss them.

Table 5: Executive Power and Ethnic Favoritism - The Downside

VARIABLES	(1) light per capita	(2) light per capita	(3) light per capita
junior partner	-0.049** (0.019)	-0.071*** (0.027)	-0.071*** (0.026)
powerless	-0.085*** (0.030)	-0.117*** (0.037)	-0.114*** (0.037)
discriminated	-0.128*** (0.035)	-0.141*** (0.036)	-0.146*** (0.036)
self excluded	-0.302*** (0.056)	-0.336*** (0.060)	-0.340*** (0.060)
junior partner * strong executive constraints		0.055** (0.023)	0.054** (0.024)
powerless * strong executive constraints		0.082*** (0.028)	0.085*** (0.027)
discriminated strong executive constraints		0.064 (0.066)	0.066 (0.066)
self excluded * strong executive constraints		0.191*** (0.067)	0.172** (0.067)
Observations	9,210	9,210	9,177
R-squared	0.991	0.991	0.991
Country-Year FE	YES	YES	YES
Group FE	YES	YES	YES
(population, area and urbanisation) x trend	NO	NO	YES

Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. "light per capita" is the ln of night light emissions per capita. "junior partner", "powerless", "discriminated" and "self excluded" are dummies that capture decreasing access to notional level executive power of the ethnic group. "strong executive constraints" is a dummy which captures values of  $xconst > 5$ . Regressions use population weights.

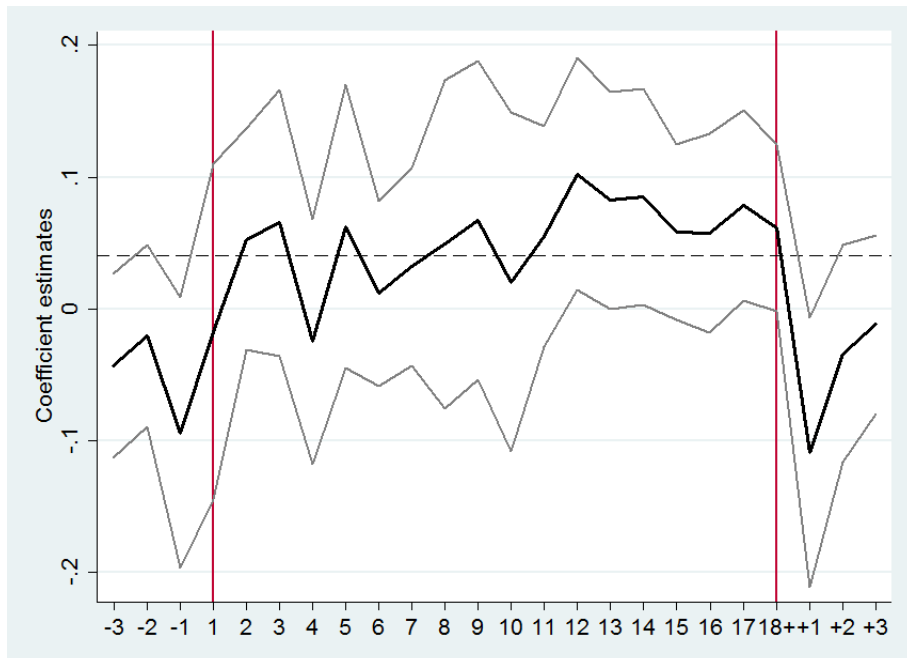
is the potential bias induced by reverse causality or omitted variable bias. Groups might gain power, for example, because they have become economically more powerful. However, relative changes in economic activities across ethnic groups in a given country are more likely to be gradual while most changes in political leadership occur after elections, military coups or natural death of leaders. Also, it is hard to reconcile the absence of a relationship under strong executive constraints with reverse causality.

In any case, if economic changes anticipate political changes we would expect ethnic groups in power to have more intense light per capita already before holding the leadership and, perhaps, a declining trend after losing power. To test whether there is such pattern in the data, we look at ethnic groups that are about to become leaders or have been leaders recently to see whether they look different in these years compared to other years in which they were not leaders. To do so, we decompose the  $leader_{i,j,t}$  dummy in column (1) of Table 4 into a set of dummies for future, current, and past political leadership. In particular, we add 3 dummies for the last 3 years before groups gain power and 3 dummies for the first 3 years after an ethnic group lost power. We also add 17 dummies for the first 17 years in which an ethnic group is in power, and

one dummy for all subsequent years in power.

The results are shown in Figure 1 and suggest that there is no difference in night light per capita before or after an ethnic group becomes leader compared to the other years in which it is not in power. After getting access to power, we observe a significant increase in per capita light intensity which takes place within a few years and then remains fairly stable across time in power. These results suggest that there are no pre-trends before gaining power or negative trends after losing power. It is rather that changes in political power coincide with a relatively sharp and seizable change in economic activity.

Figure 1: The dynamics of ethnic favoritism



Notes: The graph shows the point estimates of a series of dummy variables accounting for the individual three years before an ethnic group becomes a leader (-3, -2, -1), the first 17 years of being a leader (1-17), the eighteenth and all subsequent years (18+), and the first three years after the end of the group’s leadership (+1, +2, +3). The black line plots the point estimates, and the gray lines indicate the upper and lower limits of the 95% confidence interval. These estimates come from a single fixed effects regression, where log light per capita is regressed on the 24 dummy variables and the full set of country-year and ethnic group dummy variables. The vertical lines in red indicate the first and the last dummy variable representing leadership of ethnic groups. The horizontal dashed line indicates the estimate of leader coefficient in Table 6, Column (2).

A simple summary of these results is in columns (1) and (2) of Table 6. Here we collapse the dummies and show just the coefficients on the dummies for the time before and after a switch into government, i.e. a switch from less power than a senior partner to more. Column (1) displays the estimated coefficients on the year right before and right after the switch. Column (2) displays the estimated coefficient for a dummy that captures the three years before and after. We find no significant deviation from 0 around the switching date. The same is true if we move the cut-off

of what defines leader to include junior partners (columns (3) and (4) in Table 6) or if we drop senior partners from the definition (columns (5) and (6)).<sup>16</sup>

Table 6: Dynamics of Ethnic Favoritism

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Senior + light per capita	Senior + light per capita	Junior + light per capita	Junior + light per capita	Dominant + light per capita	Dominant + light per capita
Leader	0.053*** (0.019)	0.041* (0.024)	0.075*** (0.026)	0.088*** (0.032)	0.084*** (0.025)	0.077*** (0.028)
Lost leadership recently	-0.046 (0.043)	-0.033 (0.032)	0.006 (0.066)	-0.002 (0.052)	0.086 (0.067)	0.038 (0.030)
About to gain leadership	-0.056 (0.051)	-0.048 (0.033)	0.004 (0.045)	0.031 (0.031)	0.059 (0.057)	0.019 (0.045)
Observations	9,186	9,086	9,195	9,120	9,180	9,068
R-squared	0.991	0.991	0.991	0.991	0.991	0.991
Country-Year FE	YES	YES	YES	YES	YES	YES
Group FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. "light per capita" is the ln of night light emissions per capita. "leader" is a dummy that takes 1 if ethnic group has access to power above a certain threshold. In column (1) and (2) leader is defined as senior partner or above ("senior partner", "dominant" or "monopoly") and is called "senior+". In columns (3) and (4) we lower this threshold by one level to include Junior Partners ("Junior +"). In columns (5) and (6) we restrict leader status to groups that are dominant or have monopoly of power ("Dominant+"). "lost leadership recently" is a dummy that takes value 1 if an ethnic group lost leadership status the previous year (columns (1), (3) and (5)) or within the last 3 years (columns (2), (4) and (6)). "about to gain leadership" is a dummy that takes value 1 if an ethnic group will be in power next year (columns (1), (3) and (5)) or within the next 3 years (columns (2), (4) and (6)). Regressions use population weights.

In Table 7 we produce a number of robustness checks. The first 3 columns show robustness to different institutions. In column (1) we use the cut-off of 7 for our definition of strong executive constraints and our results are broadly consistent with our main results.<sup>17</sup> In column (2) we use the level of competitiveness of executive recruitment to define strong political institutions. Political constraints are assumed to be present if the variable *xrcomp* in Polity IV is equal to its highest value of 3; meaning that chief executives are typically chosen in competitive elections matching two or more major parties or candidates. Results are, again, similar to our main findings. In column (3), we perform a similar exercise with openness of executive recruitment as institutional feature and our results are not robust.<sup>18</sup> This suggests that what prevents ethnic

<sup>16</sup>Most of the coefficients are positive now but there is no evidence for a trend around adoption.

<sup>17</sup>This is closely in line with theoretical and empirical work at the country level (Besley and Persson (2011)) who also use the cut-off at 7.

<sup>18</sup>Openness in Polity IV means that the "recruitment of the chief executive is open to the extent that all the politically active population has an opportunity, in principle, to attain the position through a regularized process". We define strong political institution here as a dummy that takes 1 if variable "xropen" in Polity IV data is equal to 4 meaning that chief executives are chosen by elite designation, competitive election, or transitional arrangements between designation and election.

favoritism is the accountability of the executive power due to institutional constraints or incentives for re-election rather than the possibility for anybody to be part of the executive.<sup>19</sup>

We also show robustness to sample restrictions in columns (4) to (7) of Table 7 to make sure our findings are not driven by a specific type of country. A problem with looking at different samples is that we need to make sure that enough transitions remain in the sample. In order to do this we drop one income quartile at a time.<sup>20</sup> In column (4) we drop the poorest countries, in column (5) we add these countries back and only drop the second-poorest countries and so on. Standard errors and the size of the coefficient varies but in all columns we get a positive and rising coefficient with increasing power in weak executive constraints and a negative and falling coefficient on the interaction term with strong executive constraints.

Table 7: Robustness to measures of good institutions and sample restrictions

VARIABLES	Political Institutions			Sample restricted by dropping the following quartiles:			
	(1) light per capita	(2) light per capita	(3) light per capita	(4) light per capita Q1	(5) light per capita Q2	(6) light per capita Q3	(7) light per capita Q4
senior partner	0.052** (0.022)	0.055** (0.025)	0.075** (0.035)	0.100*** (0.032)	0.037 (0.028)	0.077*** (0.028)	0.063*** (0.024)
dominant	0.089** (0.035)	0.090** (0.039)	0.053 (0.074)	0.164*** (0.029)	0.057 (0.061)	0.107** (0.047)	0.090** (0.044)
monopoly	0.179*** (0.047)	0.177*** (0.051)	0.145* (0.081)	0.229*** (0.042)	0.246*** (0.075)	0.196*** (0.062)	0.215*** (0.048)
senior partner * strong institutions	-0.003 (0.023)	-0.011 (0.026)	-0.025 (0.031)	-0.017 (0.025)	-0.052** (0.023)	-0.039 (0.025)	-0.036* (0.020)
dominant * strong institutions	-0.058* (0.033)	-0.048* (0.027)	0.039 (0.069)	-0.088*** (0.022)	-0.028 (0.048)	-0.088*** (0.033)	-0.052 (0.034)
monopoly strong institutions	-0.178*** (0.063)	-0.108* (0.059)	-0.007 (0.083)	-0.234*** (0.059)	-0.250*** (0.090)	-0.385*** (0.099)	-0.276*** (0.061)
Observations	9,210	9,210	9,210	6,641	6,232	7,034	7,723
R-squared	0.991	0.991	0.991	0.990	0.993	0.990	0.987
Country-Year FE	YES	YES	YES	YES	YES	YES	YES
Group FE	YES	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. First 3 columns show robustness to different definitions of good political institutions and the last ones show robustness to sample restrictions. "light per capita" is the ln of night light emissions per capita. "senior partner", "dominant" and "monopoly" are dummies that capture increasing executive power of the ethnic group. "leader" is a dummy that takes 1 if ethnic group has the highest level of access to power in the country/year ("senior partner", "dominant" or "monopoly"). "strong political institutions" is a dummy which captures values of xconst=7 in column (1), xrcomp=3 in column (2) and xropen=4 in column (3). In columns (4) to (7) we use our main definition of good political institutions i.e. xconst>5. Column (4) drops from our sample ethnic groups in countries that belong to the lowest GDP per capita quartile Q1. Column (5) drops countries in the lower middle income quartile Q2 while column (6) drops those in the upper middle quartile Q3. In column (7) we drop the ethnic groups in countries that belong to the top income quartile Q4. Regressions use population weights.

<sup>19</sup>Our results are also not robust to using the aggregate polity score from Polity IV dataset as an indicator for strong institutions. This result is in line with findings in [De Luca et al. \(2015\)](#) and suggests that the level of constraints on the executive is the main institutional feature that mitigates ethnic favoritism.

<sup>20</sup>We use average GDP per capita in 1990 and 2000 to build these quartiles. These are the only two years in GROW<sup>up</sup> dataset for which we have both data on GDP and population.

## 4 Conclusions

In this article we have shown that ethnic groups which hold executive power at the country level generate more light per capita locally and that this effect is dampened or vanishes in environments with strong institutional constraints on the executive.

Our data allows us to study higher and lower concentrations of executive power and we find that groups that concentrate political power in the executive also benefit economically. Again, this effect is dampened or vanishes in countries with strong executive constraints. This lends additional credibility to existing findings in the literature which suggest a causal link from political representation to economic benefits and highlight the role played by checks and balances in restricting favoritism.

Our estimates are most precise when defining institutional constraints through high scores on the dimension of executive constraints. This captures, for example, that a legislature, ruling party, or council of nobles initiates much or most important legislation. Surprisingly, these sort of institutional constraints seems to constrain favoritism even if the measured concentration of executive power grows. This strengthens the view that political institutions are an important mediating factor of internal conflicts.

The existing data does not, however, allow us to make sharp distinctions regarding which institutions exactly restrict favoritism or how they do it. Further research on the mechanism by which these institutions prevent favoritism appears to be a logical next step.



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## Appendix

The data provided by [Girardin et al. \(2015\)](#) codes access to power on a seven point scale. Access to power is measured through the inclusion of members from the ethnic group in government.

The different codes are:

- Monopoly: Elite members hold monopoly power in the executive to the exclusion of members of other ethnic groups.
- Dominant: Elite members of the group hold dominant power in the executive but there is limited inclusion of "token" members of other groups.
- Senior Partner: Representatives of the group participate as senior partners in a formal or informal power-sharing arrangement.
- Junior Partner: Representatives participate as junior partners in government.
- Self-Exclusion: The special category of self-exclusion applies to groups that have excluded themselves from central state power, in the sense that they control a particular territory of the state which they have declared independent from the central government.
- Powerless: Elite representatives hold no political power at either the national or the regional level without being explicitly discriminated against.
- Discriminated: Group members are subjected to active, intentional, and targeted discrimination, with the intent of excluding them from both regional and national power.