Redistributive Political Transitions: Minority Rule and Liberation Wars in Colonial Africa

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Abstract

Does economic inequality and fear of redistribution affect prospects for political transitions? This article argues that tensions over economic redistribution in European settler colonies was an important contributor to resisted enfranchisement and liberation wars in colonial Africa. In settler colonies, Europeans monopolized the best agricultural land and secured their economic advantages by blocking franchise extensions—also creating conditions for liberation wars. Statistical evidence from Africa during the decolonization era demonstrates that larger European settler population shares covary with smaller franchises and with more frequent colonial liberation wars. To account for the endogeneity of European settlement, the article introduces a novel instrument that measures climatic and other land suitability factors that affected where Europeans could settle. The instrumental variable estimates more directly support the causal implications of European settlers.

Keywords: Africa, Civil war, Colonialism, Decolonization, Democracy, European Settlers, Redistribution

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Does economic inequality and fear of redistribution affect prospects for political transitions? Recent political science research offers opposing conclusions. On the one hand, influential theories have proposed precise mechanisms through which economic inequality affects franchise expansion and revolution (Acemoglu and Robinson, 2001, 2006; Boix, 2003, 2008). In these models, high economic inequality causes economic elites to fear political rule by the masses because the masses desire considerable wealth redistribution. Conflicting political preferences lower prospects for negotiated transitions to democracy and raise the likelihood of repression and revolution. Redistributive political transition models build off a long tradition in comparative politics that examines how relationships among social classes affect political transitions.

On the other hand, many have argued that the scope conditions of redistributive political transition models are too narrow explain empirical cases, such as 19th century European democratization (Ziblatt, 2006; Ansell and Samuels, 2014) and post-colonial transitions (Albertus and Menaldo, 2014; Slater, Smith and Nair, 2014), especially since 1980 (Haggard and Kaufman, 2012). This research challenges various assumptions from the original frameworks and instead posits, for example, that class tends to be an unimportant political cleavage, economic elites usually do not control authoritarian regimes, revolutionary threats from below rarely exist, and expanded franchises rarely redistribute en masse.

This article studies the post-World War II decolonization period in Africa and demonstrates strong empirical support for key redistributive implications about franchise expansion and revolutions, contrary to recent pessimistic empirical assessments of Acemoglu and Robinson's (2001, 2006) and Boix's (2003, 2008) theories. Although decolonization episodes have not received much attention from either proponents or opponents of redistributive models, they provide crucial cases for assessing the theoretical mechanisms of one of the most widely debated theories in comparative politics. Africa during the decolonization era closely matches scope conditions of the models, which enables a more direct empirical assessment of the theory than existing empirical critiques, and also facilitates a relatively strong research design.

The analysis first presents a modified version of Boix's (2003) and Acemoglu and Robinson's (2006) models accompanied by historical evidence to demonstrate the relevance of redistributive transition theories for understanding colonial Africa. The model shows that tensions over economic redistribution between a sizable European settler minority population and Africans should increase the likelihood of a contested political transition to majority rule.[1] In settler-dominated African territories, a minority of Europeans com-

[1]Throughout, "majority rule" does not imply that the masses rule via free and fair elections or impose constraints on the executive, which is consistent with the predominant focus of redistributive models on

manded the colonial economy by monopolizing the best agricultural land. European settlers feared economic redistribution of this highly specific asset if the African majority gained control over policymaking, which began to occur in many colonies across the continent after World War II. In settler-dominated territories, the settlers usually exerted strong political influence within the metropole country or themselves controlled the colonial government. Frequently, they successfully blocked franchise expansion reforms that would have undermined their economic privileges, which created incentives for Africans to fight for liberation from European rule. This situation contrasted with non-settler colonies, which tended to exhibit weaker vested economic interests for maintaining colonial rule due to the prevalence of African control of land, to the unprofitability of most colonies to the metropole, and to the greater mobility of production by multi-national corporations that operated in these territories. Despite also benefiting from exploiting Africans, Europeans in non-settler colonies were less willing to pay the associated repression costs needed to maintain colonial rule. The two main hypotheses are that larger European population shares should (1) diminish possibilities for franchise expansion and (2) raise the likelihood of colonial liberation wars.

The initial regression results strongly support the two main hypotheses, yielding large magnitude and statistically significant coefficient estimates. In bivariate regressions, hypothetically increasing a colony's European population share from Ghana's one-tenth of one percent to Rhodesia's level of roughly six percent increases the predicted probability of a colonial liberation war from six percent to 77 percent; and, between 1955 and 1970, decreases the expected percentage of the population that was legally enfranchised from 78 percent to 40 percent. The European settler coefficient estimates remain substantively large and robustly statistically significant when controlling for a wide range of alternative explanations. The results are also similar when presenting robustness checks that use selection on observables to estimate bias from unobservables, or that alter the sample of territories or years.

Africa during the decolonization era also provides an advantageous setting for evaluating redistributive political transition models by facilitating a relatively strong research design. Europeans were not randomly assigned to different locations, and their settlement decisions could be correlated with other factors that directly influenced franchise expansion and liberation wars. However, settlers could only replicate European farming techniques in areas of Africa that had either (1) Mediterranean climate or (2) all of high rainfall, high elevation, and low tsetse fly prevalence. Exploiting this historical fact enables constructing a novel, plausible instrument for European population share: the percentage of a colony's territory that was suitable

franchise size rather than on other aspects of democracy.

for large-scale European settlement, calculated by the author using GIS data.

Results from instrumental variable regressions more directly support the causal implications of European settlers. They estimate a similarly (relative to the non-instrumented results) substantively large and statistically significant correlation between European population share and each of enfranchised population percent and colonial liberation wars. Formal sensitivity analysis demonstrates these correlations are robust even if the exclusion restriction is violated to a considerable extent. This relatively strong research design relates to numerous recent contributions on the political effects of colonialism in Africa (Lee and Schultz, 2012; McCauley and Posner, 2015; Goemans and Schultz, 2017) and beyond (Mattingly, 2017) that exploit exogenous variation in international border drawing, although the present article takes a more macro focus.

Additional qualitative and quantitative evidence provides more direct support that land inequality—a key mechanism in the theory—was an important factor for explaining conflictual transitions in settler colonies. Settlers exhibited fear of land redistribution under majority rule and many African liberation organizations mobilized on the issue of land reform. Two proxies for land inequality are positively correlated with the land suitability instrument and with European population share, and covary in the expected direction with the two outcome variables. Finally, the conclusion grounds the focus on Africa while also discussing broader implications, both empirical—examining correlations across a broader decolonization sample—and theoretical implications for redistributive political transition models.

The present research builds off considerable historical research on colonial Africa arguing that European settlers should contribute to liberation wars (Gann and Duignan, 1962; Wasserman, 1976; Mosley, 1983, and numerous additional citations below).[2] Matching scope conditions of redistributive political transition models with empirical facts from colonial Africa would be impossible without this existing work. However, these historical accounts tend to be less clear about the specific mechanisms posited to cause liberation wars and tend to focus on one or a small number of cases. The present contribution demonstrates the relevance of redistributive mechanisms—which includes analyzing the additional dependent variable of legalized enfranchisement. It also comparatively assesses all African colonies using statistical analysis premised on a research design that exploits plausibly exogenous variation in European settlement patterns. This approach exemplifies complementarities among historical research, general theories, and statistical testing.

[2]Other important contributions on colonial rule analyze decolonization wars as part of the broader colonial context, such as Spruyt (2005) and Lawrence (2013). Goldsmith and He (2008) statistically assess some correlates of decolonization wars, but do not discuss European settlers.

1 Theory: Redistributive Political Transitions and Colonial Africa

This section presents a formal model based on Boix (2003) and Acemoglu and Robinson (2006), accompanied by historical evidence to show the key assumptions are appropriate for studying colonial Africa. Evidence in the next section shows why the model generates divergent implications for settler and non-settler colonies. Although the present model closely resembles existing models of redistributive political transitions, it is useful to present formally for three reasons. First, the formal exposition enables clearly linking model assumptions with empirical facts about colonial Africa. Second, it is necessary to impose additional assumptions to facilitate comparative statics on the size of the rich population (which existing models are not well-suited to do because they normalize the size of different groups) and to modify the constraint for when the masses will stage a revolution in a manner substantively appropriate for post-World War II colonial Africa. Additionally, an extension incorporates a distinct metropole actor, thus adding an international component to these domestic-focused models. Third, Boix's (2003) and Acemoglu and Robinson's (2006) baseline models contain some important differences from each other, e.g., only the former incorporates asset specificity and revolution never occurs in equilibrium in the latter. It is difficult to track the logic of the relevant assumptions for colonial Africa without formally presenting a model, although most details are relegated to Appendix A, which also elaborates on some assumptions not discussed in the text.

1.1 Setup

Actors and economic endowments. A continuum of agents normalized to size 1 are denoted by their endowed income level $y^i > 0$. These actors are bifurcated along class lines between a rich minority and poor majority (Assumption 1). Rich actors compose anywhere between 0 and half the population, $e \in \left(0, \frac{1}{2}\right)$, and have an endowment of $y^r > \overline{y}$, where $\overline{y} > 0$ is the fixed level of average societal income. In colonial Africa, the parameter e captures not only Europeans that permanently settled in Africa, but also government officials that accrued revenues from African colonies and multi-national corporations with colonial investments. Therefore, although larger European settler populations correspond with higher e, this parameter was positive in all colonies. Poor actors compose the remaining $1 - e$ percent of the population and have an endowment of $y^p = \frac{\overline{y} - e \cdot y^r}{1-e}$. The equality follows because average societal income is fixed at $\overline{y}$. Correspondingly, rich agents' share of total income, $\frac{e \cdot y^r}{\overline{y}}$, strictly increases in the share of rich agents in the population, whereas poor agents' share of total income strictly decreases in e.

Sequence of moves. At the outset of the game, the rich control a minority regime (Assumption 2) and decide whether to grant majority rule or to repress.[3] If the rich grant majority rule, then the poor move next and choose a tax rate $\tau \in [0, 1]$. If instead the rich repress the poor, then with probability w the rich retain power and set the tax rate. With complementary probability $1 - w$ following repression, the poor can choose to launch a revolution (Assumption 3), which here is conceptualized as a liberation war. If the poor revolt, then $\mu \in (0, 1)$ percent of societal output is destroyed and the poor consume the rest, $(1 - \mu) \cdot \overline{y}$, whereas the rich consume 0. By contrast, if the poor do not revolt following repression, then the rich retain political control and set the tax rate. Repression (without a subsequent liberation war) destroys $\phi \cdot \mu$ percent of total output, for $\phi \in [0, 1)$. Regardless of prior moves, after the tax rate is set, the rich decide whether to sell their production domestically or abroad. Appendix Figure A.1 presents the game tree.

Payoffs. If the rich sell domestically, then all actors pay taxes. Government revenues are redistributed as identical lump-sum transfers to each agent in society and equal $\big[\tau - b(\tau)\big] \cdot \overline{y}$, where $b(\tau)$ expresses the bureaucratic costs of collecting taxes. Therefore, each agent consumes $(1 - \tau) \cdot y^i + \big[\tau - b(\tau)\big] \cdot \overline{y}$. Assuming that a lump sum tax rate is the only policy instrument departs from reality in colonial Africa because colonizers imposed all sorts of taxes (e.g., hut taxes, forced labor) and non-tax costs (e.g., uncompetitive labor markets, and forced resettlement and land expropriation in most settler colonies) on Africans. However, the present results would be identical if the model included an additional choice for the rich to impose a tax that only the poor pay as long as, in equilibrium, this poor tax would increase in rich population share. This implication receives support in colonial Africa considering the extreme extent of land appropriation and labor market distortions in settler economies (Palmer, 1977, 246; Mosley, 1983, 13-6). Given equivalency of theoretical findings, it is preferable to avoid adding another moving part to the model and to stick to existing redistributive models as closely as possible.

If instead the rich sell abroad, then no domestic taxation or redistribution occurs. Instead, the poor consume their endowment y^p and the rich consume $\sigma \cdot y^r$, for $\sigma \in (0, 1)$. The parameter σ is the price the rich receive internationally, and captures the specificity of rich agents' output to producing and selling domestically. Related, this option captures moving and producing elsewhere for settlers and multi-national corporations, and the metropole's economic prospects if colonial rule ends. Lower σ corresponds to assets

[3]For concreteness, a representative rich agent makes all choices for the rich and a representative poor agent makes all choices for the poor.

whose productivity is more specific to that country, yielding a low-valued outside option. After deriving the formal logic, the next section argues that economic differences between settler and non-settler colonies correspond with differences in e and σ, which implies divergent expected decolonization paths.

1.2 Relevance of Scope Conditions for Colonial Africa

Although the literature has challenged the empirical relevance of Assumptions 1 through 3 across a wide range of cases,[4] they are appropriate scope conditions for studying decolonization in colonial Africa.

Assumption 1. Class cleavages. Africans versus Europeans provided most important political cleavage in colonial Africa. This racial cleavage correlated highly with class—with Europeans composing the economic elite—as many historians have described, especially in the settler colonies. "Class conflicts are overlaid and reinforced by racial differences" (Gann and Duignan, 1962, 142). In Kenya, the "wealthy, expatriate, white landowning elite ...conspicuously dominat[ed] the African societies among whom they dwelled." This "spawned their antithesis: the conscious rural African masses aware of their disadvantaged position in society" (Wasserman, 1976, 2). In Algeria, "The lack of articulate class divisions within the European population is explained precisely by its colonial situation; Europeans collectively derived their employment, their riches, their place in the sun, from the rigorous exclusion and exploitation of Algerian Muslims" (Murray and Wengraf, 1963, 19), a point that Good (1976, 611-2) generalizes to other major settler colonies.

This assumption does not deny the existence differences or divisions *within* either the European or African populations, only that this dichotomous class distinction was politically meaningful in colonial Africa. The relevant question is whether introducing more domestic actors would change the implications of the game (see below for a consideration of international actors), which appears unlikely given incentives for intra-African and for intra-European alliances. Africans differed on dimensions such as whether they lived in urban or rural areas, or whether or not they worked for the colonial government. One group that seemingly might have faced incentives to ally with Europeans was educated African elites. However, although they tended to be relatively pro-Western in the early colonial period, they were soon pushed out of power in favor of decentralized (or, "indirect") rule by local chiefs. Educated Africans reacted by harshly condemning the endemic racism of European colonial rule (Mamdani, 1996, 74-6). And the colonial-favored chiefs, whatever their proclivity toward colonial rule, were outsiders to Africans' independence movements as many rulers sought to undermine "the traditional authorities [that] were seemingly the anthesis of the

[4] Appendix Section A.3 discusses and cites existing research.

modern revolution that they sought to lead" (Herbst, 2000, 174). Boone (2003, 159-163) describes how Kwame Nkrumah's nationalist movement overwhelmed the previous political power of Asante planter-chiefs in colonial Gold Coast/Ghana.

Similarly, Europeans faced strong incentives to band together even where sharp intra-European divisions existed. For example, South Africa exhibited a politically relevant split among white settlers between British and Boers, but they consciously chose to create a regime that emphasized racial rather than regional cleavages for fear of losing power to the African masses (Lieberman, 2003). Additionally, there were certainly poor whites, but white leaders consistently provided "a clear idiom that emphasized strategic and normative obligations to one another and to 'poor whites' within that society" (4). Consequently, there were no cross-racial alliances: "blacks—who were also largely poor—organized and resisted *as* blacks, gaining no solidarity from poor whites—who were, in fact, among their fiercest adversaries" (93).

The collinearity between class and racial cleavages, however, does pose an empirical challenge. How can we know that redistributive pressures played an important role, as opposed to an alternative story about racism and grievances? Below I show that the economic structure of settler and non-settler colonies differed in ways that should affect Europeans' incentives for decolonization—independent of their racist feelings, which do not explain why they would be willing to suffer massive costs of prolonged wars—and evidence that Europeans acutely feared land redistribution following majority rule.

Assumption 2. Rich control the minority regime. By definition of colonial rule, Europeans controlled the regime. This was true even in territories such as South Africa and Southern Rhodesia/Zimbabwe where European settlers were autonomous from the metropole but were still "colonial" from the perspective of the native population. Prior to 1945, very few citizens or subjects in Africa could vote except for some Europeans in settler colonies. Appendix Figure B.1 depicts this trend.

Relevant for Assumptions 1 and 2, a clear source of divergent preferences among Europeans in many cases occurred between the European metropole and European settlers. The next section on different economic structures in settler and non-settler colonies provides evidence that many large settler communities were politically influential enough to dictate colonial policy, even where it departed from the metropole's preferences, and discusses alternative modeling setups that yield similar insights as the baseline model.

Assumption 3. Economic grievances and revolution. In addition to injustices of foreign political rule, Africans also harbored many economic grievances. Hut taxes, forced labor, and uncompetitive labor mar-

kets were ubiquitous across colonial Africa (Mamdani, 1996, 148-165), which coincided with metropoles' demands that their colonies be self-financing. Young (1994) summarizes the coercion and economic exploitation involved with constructing and maintaining colonial rule in Africa using explorer Henry Morton Stanley's nickname "Bula Mutari" (he who crushes rocks), and discusses the role of coercion in the "revenue imperative" for colonial states (124-133).

Despite these grievances, the continent was nearly free of major conflict in the interwar period. Between 1919 and 1945, only Morocco and Libya experienced major "extra-state" wars between natives and the colonizer, and these two were colonized late and not pacified prior to World War I.[5] However, prospects for mass rebellion in Africa changed considerably after World War II. In all colonies, Europeans composed a small minority group even in colonies with—by regional standards—large European populations. Furthermore, the spread of nationalist consciousness and pan-Africanist "winds of change" across the continent created an acute sense of fear of the African majority after World War II, which had increased its mobilization ability. The war also weakened European powers' structural advantages over subject populations and shifted the international environment against continued colonialism.[6] Therefore, although Africans never acted as a monolithic bloc, assuming a threat from below expresses the well-grounded premise that changes after World War II caused European colonizers to fear repercussions if they did not expand rights to Africans.

1.3 Implications for Franchise Reform and Liberation Wars

This section summarizes the main theoretical implications and Appendix A formally details the unique subgame perfect Nash equilibrium. The key consideration for both types of agents is whether they will accept a less-preferred tax rate in return for avoiding costly coercion, yielding two main questions. (1) Will the poor accept minority rule or (if possible) fight a liberation war? Formalizing the motivation for Assumption 3—Africans were exploited everywhere across the continent and faced newfound organizational opportunities to challenge colonial rule after World War II—the analysis assumes that liberation wars destroy a sufficiently small amount that the poor will initiate a liberation war if possible. (2) Will the rich grant majority rule or repress the poor—possibly breeding a liberation war? The rich repress if both their population share and asset specificity are high to avoid considerable redistribution under majority rule. By

[5]Data from Correlates of War (Sarkees and Wayman, 2010) with authors' coding of war location. Extra-state war is the relevant war category for colonized territories.

[6]Young (1994, 182-217) provides more extensive background on the decolonization period.

contrast, either low rich population share or high asset specificity limit the amount of redistribution under majority rule and induce the rich to reform.

An enlarged rich population share (weakly) causes greater discrepancy in the tax rates levied under majority and minority rule, which widens the difference in the amount of redistribution under the two regimes. Higher e decreases poor agents' income y^p, which decreases their opportunity cost of taxation relative to benefits from redistributive transfers. This increases the poor's most-preferred tax rate. If asset specificity is high (i.e., σ is low), then the solid line in Figure 1 depicts the high tax rate the poor will set (bureaucratic costs pose the only constraint in this case). However, if asset specificity is lower, then the poor are constrained to not set the tax rate so high that rich agents will sell their production abroad. The dashed line in Figure 1 depicts the lower tax rate under majority rule that results from low asset specificity. By comparison, the rich always set a tax rate of 0 under minority rule because lump-sum redistribution necessarily transfers wealth from the rich to the poor, and taxation entails bureaucratic costs.

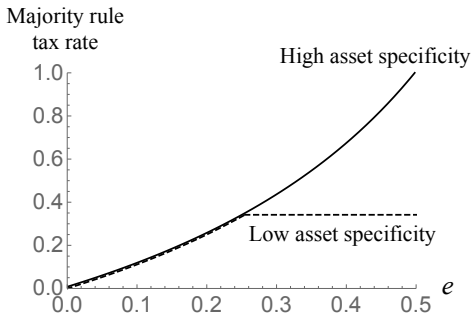
The rich face strong incentives to deny majority rule if and only if their population share is high and asset specificity is high. Figure 2 illustrates the rich's calculus. Expected consumption under majority rule strictly decreases in e when asset specificity is high (black line in Panel A) because larger European settler population share raises the tax rate under majority rule (solid line in Figure 1). The gray line in Panel A of Figure 2 expresses the rich's expected consumption if it represses. Although repression is costly, the large amount of redistribution expected at high e causes the rich to repress and risk a liberation war (probability $1 - w$) to preserve the possibility of minority rule (probability w), rather than acquiesce to a high tax rate under majority rule. By contrast, Panel B of Figure 2 shows that if asset specificity is low, then the rich reform even if their population share is large because low asset specificity constrains the tax rate under majority rule (dashed line in Figure 1).

This logic yields the unique equilibrium (formalized in Appendix A), which the next section states in terms of testable hypotheses after showing e and σ differed between settler and non-settler colonies.

Proposition 1 (Key components of equilibrium path of play)**.**

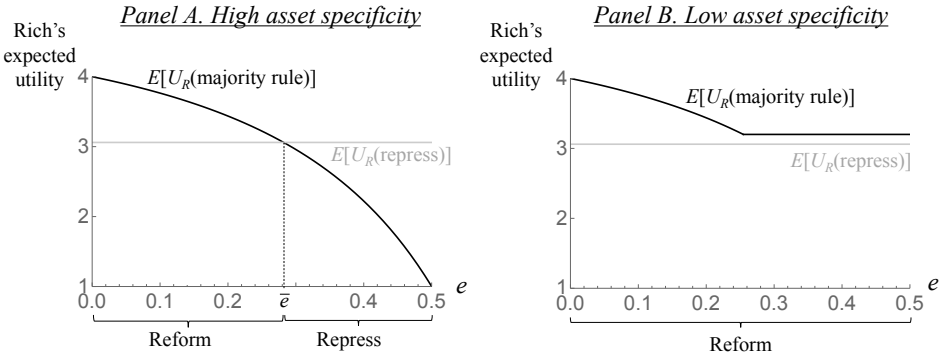
If rich share of the population is low (i.e., low e) or if asset specificity is low (i.e., high σ), then the rich grant majority rule and no liberation war occurs. If rich share of the population is high (i.e., high e) and if asset specificity is high (i.e., low σ), then the rich repress and the poor initiate a liberation war if repression fails.

Figure 1: Tax Rate Poor Agents Would Set Under Majority Rule



Notes: Figure 1 uses the following parameter values and functional forms: $y^r = 4$, $\overline{y} = 2$, $\mu = 0.2$, $w = 0.5$, $\phi = 0.75$, and $b(\tau) = \frac{\tau^2}{2}$. For the solid black line, $\sigma = 0$. For the dotted black line, $\sigma = 0.8$.

Figure 2: Optimal Reform/Repress Decision for Rich Agents



Notes: Figure 2 uses the following parameter values and functional forms: $y^r = 4$, $\overline{y} = 2$, $\mu = 0.2$, $w = 0.9$, $\phi = 0.75$, and $b(\tau) = \frac{\tau^2}{2}$. In Panel A, $\sigma = 0$. In Panel B, $\sigma = 0.8$.

2 Economic Differences Between Settler and Non-Settler Colonies

Structural changes after World War II created a choice for European colonial rulers: decolonization reforms eventually leading to full independence under African control, or rebellion. Although many factors affected the colonial calculus, economic considerations in most colonies did not warrant continued colonial rule as events unfolded in the 1950s and 1960s. European metropoles tended not to derive economic gains from their colonies. For many multi-national corporations, the rents enjoyed under colonialism did not outweigh the looming costs of a liberation war. Despite benefiting from exploiting Africans, Europeans in non-settler colonies were less willing to pay the associated repression costs needed to maintain colonial rule. By contrast, in settler colonies, Europeans tended to dominate the best land and to derive other rents they would not be able to replicate under African majority rule, creating incentives to repress. In terms of model parameters, e tended to be larger in settler colonies and σ tended to be lower. Combining historical evidence

with the logic of the model yields the two main hypotheses.

2.1 Economic Incentives for Decolonization in Non-Settler Africa

Within roughly a decade after World War II concluded, it had become clear to government officials that colonies did not tend to economically benefit the metropolitan country. Although until the 1950s some argued that the colonies were necessary for economic recovery after the war, these economic benefits were transient. Britain's official historian of colonial development proclaimed with regard to African decolonization in the 1950s: "The economic considerations were fairly evenly matched [because, while Britain might save on some types of expenditure, there might be costs resulting from reduction of special commercial advantages it enjoyed in the colonies]" (quoted in Fieldhouse, 1986, 8). Similarly, France granted huge subsidies to its colonies that undermined economic incentives for continued colonial rule. By the 1950s, this economic reality had convinced many French officials that autarkic assumptions about benefits of trading within the empire were flawed (Fieldhouse, 1986, 14-7). These trends reflected the changed post-World War II international economic system that made continued colonial rule unprofitable (Spruyt, 2005, 65-86), especially considering the alternative of facing anti-colonial rebellions.

Nor did non-settler colonies tend to possess strong business lobby groups with specific assets.[7] Larger firms operating in more modern industries relied less on colonial protection because they were more competitive internationally, and therefore more readily accepted African majority rule. Many recognized the benefits of establishing a moderate nationalist elite to work with after independence rather than potentially letting a guerrilla group take power following a prolonged struggle. "Big companies were confident that they could cope with changing situations by adapting their methods and activities; it was the small men—the white settlers ... who had cause for fear that decolonization would destroy their world" (Fieldhouse, 1986, 12). Although certain businesses were strongly pro-empire, their lobbies were not politically powerful in either Britain or France. Stockwell (2000) examines firms' reactions to decolonization in the Gold Coast, perhaps a most likely case for finding evidence of business influence halting decolonization because of considerable British corporate interests. Instead, she shows that these firms were largely on the defensive with regard to the pace of political change and, to the extent they exerted influence, realized the changing tide and attempted to throw their support behind moderate African leaders.

[7] The broad points in this paragraph draw from Kahler (1981), Fieldhouse (1986, 9-12, 17-21), and Spruyt (2005, 101-4, 124-7).

This discussion does not imply that multi-national corporations expected to gain the same level of rents in independent Africa. After all, colonial rule enabled economic exploitation of Africans in a manner that would be impossible under independent rule. Instead, the relevant point is that the difference in profits did not justify the increasing repressive costs of continued colonial rule. Even in colonies with considerable mineral production, corporations could leverage their technical expertise against a post-colonial government. For example, Kahler (1981, 392-4) argues that the political future of large European copper mining corporations in Zambia "seemed secure because of the enormous bargaining power they expected to wield vis-a-vis *any* successor regime" due to Africans' technological and financial dependence on the companies. Butler (2007) details how the chairman of the Northern Rhodesian/Zambian mining company Rhodesian Selection Trust recognized the "significance of African industrial, and subsequently political, mobilisation" (467) and sought to empower moderate African leaders to manage the transition to independence, rather than seek to resist change that he saw as inevitable. In a broad statement, White (2000, 545) argues that after independence, "British economic influence was maintained in the new Commonwealth" as many ex-colonies retained the sterling and relied heavily on foreign investment. "Constitutional advance, it would appear, rarely blighted the prospects for British business overseas" (545-6).

Of course, despite aggregate trends that encouraged decolonization reforms in non-settler colonies, there were many important sources of heterogeneity—which motivates many of the control variables used below. European metropoles differed in their assessment of the continued benefit of colonial rule, with Portugal's authoritarian regime more willing to pay the costs of fighting in order to retain control. Metropolitan political systems also differed in their institutions, which affected the ability of extreme lobbies to influence policy (Spruyt, 2005). The Belgian Congo featured high levels of concessions to multi-national corporations, but Belgium was also a relatively weak European country that had little ability to maintain control in the face of rebellion. Controlling for colonizer fixed effects accounts for these and other important differences across European empires. Non-settlers colonies also differed in their economic structure and value with regard to the extent of African labor exploitation and exports of cash crops or minerals, which motivates controls for exports per capita and natural resource income per capita. Colonial policy and the extent to which World War II disrupted colonial control also differed across individual territories, motivating controls for indigenous traditional leaders and Axis occupation during World War II.

2.2 Land Control and High Asset Specificity in Settler Colonies

Economic incentives for decolonization differed considerably in settler colonies compared to non-settler colonies. The primary reason stemmed from settlers' dominance over the best agricultural land. In the model, more extensive control over land corresponds with a shift in wealth from poor to rich as e increases—which is especially applicable for this setting because of the centrality of agricultural production in colonial Africa—and implies the rich's main asset was non-mobile, i.e., low σ. Research by area specialists and historians of Africa supports that land inequality between Europeans and Africans was starkly higher in settler than non-settler colonies. Although colonizers tended to misunderstand "traditional" land practices in Africa, private land ownership was and still is relatively rare. Few territories experienced high levels of disruption of local land tenure arrangements during the colonial era, and almost all that did "saw exceptionally large amounts of land alienated during white rule for the benefit of white settlers" (Herbst, 2000, 189). By contrast, "in many African colonies without settlers, the colonial authorities did not attempt to disrupt local tenure practices. Indirect rule was interpreted to call for, in some places, vesting local authorities with control over land" (190).[8] In other words, the key premise of the widespread practice of "indirect rule" across the continent was premised on Africans controlling their land. Table 1 summarizes starkly unequal land distribution patterns in the four main settler colonies—compared to 0% European land alienation in most colonies—and results below analyze the relationship between land inequality and other key theoretical variables using comparative data for a broader sample.

Table 1: European Settler Land Domination - Eve of World War II

Territory	*Eu. settler % of population*	*Eu. settler % alienated land*	*Eu. settler % cultivable land*
South Africa	20%	87%	61%
Algeria	11%	34%	27%
Southern Rhodesia	6%	50%	58%
Kenya	1%	7%	25%

Source: European settler population figures described in next section. Land data from Lutzelschwab (2013), Tables 5.1 and 5.2. Land figures for Algeria exclude the Sahara. Many historians consider these the four main European settler colonies in Africa (Good 1976; Mosley 1983, 1; Lutzelschwab 2013).

This key economic difference between settler and non-settler colonies—considerable European alienation of land—created broad interests against decolonization in settler colonies. For farmers, relatively low technological barriers to entry on many Europeans farms would make it easy to replace Europeans with

[8] See also Mamdani (1996), Mosley (1983, 13-29), and Hailey (1957, 685-815).

Africans (Kahler, 1981, 391). Nor were farmers' prospects for relocating back to Europe promising. Many were uneducated and would face lower economic and social status (Spruyt, 2005, 105). Both of these factors correspond with low σ. European land control also created positive spillovers for non-agricultural whites. The major settler colonies were founded upon preferential European access to land (Palmer, 1977, 246; Mosley, 1983, 13-6). Displacing Africans from their land created a cheap, mobile labor supply.[9] This generated and reinforced rents that Europeans accrued by economically marginalizing Africans.[10] Europeans in every economic sector would lose their privileges of having the best jobs and earning the highest wages (Oliver and Atmore, 2005, 187, 269) if they lost political control, and most would not be able to replicate their standard of living in the metropole (Spruyt, 2005, 105).

Overall, although Europeans participated in a wide range of economic activities in settler colonies (Christopher, 1984, 122-192), widespread European control of land fundamentally distinguished them from non-settler colonies and yielded high e and low σ for the colony as a whole. The section below on the importance of land inequality further grounds this argument by demonstrating that settlers acutely feared land redistribution and that agricultural lobbies tended to be politically powerful.

2.3 Political Power of European Settlers

Settlers' political power enabled them to effectively pursue their economic desires to thwart decolonization. Where large in number, European settlers usually dominated the colonial state and commanded considerable influence in the metropole until and after World War II, which enabled them to block reforms that could have alleviated Africans' incentives to rebel.

In three cases, European settlers directly controlled the state. South African whites governed a sovereign state, yielding wide leeway to pursue policies that enhanced their economic interests. They wrote the discriminatory founding constitution in 1909 and formally implemented apartheid policies in 1948. Southern Rhodesian whites had enjoyed self-governance since 1923 and the government pandered solely to European interests. After African leaders rejected a proposed constitution in 1961, the white electorate voted

[9] Lutzelschwab (2013, 155-61) discusses the four main settler colonies, Duffy (1962, 187) discusses Angola, and Schmokel (1985, 101) discusses South-West Africa.

[10] As the model setup section discussed, this consideration could easily be incorporated in the model by assuming minority regimes can tax the poor without having to engage in lump-sum redistribution, but would not qualitatively change the main model implications.

into power the extreme right-wing Rhodesian Front party that was "committed to the maintenance of white rule in the country" (Oliver and Atmore, 2005, 272). Rather than heed Britain's demands to grant African representation, the settler government took an extreme move to preserve white rule: unilaterally declaring independence in 1965, despite not gaining international recognition. South-West Africa/Namibia also had a large European population. South Africa governed the territory after World War I as a League of Nations mandate and extended apartheid rule to its self-proclaimed "fifth province" (Oliver and Atmore, 2005, 297).

Elsewhere, the metropolitan country governed the colony, but settlers exerted considerable influence that facilitated implementing their preferences. Relating this consideration to the theory, the model could be easily extended to allow rich agents to differ in their preferences—e.g., differences between the metropole and settlers—and to decide the "representative" rich agent that makes policy choices by a weighted average (determined by political power) of the rich's preferences. Appendix Section A.4 considers a slightly more complicated extension in which the metropole is a separate actor in the model, and shows why the political power of settler lobbies should yield the outcomes predicted in the baseline model despite the metropole having different incentives for decolonization. The appendix also analyzes the Rhodesia and Kenya cases with regard to metropolitan relations in more depth.

French settlers in Algeria commanded considerable influence over the colonial government, the Parisian government, and the military. Their influence undermined the Blum-Violette Bill of 1936 that would have granted citizenship to a small fraction of the Arab majority, and the settler-dominated administration rigged the 1948 Algerian Assembly elections to prevent sharing any power with Arabs (Spruyt, 2005, 105; Lawrence, 2013, 80). Europeans in Kenya also exerted considerable influence prior to the Mau Mau rebellion. "The British administration did in fact follow a policy which almost invariably allowed the interests of settlers to prevail at all the critical points where they conflicted with those of the African population" (Good, 1976, 613). Only after Mau Mau did the British government more directly govern the colony—despite considerable protest by whites—and allow it to become "part of Black Africa" (Gann and Duignan, 1962, 136). Although Angola differed because Portugal always maintained tighter metropolitan control, European settlers still exerted substantial influence. They rejected proposed assimilation policies and instead supported segregation to secure their economic and legal status (Duffy, 1962, 204; Spruyt, 2005, 187) and rejected African proposals for multi-racial parties (Bender, 1974, 144). A white settler party succinctly stated its desire to make an "intransigent defense of what we built and [what] belongs to us" (152).

In addition to important informal channels of power, one formal measure showing the dominance of

European settler interests in South Africa, Zimbabwe, Algeria, and Kenya is that all had a long history of legislative representation for Europeans—in contrast to the near absence of legislatures across Africa in non-settler colonies before 1945 discussed above—coupled with the exclusion of African representation. Appendix Table B.1 summarizes this pattern.

Combining redistributive logic with this historical evidence about differences in e and σ between settler and non-settler colonies yields the two main hypotheses.

> **H1.** During the decolonization era in Africa, larger European settler population share should covary with smaller franchise size.
>
> **H2.** During the decolonization era in Africa, larger European settler population share should covary with higher frequency of colonial liberation wars.

3 Data

This section introduces the data. Appendix B provides additional information and references.

3.1 Sample of Territories

The core sample consists of every mainland African country (including North Africa) plus Madagascar that was once colonized by Western Europe and gained African majority rule after 1945. The appendix discusses the two exceptions, former Italian colonies Libya and Somalia. Two cases in the sample that fit the scope conditions of redistributive transitions models but deserve special attention are South Africa and Zimbabwe. White leaders of the colonies Cape, Natal, Orange, and Transvaal collectively gained independence as South Africa in 1910. Whites in Southern Rhodesia declared the independent state of Rhodesia in 1965 despite not gaining international recognition. Although these territories' "colonial" status was somewhat ambiguous, the model specifies that rule by a European minority is the key scope condition as opposed to, necessarily, Europeans whose primary residence is overseas. This also motivates the phrasing "colonial liberation war" (as opposed to "independence war") to denote liberation from European colonial rule, broadly defined. For example, historian John Hargreaves (1996, 5) refers to South Africa's "false decolonization of 1910." Where relevant, South Africa is coded as liberated in 1994, and Zimbabwe in 1980.

Furthermore, although South Africa and Zimbabwe clearly match the theoretical scope conditions, sample sensitivity analyses that drop all combinations of either one or two cases demonstrate that the findings do not hinge on including these two countries.

3.2 Main Variables

The main franchise size regressions feature panel data for every year between 1955 and 1970 for all territories, regardless of whether the country was colonized or independent in a particular year. This time period corresponds to Africa's main decolonization period. Jointly analyzing colony-years and independent country-years is theoretically appropriate because the timing of independence/liberation—which was closely related to the onset of a full franchise in most colonies—should be endogenous to the size of the European settler population. The suffrage variable is percentage of the population with the legal right to vote in national elections, measured in the Varieties of Democracy (V-Dem) dataset (Coppedge et al., 2016). These regressions include one fewer territory than the liberation war specifications because V-Dem does not provide data for Equatorial Guinea.

The main regressions for colonial liberation wars use a cross-section of territories. Every observation scores a 1 if a major colonial liberation war occurred and 0 otherwise. A major colonial liberation war is defined as a violent struggle against European colonizers—whether ruled by an overseas European country or by Europeans in the African territory—with some evidence of claims for liberation from colonial rule that involves at least 1,000 battle deaths. Every such war coded here occurred after World War II. No colony in the sample experienced more than one major liberation war, implying that analyzing a cross-section facilitates an appropriate and easily interpreted analysis of this outcome. However, temporal sample robustness checks show that the results for both franchise size and liberation wars are qualitatively unaltered when analyzing a panel from 1945 and 1989. Appendix Table B.3 lists the wars.

The main explanatory variable is European population percentage using data between 1945 and 1960. To prevent a handful of observations with large European population shares (relative to the sample) from heavily influencing the coefficient estimates, the regressions use the natural log of this variable. Appendix Table B.2 lists territories' European population share.

3.3 Possible Confounders

Research on democracy, civil war, and historical legacies in Africa provides insight into possible confounders for the relationship between European settlers and each of liberation wars and franchise size. This section states each group of covariates and Appendix B discusses the rationale and sources for each variable.

Two variables drawn from pre-colonial democracy studies are latitude and a country's weighted years

as a centralized state as of 1500. Two pre-colonial violence covariates are logged slave exports from a territory divided by land area and logged number of years a territory experienced warfare between 1400 and 1700, both using modern country borders. The geography of rebellion covariates are logged land area and an index of rugged terrain. Climate and elevation, which impacted European settlement prospects, compose another relevant aspect of geography and are incorporated the instrumental variable analysis presented below. Two specifications include colonial attributes. The first models colonizer fixed effects for British, French, Portuguese, and Belgian. The second colonial specification controls for whether or not the colony was invaded and occupied by an Axis power during World War II, logged size of the colonial Protestant missionary population, and whether the colony had a ruling monarchy anytime after World War II (an indicator of highly indirect rule). The colonial value covariates are logged exports per capita and logged mineral income per capita, both measured at independence. The standard democracy and civil war correlates are ethnic fractionalization, logged population, and logged income per capita. Appendix Table B.4 provides summary statistics for all variables.

4 Statistical Results

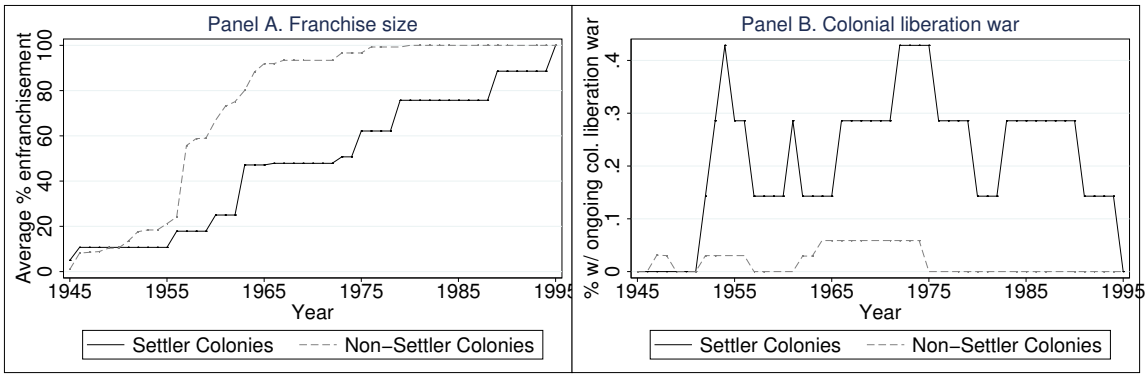
Graphical evidence and regression results strongly support Hypotheses 1 and 2. The regression specifications consider a variety of covariates, assess sensitivity to omitted covariates, and assess robustness to altering either the sample of territories or the time period.

4.1 Graphical Evidence

Between 1945 and 1995, Figure 3 compares the seven territories with a colonial European settler population of at least 2.5 percent to the 35 with a lower percent. In Panel A, the lines depict average percent legally enfranchised settler and non-settler territories. Few in Africa could vote in 1945. Limited franchises in European settler-dominated legislatures provided the main exceptions. However, whereas legal enfranchisement rates spiked in non-settler colonies between 1955 and 1965—by which time most had gained independence—reforms proceeded slowly in settler colonies (and Algeria's independence in 1962 accounts for most of the latter jump). These differences narrowed throughout the 20th century after a series of colonial liberation wars, which Panel B expresses. The lines show the percentage of territories in the settler and non-settler categories with an ongoing major colonial liberation war. French North Africa (Algeria, Morocco, Tunisia) experienced conflicts first, followed in the 1960s by Portuguese Africa (including Angola),

Zimbabwe, and Namibia. Long-simmering tensions in South Africa reached civil war violence levels in the 1980s. This contrasts with few colonies with smaller settler populations experiencing colonial liberation wars, and European settlers also contributed to some of these wars (e.g., Kenya).

Figure 3: Settler vs. Non-Settler Colonies between 1945 and 1995



4.2 Regression Results

Results from OLS regressions support the main hypotheses by estimating a large magnitude coefficient for European population share. Tables 2 and 3 estimate models of the following form:

$$Y_i = \beta_0 + \beta_E \ln E_i + \boldsymbol{X}_i' \beta_X + \epsilon_i, \tag{1}$$

where Y_i is percentage of the population with the franchise in Table 2 and an indicator for major colonial liberation war in Table 3, E_i is European population share, β_E is the main parameter of interest, $\boldsymbol{X}_i$ is a vector of covariates that differs across the different columns, and ϵ_i is a random error term. The text presents results from linear models for the liberation wars specifications to provide a direct comparison for the two-stage least squares results below, although probit regressions yield similar estimates as Table 3 (Appendix Table C.3).[11] The unit of analysis is territory-years in Table 2 and is territories in Table 3.

In Tables 2 and 3, Column 1 presents a bivariate regression of the dependent variable on logged European population share. The implied substantive magnitude is large. Hypothetically increasing a colony's European settler percentage from Ghana's one-tenth of one percent to Zimbabwe's level of six percent de-

[11] Additionally, some of the robustness checks used below are better suited to linear models. Techniques for assessing bias from unobservables using observables have been mostly analyzed using linear models (Oster, Forthcoming, 5). Additionally, there are problems of separation in some of the probit specifications, which makes summary statistics for the jackknife sample alternation regressions harder to interpret.

Table 2: European Settlers and Franchise Size (Territory-Years)

	DV: % pop. legally enfranchised								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	-10.93***	-9.798***	-11.75***	-9.683***	-7.896***	-11.44***	-7.480**	-18.41***	-11.52***
	(2.819)	(3.227)	(3.544)	(3.098)	(1.709)	(3.073)	(3.571)	(3.103)	(2.140)
Latitude		-0.593							
		(0.522)							
State antiquity		46.59**							-0.401
		(19.10)							(12.69)
ln(Slave exports/area)			-1.641						
			(2.644)						
ln(War years 1400-1700)			-0.497						
			(0.355)						
Rugged terrain				-4.910					
				(3.420)					
ln(Area)				-2.174					
				(4.058)					
British colony					24.77***				23.64***
					(6.945)				(6.991)
French colony					55.71***				50.86***
					(6.684)				(6.583)
Portuguese colony					-25.21***				-22.27***
					(5.172)				(4.538)
Belgian colony					28.09**				23.52
					(12.47)				(13.97)
WWII occupied						24.12**			5.402
						(10.85)			(6.056)
ln(Protestant miss.)						-3.746			
						(2.913)			
Post-1945 ruling monarchy						-2.146			
						(6.498)			
ln(Exports/pop)							-1.585		
							(1.918)		
ln(Resource income/pop)							-2.478		
							(2.514)		
ln(Population)								-1.005	
								(3.051)	
ln(GDP/capita)								25.10***	9.490**
								(7.849)	(4.070)
Ethnic frac.								-40.40**	-13.88
								(17.42)	(11.09)
Territory-years	650	650	650	650	650	650	650	650	650
R-squared	0.136	0.185	0.160	0.148	0.418	0.207	0.156	0.217	0.429

Notes: Table 2 summarizes a series of OLS regressions by presenting coefficient estimates for each variable, and country-clustered robust standard error estimates in parentheses. The sample is territory-years from 1955-1970. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

creases expected franchise size by 38 percentage points (78% versus 40%). Even this large difference is an underestimate if one is interested in *non-European* enfranchisement. For example, the legal enfranchisement rate in South Africa was 20% from 1955 to 1970. This is the value used in the regressions, but 0% of non-Europeans could vote. Also striking, hypothetically increasing a colony's European settler percentage from Ghana's to Zimbabwe's increases the predicted probability of a decolonization war by 71 percentage points (6% versus 77%). Furthermore, both correlations are statistically significant at 1%.

Columns 2 through 8 demonstrate that the coefficient estimate for European population share remains large in magnitude and statistically significant in each table across the seven groupings of covariates de-

Table 3: European Settlers and Colonial Liberation Wars (Territories)

	DV: Major colonial liberation war								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	0.210***	0.196***	0.240***	0.204***	0.207***	0.178***	0.222***	0.245***	0.202***
	(0.0263)	(0.0468)	(0.0332)	(0.0280)	(0.0314)	(0.0395)	(0.0377)	(0.0496)	(0.0263)
Latitude		0.00238							
		(0.00963)							
State antiquity		0.138							
		(0.286)							
ln(Slave exports/area)			0.0445						
			(0.0284)						
ln(War years 1400-1700)			0.00535						
			(0.00408)						
Rugged terrain				-0.00615					
				(0.0425)					
ln(Area)				0.0558					
				(0.0456)					
British colony					0.177				
					(0.285)				
French colony					0.260				
					(0.284)				
Portuguese colony					0.821***				0.603***
					(0.273)				(0.161)
Belgian colony					0.212				
					(0.281)				
WWII occupied						0.292			
						(0.178)			
ln(Protestant miss.)						0.0158			
						(0.0418)			
Post-1945 ruling monarchy						-0.107			
						(0.110)			
ln(Exports/pop)							-0.00720		
							(0.0312)		
ln(Resource income/pop)							-0.00807		
							(0.0405)		
ln(Population)								0.103***	0.110***
								(0.0368)	(0.0295)
ln(GDP/capita)								-0.0637	
								(0.136)	
Ethnic frac.								0.275	
								(0.289)	
Territories	42	42	42	42	42	42	42	42	42
R-squared	0.447	0.456	0.509	0.483	0.585	0.498	0.449	0.563	0.664

Notes: Table 3 summarizes a series of OLS regressions by presenting coefficient estimates for each variable, and robust standard error estimates in parentheses. The unit of analysis is territories and the dependent variable equals 1 if at least one major liberation war began between 1945 and 1989, and 0 otherwise. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

scribed in the previous section. The estimated difference in expected franchise size between Ghana and Zimbabwe ranges from 26% (74% versus 48% in Column 7) to 63% (86% versus 23% in Column 8), and the difference in the predicted probability of a liberation war ranges from 61% (70% versus 9% in Column 6) to 84% (86% versus 2% in Column 8). These are useful specifications to evaluate because they show that no alternative theory can explain away the finding, and also enables assessing which existing explanations find empirical support when accounting for European settlers (see Appendix Section C.1). Column 9 shows that the results are also largely unaltered when letting the models choose the most important covariates, specifically, controlling for every regressor with a p-value less than 0.10 in the Column 2 through 8

specifications. Finally, Appendix Tables C.1 and C.2 show that simultaneously controlling for either every pre-colonial covariate, every colonial covariate, or all the covariates yields similar findings.

4.3 Robustness Checks

Three sets of robustness checks affirm the results from Tables 2 and 3. First, the magnitude of the European settler coefficient estimates are relatively stable across the various specifications in the two tables. This observation lends credence to the robustness of the results by suggesting that selection on unobservables would have to be quite strong relative to selection on observables in order for the true effect to be 0. Appendix Section C.3 uses formal sensitivity metrics and demonstrates that to explain away the positive European population share coefficient estimate in each specification of Tables 2 and 3, the bias from omitting unobservables must either go in the opposite direction as the bias from omitting observables, or the bias from omitting unobservables would have to be large in magnitude. This implies that—although it is impossible to control for every possible confounder—if the control variables included the tables are substantively relevant, then there is less reason to believe that omitted covariates would overturn the results.

Second, the results are mostly robust to "jackknife" sample modifications, specifically, dropping every combination of up to two territories from the sample for each specification. All 369 permutations of dropping all years for exactly one territory from each franchise size specification, and all 7,380 permutations of dropping exactly two territories, are statistically significant at 5% (89% of both drop one territory and drop two territories are significant at 1%). For colonial liberation wars, all 378 permutations of dropping exactly one territory and all 7,749 permutations of dropping exactly two territories yield coefficient estimates for European settlers that are statistically significant at 1%.

Third, several temporal sample robustness checks show the results do not hinge on a potentially arbitrary time period or way to pool the data. Table C.5 re-runs the franchise size regressions for all years between 1945 and 1989. The next two tables show the colonial liberation war results are also robust to regressions using a panel of data between 1945 and 1989. Table C.6 analyzes colonial liberation war incidence for all colony-years and Table C.7 analyzes colonial liberation war onset for all colony-years.

5 Instrumental Variable Results

Despite the large-magnitude and robust coefficient estimates using standard regression techniques, because European settlers were not randomly assigned to different African territories, it is possible that Euro-

peans tended to migrate to areas that were more likely to experience resisted political transitions for which the different covariates do not account. This section introduces a novel instrument that enables more directly supporting causal implications by addressing the endogeneity of European settlement. Europeans could only develop large-scale settlements in areas of Africa that either had Mediterranean climate; or all of high rainfall, high elevation, and low tsetse fly prevalence. I used GIS data to construct a new variable that measures the percentage of a colony's territory that was suitable for European settlement. Regressions using this variable as an instrument for European settlement generate similarly substantively large coefficient estimates for European population share as in Tables 2 and 3. Formal sensitivity analysis presented in Appendix Section D.4 demonstrates that these correlations are robust even if the exclusion restriction is violated to a considerable extent.

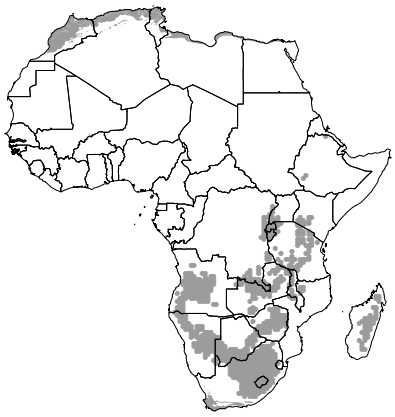
5.1 Possible European Agricultural Settlements in Africa

Climatic and related land suitability factors influenced prospects for European settlement. Historians have discussed conditions required for replicating large-scale European agricultural settlements in Africa (Mosley, 1983, 5; Lutzelschwab, 2013, 145). Temperate (or, Mediterranean) climate, found at the northern and southern tips of the continent, enabled large-scale European-style farming settlements. The remainder of the continent contains tropical climate, which obviates most temperate farming practices. However, Europeans could cultivate similar cereal crops as at home in tropical areas that met three conditions. First, they needed enough rainfall to grow crops. Second, high enough elevation created moderate temperatures. Third, Europeans needed land without the tsetse fly, which causes sleeping sickness in humans.

To construct a variable capturing these conditions, I used GIS data for climate, rainfall, elevation, and tsetse fly prevalence. Appendix D details the data and coding procedure. For each country, I computed percentage of non-desert territory with either (a) Mediterranean climate, or (b) all three of at least 20 inches of annual rainfall, 3,000 feet in elevation (see Mosley, 1983, 5), and the lowest quartile on Alsan's (2014) tsetse fly suitability index. Figure 4 depicts these conditions, and Appendix Figures D.1 through D.4 depict each factor individually. The regressions log this variable to guard against outliers driving the estimates.

This is a reasonable instrument for studying the effect of European settlement on both franchise size and colonial liberation wars for three reasons. First, all components of the instrument are exogenous with respect to political factors that could affect these outcomes. The data for the one potentially endogenous component of the instrument, tsetse fly, comes from Alsan's (2014) tsetse fly suitability index—which is derived from

Figure 4: African Territory Suitable for Large-Scale European Settlement



historical climate data—rather than from colonial or post-colonial maps of tsetse fly prevalence that may be affected by climate change or by stronger states better able to control the fly (389). It is of course possible that due to finite sample bias there is imbalance on confounders between colonies with a large versus small percentage of its territory suitable for European settlement, but (1) there is no *a priori* reason to believe this bias artificially supports the main hypotheses, and (2) I use the same groups of covariates as above to demonstrate the robustness of the European settlers coefficient estimate across various specifications.

Second, the instrument correlates strongly with European population share. Appendix Figure D.5 presents the scatterplot for a bivariate regression of European population share on the instrument, the first stage of the two-stage regressions. Despite the strong correlation, however, a handful of outliers with favorable conditions for European settlement but few European settlers (Burundi, Lesotho, Rwanda) highlight how geography is not destiny and how colonial policies affected European settlement. In these and several other colonies, the colonizer ruled indirectly through an indigenous monarch and eschewed European settlement to maintain a favorable relationship. Hailey (1957) provides examples from colonies such as Lesotho (697) and Uganda (723-6) in which the founding treaty with the monarch agreed that colonists would not appropriate African land, and how in Ruanda Urundi (contemporary Rwanda and Burundi), Belgium did not encourage any European settlement and how few settlers leased land (754), perhaps because high population density left little land unoccupied. To increase the strength of the first-stage correlations,[12] every specification includes the post-1945 ruling monarchy variable included in Column 6 of Tables 2 and 3 (see

[12] A stronger first-stage correlation decreases the magnitude of bias that results from any violations of the exclusion restriction, which Appendix Section D.5 discusses.

Appendix Section B.2 for coding details). The coefficient estimates for European population share are similar if replacing the post-1945 ruling monarchy variable with population density in 1800 (Appendix Tables D.10 and D.11) or if excluding both these variables (Appendix Tables D.12 and D.13), although the first stage relationship is weaker when not controlling for either.

Third, various statistical tests show that exclusion restriction violations are unlikely to explain away the findings. Regarding liberation wars, favorable rainfall patterns and high elevation may have directly created favorable conditions for guerrilla tactics, and tsetse fly prevalence may have raised colonizers' costs of repression. These three factors may also have affected pre-colonial political development—which in turn could have affected demand for majority rule. Two strategies show that these alternative pathways are unlikely to explain away the estimated effect. First, the wide array of control variables across the specifications directly address these specific concerns and show the estimates remain similar. The controls for terrain and land area account for the most prominent accounts in the literature about geographic causes of rebellion in Africa (see Garcia-Ponce and Wantchekon 2017 and Herbst 2000, respectively), and the various pre-colonial development controls address the concern about demand for democracy (Hariri, 2012).

However, because it is impossible to account for every way the exclusion restriction could be violated, it is crucial to formally assess how violations of the exclusion restriction would change the results. Appendix Section D.4 formally demonstrates that the results are robust to relatively large exclusion restriction violations. It uses Conley et al.'s (2012) formal sensitivity metric designed to perform "inference while relaxing the exclusion restriction" (260), which Appendix Section D.4 explains in more detail. Appendix Section D.2 also describes important differences from Acemoglu et al.'s (2001) settler mortality instrument.

5.2 IV Results

Results from two-stage least square (2SLS) regressions strongly support the main hypotheses. Tables 4 and 5 estimate simultaneous equation models composed of Equation 1 and:

$$\ln E_i = \beta_{0,Z} + \beta_Z \ln Z_i + \boldsymbol{X}_i' \beta_{X,Z} + \epsilon_{Z,i}, \tag{2}$$

where E_i is European population share, $\boldsymbol{X}_i$ is a vector of covariates that differs across the columns of Tables 4 and 5, Z_i is the instrument, and $\epsilon_{Z,i}$ is a random error term. Each column in Tables 4 and 5 contains 2SLS estimates of Equations 1 and 2 for franchise size and colonial liberation wars, respectively, as well as the partial F-test for the instrument in the first stage. Appendix Tables D.2 and D.3 present regression tables

with identical specifications but show all the coefficient estimates. Appendix Tables D.4 through D.7 present the corresponding first stage and reduced form estimates.[13]

Table 4: European Settlers and Franchise Size: IV Results

	DV: % pop. legally enfranchised								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	-19.59***	-20.70***	-26.95***	-19.83***	-10.50***	-22.13***	-22.97***	-25.33***	-13.40***
	(5.004)	(6.487)	(7.264)	(5.008)	(2.342)	(6.261)	(7.839)	(4.561)	(2.665)
Territory-years	650	650	650	650	650	650	650	650	650
R-squared	0.052	0.108		0.053	0.412	0.115		0.203	0.429
Covariates	Only monarchy	Pre-colonial democracy	Pre-colonial violence	Geography of rebellion	Colonizer FE	Other colonial	Colonial value	Standard	All stat. sig.
Partial F-test for IV in first stage	23.2	12.3	14.9	21.4	44.6	11.1	13.5	57.1	16

Table 5: European Settlers and Colonial Liberation Wars: IV Results

	DV: Major colonial liberation war								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	0.268***	0.320***	0.339***	0.253***	0.272***	0.387**	0.343***	0.248***	0.210***
	(0.0591)	(0.0949)	(0.0939)	(0.0611)	(0.0515)	(0.151)	(0.105)	(0.0701)	(0.0494)
Territories	42	42	42	42	42	42	42	42	42
R-squared	0.418	0.364	0.452	0.463	0.555	0.340	0.363	0.563	0.664
Covariates	Only monarchy	Pre-colonial democracy	Pre-colonial violence	Geography of rebellion	Colonizer FE	Other colonial	Colonial value	Standard	All stat. sig.
Partial F-test for IV in first stage	22.1	11.1	13.5	19.5	38.4	10.1	12.3	50.5	18.3

Notes: Tables 4 and 5 summarize a series of two-stage least square regressions in which log percentage of a colony's area that is suitable for European agriculture instruments for log European population share. In Table 4, the dependent variable is franchise size, the unit of analysis is territory-years, and it uses country-clustered robust standard errors. In Table 5, the dependent variable is major colonial liberation war, the unit of analysis is territories, and it uses robust standard errors. Every specification in both tables controls for post-1945 ruling monarchy. The bottom row of each table reports the partial F-test for the instrument in the first stage regression. Appendix Tables D.4 and D.5 present the corresponding first stage and reduced form estimates for Table 4, and D.6 and D.7 for Table 5. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

The combinations of covariates in Tables 4 and 5 resemble those in Tables 2 and 3. Hypothetically increasing a colony's European settler percentage from Ghana's one-tenth of one percent to Zimbabwe's six percent yields a difference in expected legal franchise size that ranges from 36% (77% to 41% in Column 5) to 93% (95% to 2% in Column 3). Using this same comparison to estimate substantive magnitude for the war regressions, the difference ranges from 71% (77% to 6%) in Column 9 to 100% (0% to 100%) in several specifications. All the coefficient estimates in the tables are statistically significant at 5%.

Tables 4 and 5 also provide evidence that the land suitability instrument is strongly correlated with Eu-

[13] Although colonial liberation wars is binary, it is standard to estimate such instrumental variable regressions with 2SLS (Angrist, 2001). Additionally, linear and nonlinear models tend to produce similar results for non-extreme values of the explanatory variable (Angrist and Pischke, 2009, 107) and, as noted, logging the land suitability instrument guards against horizontal outliers.

ropean settlers. In every specification, the partial F-test for the instrument exceeds the conventional standard of 10 for a weak instrument. Furthermore, only large violations of the exclusion restriction would overturn these results, as Appendix Section D.4 demonstrates with formal sensitivity analysis. Appendix Table D.14 shows that anywhere between 42% and 66% of the effect of the land suitability instrument on enfranchisement would have to occur through channels other than European settlement for any of the specifications in Table 4 to lose significance at the 5% level, and between 52% and 72% at the 10% significance level. The corresponding figures for the liberation war specifications in Table 5 are between 37% and 61% at the 5% significance level and between 47% and 67% at the 10% significance level. Between the large-magnitude coefficient estimates and relative insensitivity to exclusion restrictions violations for both dependent variables, it is difficult to explain away the purported causal effect of European settlers.

The findings are similar when considering additional combinations of covariates (Appendix Tables D.8 and D.9), replacing the post-1945 ruling monarchy control with population density in 1800 (Appendix Tables D.10 and D.11), or dropping both the monarchy and population density controls (Appendix Tables D.12 and D.13). The 2SLS liberation war specification with all covariates (Appendix Table D.9, Column 3) is not statistically significant (p-value 0.104), but the implied substantive magnitude remains very large even in this specification: the predicted probability of a liberation war in a colony with Zimbabwe's European population share is 71%, compared to 9% for Ghana's European population share.

6 Did Land Inequality Matter?

Differences between the economic structure of settler and non-settler colonies in Africa correspond with key assumptions from the redistributive framework that predict divergence in franchise expansion and liberation wars, and the quantitative findings show evidence of a causal relationship between European population share and both franchise size and colonial liberation wars. The final part of the analysis presents evidence about the importance of the intervening outcome land inequality—specifically, qualitative evidence that an important factor in European settlers' intransigence was fear of losing their land, and quantitative evidence that different measures of land inequality correlate as expected with key variables.

This evidence shows that land inequality played an important role in explaining different types of decolonization trajectories in Africa, as opposed to theories stressing the importance of racism or grievances (although these are not mutually exclusive).[14] Also important, redistributive theories can answer key ques-

[14]These factors are difficult to measure empirically, which is why they were not addressed in the re-

tions that these alternative accounts cannot. Even if racism was greater in settler colonies—or, perhaps Europeans in these colonies were better-positioned to act on their racist inclinations—this factor seems unlikely to explain why European settlers frequently went to extreme means to cling to power even in the face of long and costly wars, whereas the non-fungible economic rents they earned from colonialism anticipates this behavior. More generally, ethnic and racial grievances are omnipresent in colonial and post-colonial societies, but they only rarely erupt in conflict because additional triggering factors are required (Fearon and Laitin, 1996). Related, it is unconvincing to argue that conflict occurred in the settler colonies simply because Africans were more aggrieved there. Africans harbored grievances in all colonies (see the discussion of Assumption 3) that stemmed from lack of political representation and from economic exploitation, even if land displacement in settler colonies did cause an especially bad status quo. However, in colonies where the Europeans living there did not have strong vested interests that they could translate into policy decisions, Europeans usually decolonized and alleviated Africans grievances before major conflict ensued.

6.1 Qualitative Evidence of Land Inequality

Considerable evidence shows that European settlers perceived an acute threat of redistribution under majority rule. Land inequality loomed large, although settlers also enjoyed other rents that they would lose if Africans gained the franchise. This situation departs from many other cases discussed in critiques of redistributive models in which elites may not fear franchise expansion because they do not expect mass redistribution, either because of low state capacity (Slater, Smith and Nair, 2014) or anticipation of "capturing" democratic institutions (Albertus and Menaldo, 2014). However, for colonial Africa:

> The probable political future of settler agriculture was not promising. Land and land hunger were the driving forces behind nationalist movements from Rhodesia to Kenya to North Africa. The colonial state had carefully prepared the way for European agriculture; any successor regime was likely to threaten its property rights first. Few technological or other obstacles would prevent a successor government from substituting African or Arab farmers for Europeans (Kahler, 1981, 391).

Providing examples, a Rhodesian historian claimed, "Should power fall into African hands in Rhodesia, settlers fear the new rulers would insist on the expropriation of white farms in the name of land reform" (Gann and Duignan, 1970, 161). In Kenya, "The fate of the 'White Highlands' was the linchpin determining

gression results above. By contrast, the value of colonies—another alternative explanation—is more easily quantified, and therefore was evaluated statistically.

the future of the European farming community and the colonial political economy. The European farmer holding non-liquid assets in a threatening environment had to adapt in some way to his surroundings—if only by leaving" (Wasserman, 1976, 2). Related, Wasserman (1976, 2) also refers to the "European farming community" as "perched at the top of the political-economic hierarchy they had largely established." Most of Algeria's French population fled to France as the war ended in part because of reduced economic prospects in an independent Algeria (Spruyt, 2005, 105).

Stated redistributive goals of African rebel organizations likely contributed to Europeans' redistributive fears. In Rhodesia, "one of the strongest motivations for African nationalists taking up arms was to win back the land that had been expropriated by the colonial settlers" (Mlambo, 2014, 220-221). Reno (2011, 96) cites anti-colonial Rhodesian rebel groups' "consistent commitment to the narrative of majority rule and the promise of access to land." Land reform negotiations composed a crucial part of the Lancaster House Agreement of 1979, which yielded internationally recognized independence and majority rule in Zimbabwe (Mlambo, 2014, 191-3). In Algeria, the Soumman Declaration of 1956—the culmination of a foundational meeting for the revolutionary group FLN—stated the need for agrarian reform and land distribution as part of FLN's broader independence goals (Kahler, 1981, 391). In Kenya, historians frequently cite Kikuyus' belief that Europeans took their land as the primary trigger of the Mau Mau rebellion (Wasserman, 1976, 2; Lutzelschwab, 2013, 162). In Angola, early African nationalist publications in the 1950s and a main rebel leader, Holden Roberto, focused on European settlement as a primary grievance (Marcum, 1969, 24, 86). In South-West Africa, the African liberation group SWAPO turned to armed resistance after whites proposed the Odendaal Plan in 1964. This plan would have tied South-West Africa more closely to South Africa and would have legally reserved 60% of South-West Africa's land for whites (Oliver and Atmore, 2005, 297-8).

Furthermore, the European settlers that had the most to lose from land reform wielded considerable political power. "The core of resistance to decolonization could be found in the agricultural sector" (Kahler, 1981, 390). Farmers were in part able to achieve favorable policies through strong political organization. For example, in South Africa's 1948 elections, rural voters provided the main constituency for the National Party, which won power and launched apartheid policies (Thompson, 2001, 186). Similarly, the radical Rhodesian Front gained power in Southern Rhodesia in 1962 largely by rejecting modifications to the Land Apportionment Act—which secured Europeans' dominance over Southern Rhodesia's best land—and had support from white farmers (Palmer, 1977, 244). The political power of European farmers in Kenya made the land question "the crucial issue" in the colony's decolonization bargaining (Wasserman, 1976, 17).

6.2 Quantitative Evidence of Land Inequality

Despite limitations to available data on land control in colonial Africa (Van de Walle, 2009, 313), comparative data demonstrate quantitative evidence for the land mechanism. Hailey (1957, 687) provides comparative data on percentage of land alienated by colonial Europeans, perhaps the most direct measure possible of land inequality. Bruce (1998) surveys African countries in the 1990s to assess whether or not a "significant" amount of land was held privately. Herbst (2000), who also uses this source, argues that only in settler colonies did private property of land become widespread, and that these patterns tended to persist after independence because of difficulties for post-colonial rulers to disrupt existing land practices. Therefore, this variable acts as a reasonable proxy for colonial land inequality.

Appendix Table E.1 shows that these two measures each exhibit the expected correlations. They are each positively correlated with both the land suitability instrument and with European population share. Furthermore, both variables are correlated with the two outcomes: negatively with percent population enfranchised, and positively with major colonial liberation war. These results are somewhat qualified by inherent limitations of the land inequality data. Appendix Section E details some of the sample restrictions imposed by these variables, and concerns about measurement error in the land alienation variable. However, given available data, these seem to be the most appropriate measures for assessing land inequality, and the results—complementing the qualitative evidence—are consistent with theoretical expectations from redistributive political transition models about the consequences of inequality in non-mobile assets.

7 Conclusion

Does economic inequality and fear of redistribution affect prospects for political transitions? This article argues that tensions over economic redistribution in European settler colonies was an important contributor to resisted enfranchisement and liberation wars in colonial Africa. In settler colonies, Europeans monopolized the best agricultural land and secured their economic advantages by blocking franchise extensions—also creating conditions for liberation wars. Statistical evidence from Africa during the decolonization era demonstrates that larger European settler population shares covary with smaller franchises and with more frequent colonial liberation wars. To account for the endogeneity of European settlement, the article introduces a novel instrument that measures climatic and other land suitability factors that affected where Europeans could settle. The instrumental variable estimates more directly support the causal implications

of European settlers.

The article concludes by discussing two broader implications. First, do the findings hold up in a wider sample? The analysis concentrates on Africa because these colonial cases most closely match the scope conditions of redistributive models, and Africa provides almost all the colonies with sizable European settler populations that gained independence during the second major wave of decolonization after World War II. Appendix F shows that the correlations remain strong when expanding the sample to all post-1945 independence cases (Tables F.3 and F.4) and the liberation war results when examining all former Western European colonies (Table F.5; there is no available comparative colonial franchise data for 19th century independence cases). Appendix F also argues that redistributive mechanisms help to explain resistance to franchise expansion in 19th century Latin America, although alternative mechanisms may better explain why many early settler colonies fought liberation wars. More broadly, these findings also contribute one of the few statistical studies on causes of decolonization conflict, which has received relatively little attention in the broad quantitative civil war literature.

Second, this article advances debates about the empirical relevance of redistributive political transition models. Here, the conclusions are mixed overall. On the one hand, colonial Africa corresponds closely with key scope conditions and—whatever evidence to the contrary in other settings—provides one set of cases that demonstrate the empirical relevance of redistributive tensions. European settler-dominated Latin America in the 19th century appears to provide another set of supportive cases. On the other hand, the present exercise of matching assumptions from redistributive models with empirical details from colonial Africa perhaps also highlights the limitations of existing redistributive political transition models as a general theory of regime transitions. Although historically important, the scope conditions in African settler colonies are somewhat specific and extreme with regard to the degree of concentration of a completely immobile asset in the hands of a small economic and political elite, which is why in many other settings these assumptions yield less empirical purchase (Haggard and Kaufman, 2012; Ansell and Samuels, 2014). Overall, this article provides a more balanced empirical assessment of redistributive political transition theories, which should help to inform future theory development and empirical tests.

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Online Appendix

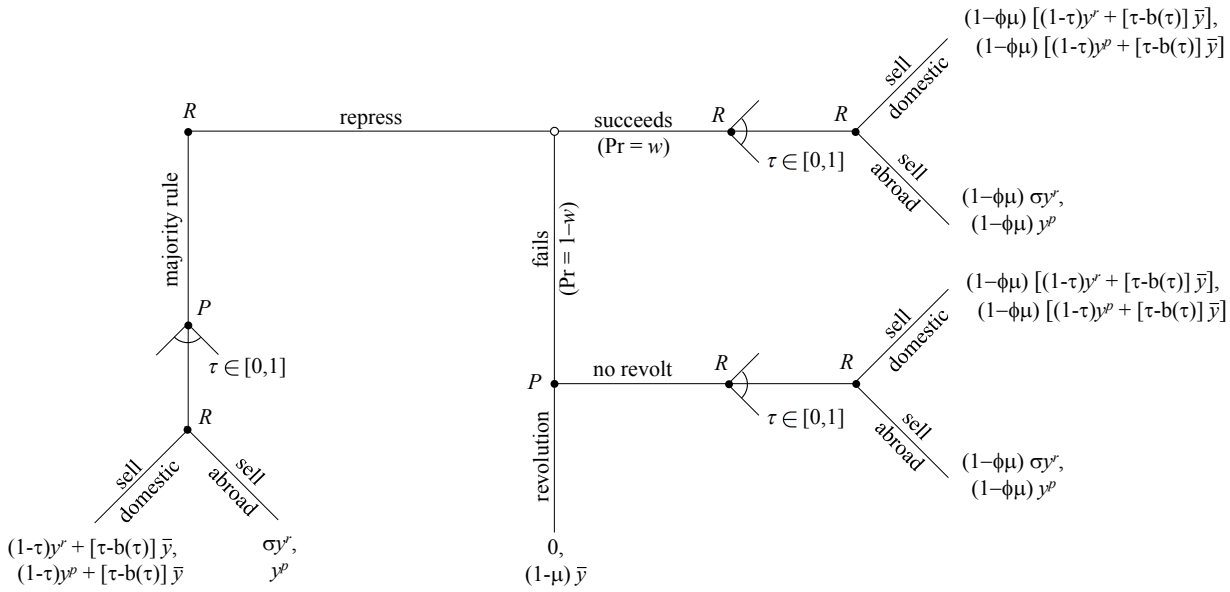
Contents

List of Tables

List of Figures

A Appendix for Theory Section

Figure A.1: Game Tree



Notes: The tree states the information sets and payoffs for a representative rich agent and for a representative poor agent.

A.1 Formal Model Analysis

The formal analysis solves backwards to characterize the unique subgame perfect Nash equilibrium.

A.1.1 Tax Rates in Minority and Majority Regimes

Assume the function $b : [0,1] \to [0,1]$ is smooth and satisfies the following conditions: $b(0) = 0, b(1) = 1, b' > 0, b'(0) = 0, b'(1) = 1, b'' > 0$. Additionally assume $y^r \in (\overline{y}, 2 \cdot \overline{y})$, which implies $y^p > 0$. Lemma A.1 shows that these assumptions imply the rich's most preferred tax rate is 0 whereas the poor's is a unique amount strictly bounded between 0 and 1.

> **Lemma A.1** (Most preferred tax rates)**.** *The rich's most preferred tax rate is 0. The poor's most preferred tax rate is $\hat{\tau}_p \in (0,1)$, for a unique $\hat{\tau}_p$ defined in the proof.*

Proof. Proving the following statement is sufficient to prove the lemma: For any agent i with income $y^i > \overline{y}$, the most preferred tax rate is $\hat{\tau}_i = 0$. For any agent $y^i \in (0, \overline{y})$, there exists a unique most preferred tax rate $\hat{\tau}_i \in (0,1)$. For a generic agent i, the optimization problem with inequality constraints

is:

$$\max_{\tau} \ (1-\tau)\cdot y^i + \left[\tau - b(\tau)\right]\cdot \overline{y} + \lambda_1 \cdot \tau + \lambda_2 \cdot (1-\tau)$$

The assumptions on $b(\cdot)$ imply that the objective function is strictly concave, which implies that any solution is a unique maximizer. Furthermore, the continuity of the objective function over a compact set implies that a maximum exists. The associated KKT conditions are:

$$-y^i + \left[1 - b'(\tau)\right]\cdot \overline{y} + \lambda_1 - \lambda_2 = 0$$

$$\tau \geq 0, \tau \leq 1$$

$$\lambda_1 \geq 0, \lambda_2 \geq 0$$

$$\lambda_1 \cdot \tau = 0, \lambda_2 \cdot (1-\tau) = 0$$

The proof proceeds in three steps.

1. If $y^i > 0$, then any solution must satisfy $\tau < 1$. Suppose not and $\tau = 1$. The first complementary slackness condition therefore requires $\lambda_1 = 0$. Substituting $\lambda_1 = 0$, $\tau = 1$, and $b'(1) = 1$ into the first-order condition yields $\lambda_2 = -y^i < 0$, which contradicts the second non-negative multiplier condition.

2. If $y^i > \overline{y}$, then the unique solution is $\tau = 0$. Suppose not and $\tau \in (0,1)$; the previous step enables restricting attention to $\tau < 1$. The interior tax rate implies $\lambda_1 = \lambda_2 = 0$ is needed to satisfy the complementary slackness conditions. Substituting these terms into the first-order condition yields a contradiction because $-(y^i - \overline{y}) - b'(\tau)\cdot \overline{y} < 0$.

3. If $y^i \in (0, \overline{y})$, then there exists a unique solution $\tau = \hat{\tau}_i \in (0,1)$. Suppose not and $\tau = 0$; the first step enables restricting attention to $\tau < 1$. The second complementary slackness condition requires $\lambda_2 = 0$. Substituting $\lambda_2 = 0$, $\tau = 0$, and $b'(0) = 0$ into the first-order condition yields $\lambda_1 = -(\overline{y} - y^i) < 0$, which violates the first non-negative multiplier condition. The existence and uniqueness of $\hat{\tau}_i$ follow from imposed boundary assumptions, the assumed continuity of b in τ, and from the strict negativity of the first-order condition in τ.

   After substituting in for y^p, the implicit characterization of $\hat{\tau}_p$ is:

$$-\frac{\overline{y} - e\cdot y^r}{1-e} + \left[1 - b'(\hat{\tau}_p)\right]\cdot \overline{y} = 0 \tag{A.1}$$

■

Two corollaries follow immediately from Lemma A.1.

Corollary A.1 (Rich size and poor tax rate)**.** *The poor's most preferred tax rate strictly increases in the rich's population share, and goes to 0 as e goes to 0.*

Proof. Applying the implicit function theorem to Equation A.1 yields:

$$\frac{d\hat{\tau}_p}{de} = \frac{y^r - \overline{y}}{b''(\hat{\tau}_p)\cdot \overline{y}\cdot (1-e)^2} > 0$$

Also need to show $\lim_{e \to 0} \hat{\tau}_p = 0$. Substituting $e = 0$ into Equation A.1 and simplifying yields $-b'(\hat{\tau}_p) = 0$, which yields the unique solution $\hat{\tau}_p = 0$. ■

Corollary A.2 (Tax rate in minority regime)**.** *In a minority regime, the rich set taxes to 0.*

The intuition for these results is straightforward. First, agents richer than the average income level get less in lump sum transfers than they lose in income, and therefore prefer a tax rate of 0 (this would be true even if there were no bureaucratic costs of taxation). By contrast, the opposite is true for agents poorer than the average income level, and therefore they prefer a positive tax rate—although the bureaucratic costs of taxation prevent poor agents from setting the tax rate to 1. Second, because the poor's income decreases in rich population share, higher e decreases the opportunity cost of taxation for the poor—increasing their most preferred tax rate. Third, because the rich do not face a constraint at information sets in which they set the tax rate (clearly, it will never be optimal to sell their output abroad), the tax rate will be 0 in minority regimes.

The poor, by contrast, face a constraint to setting their most preferred tax rate in a majority regime because the rich can sell their output abroad (unless the poor staged a revolution, in which case the poor do not have a tax rate information set). The rich sell their product domestically if and only if:[15]

$$(1 - \tau) \cdot y^r + \left[\tau - b(\tau)\right] \cdot \overline{y} - \sigma \cdot y^r \geq 0 \tag{A.2}$$

This constraint binds if and only if the rich will sell their output abroad rather than domestically if the poor set their most preferred tax rate.

Lemma A.2 (Selling abroad constraint)**.** *There exists a unique $\overline{\sigma} \in (0, 1)$ such that the rich have a credible threat to sell their output abroad if $\sigma > \overline{\sigma}$ but not if $\sigma < \overline{\sigma}$. The explicit characterization of this threshold is:*

$$\overline{\sigma} = 1 - \hat{\tau}_p + \left[\hat{\tau}_p - b(\hat{\tau}_p)\right] \cdot \frac{\overline{y}}{y^r},$$

for $\hat{\tau}_p$ defined in Lemma A.1.

[15]The "only if" part of this statement follows from standard arguments in bargaining games. If the rich sold abroad with positive probability if indifferent, then the poor would face an open set problem because their objective would be to set the highest tax rate strictly lower than the indifference level.

Proof. Applying the intermediate value theorem demonstrates the existence of at least one $\overline{\sigma}$ that satisfies Equation A.2 (after substituting in $\tau = \hat{\tau}_p$) with equality. If $\sigma = 0$, then $(1-\hat{\tau}_p)\cdot y^r + \left[\hat{\tau}_p - b(\hat{\tau}_p)\right]\cdot\overline{y} > 0$. If $\sigma = 1$, then $-(y^r - \overline{y})\cdot\hat{\tau}_p - b(\hat{\tau}_p)\cdot\overline{y} < 0$. And the function is continuous in σ. Furthermore, the function strictly decreases in σ, which yields the unique threshold claim. ■

If the rich sell their output abroad, then the poor cannot redistribute the rich's income. Given the poor's preference for positive amounts of redistribution (Lemma A.1), the optimal tax rate under majority rule will induce the rich to sell their production domestically. This implies that the tax rate in a majority regime is the smaller of the poor's most preferred tax rate and the highest tax rate at which the rich will sell their output domestically. Furthermore, the larger is σ, the more the poor have to push the tax rate downwards in order to prevent the rich from selling abroad.

Lemma A.3 (Tax rate in majority regime)**.** *In a majority regime, if $\sigma < \overline{\sigma}$, then the poor set the tax rate to $\hat{\tau}_p$, for $\overline{\sigma}$ defined in Lemma A.2 and $\hat{\tau}_p$ defined in Lemma A.1. If $\sigma > \overline{\sigma}$, then the poor set the tax rate to $\hat{\tau}_\sigma$, for $\hat{\tau}_\sigma \in (0, \hat{\tau}_p)$ defined in the proof.*

Proof. The non-trivial part of the lemma to prove is that for all $\sigma \in (\overline{\sigma}, 1)$, there exists a unique $\hat{\tau}_\sigma \in (0, \hat{\tau}_p)$, for $\hat{\tau}_\sigma$ that satisfies Equation A.2 with equality. Applying the intermediate value theorem demonstrates the existence of at least one $\hat{\tau}_\sigma \in (0, \hat{\tau}_p)$ for all $\sigma \in (\overline{\sigma}, 1)$. If $\tau = 0$, then $(1-\sigma)\cdot y^r > 0$, which follows from assuming $b(0) = 0$ and $\sigma < 1$. If $\tau = \hat{\tau}_p$, then $(1-\hat{\tau}_p)\cdot y^r + \left[\hat{\tau}_p - b(\hat{\tau}_p)\right]\cdot\overline{y} - \sigma\cdot y^r < 0$ follows directly from assuming $\sigma > \overline{\sigma}$. Continuity follows from the assumed continuity of $b(\cdot)$. Finally, the proof for Lemma A.1 shows that the function strictly decreases in τ for $y^i = y^r$, which yields the unique threshold claim.

The implicit characterization of $\hat{\tau}_\sigma$ is:

$$(1 - \hat{\tau}_\sigma)\cdot y^r + \left[\hat{\tau}_\sigma - b(\hat{\tau}_\sigma)\right]\cdot\overline{y} - \sigma\cdot y^r = 0 \tag{A.3}$$

■

Corollary A.3 (Tax rate in majority regime)**.** *Denote the equilibrium tax rate in a majority regime as $\tau_p^*(e)$. For all parameter values, this tax rate equals $\tau_p^*(e) = \min\left\{\hat{\tau}_p(e), \hat{\tau}_\sigma\right\}$.*

A.1.2 Accept Minority Rule or Revolt?

At the information set where the poor decide between accepting minority rule or revolting, they will revolt if:

$$(1 - \mu)\cdot\overline{y} > (1 - \phi\cdot\mu)\cdot y^p \tag{A.4}$$

Assumption A.1 formalizes Assumption 3 from the text and implies that the revolution constraint binds, which Lemma A.4 states.

Assumption A.1.

$$\mu < \frac{\overline{y} - y^p}{\overline{y} - \phi \cdot y^p}$$

Lemma A.4 (Revolution constraint)**.** *The poor will revolt rather than acquiesce to minority rule.*

A.1.3 Expand the Franchise or Repress?

The rich will grant majority rule rather than repress if:

$$(1 - \tau_p^*) \cdot y^r + \left[\tau_p^* - b(\tau_p^*)\right] \cdot \overline{y} - w \cdot (1 - \phi \cdot \mu) \cdot y^r > 0, \tag{A.5}$$

for τ_p^* defined in Lemma A.3. We know that the rich's utility under majority rule strictly decreases in the tax rate (Lemma A.1) and that the poor's most-preferred tax rate strictly increases in e (Corollary A.1). It follows that the rich prefer repression if they are sufficiently large and not protected by the constraint of selling their output abroad, as long as the cost of repression is not so high that the rich will not repress under any circumstance (which Assumption A.2 assumes away). By contrast, either small rich population share or a high outside option to selling abroad sufficiently constrain the majority-rule tax rate that the rich will expand the franchise.

Assumption A.2.

$$\phi \cdot \mu < \frac{\left(1 - \tau_p^*(\frac{1}{2})\right) \cdot y^r + \left[\tau_p^*(\frac{1}{2}) - b\left(\tau_p^*(\frac{1}{2})\right)\right] \cdot \overline{y}}{w \cdot y^r}$$

Lemma A.5. *There exists a unique $\overline{e} \in \left(0, \frac{1}{2}\right)$ such that if $e > \overline{e}$ and $\sigma < \overline{\sigma}(\overline{e})$, for $\overline{\sigma}$ defined in Lemma A.2 and $\overline{e}$ defined in the proof, then the rich repress. If either $e < \overline{e}$ or $\sigma > \overline{\sigma}(\overline{e})$, then the rich grant majority rule.*

Proof. The proof proceeds in three steps.

- Working from Equation A.5, the rich reform if $\Theta\left(\tau_p^*(e)\right) > 0$ and repress if $\Theta\left(\tau_p^*(e)\right) < 0$, for:

$$\Theta\left(\tau_p^*(e)\right) \equiv \left(1 - \tau_p^*(e)\right) \cdot y^r + \left[\tau_p^*(e) - b\left(\tau_p^*(e)\right)\right] \cdot \overline{y} - w \cdot (1 - \phi \cdot \mu) \cdot y^r$$

- Show: There exists a unique $\overline{e} \in \left(0, \frac{1}{2}\right)$ such that $\Theta\left(\tau_p^*(e)\right) > 0$ if $\tau_p^*(e) < \hat{\tau}_p(\overline{e})$ and $\Theta\left(\tau_p^*(e)\right) < 0$ if $\tau_p^*(e) > \hat{\tau}_p(\overline{e})$. Proof: It suffices to demonstrate the existence of a unique $\overline{e} \in \left(0, \frac{1}{2}\right)$ such that $\Theta\left(\hat{\tau}_p(e)\right) > 0$ if $e < \overline{e}$ and $\Theta\left(\hat{\tau}_p(e)\right) < 0$ if $e > \overline{e}$. Applying the intermediate value theorem demonstrates the existence of at least one $\overline{e}$ such that $\Theta\left(\hat{\tau}_p(\overline{e})\right) = 0$:
  - $\Theta\left(\hat{\tau}_p(0)\right) = \left[1 - w \cdot (1 - \phi \cdot \mu)\right] \cdot y^r > 0$, which follows from $\lim_{e \to 0} \hat{\tau}_p = 0$ shown in Corollary A.1
  - $\Theta\left(\hat{\tau}_p(\frac{1}{2})\right) < 0$ follows directly from Assumption A.2
  - The assumed smoothness of $b(\cdot)$ implies that $\hat{\tau}_p$ is continuous in e (see Equation A.1) and that $\Theta(\hat{\tau}_p)$ is continuous in $\hat{\tau}_p$, therefore implying that $\Theta(\hat{\tau}_p)$ is continuous in e.

  To establish the unique threshold claim, $\frac{d\Theta(\hat{\tau}_p(e))}{de} = \frac{\partial \Theta(\hat{\tau}_p(e))}{\partial \hat{\tau}_p} \cdot \frac{d\hat{\tau}_p}{de}$. The strict negativity of $\frac{\partial \Theta(\hat{\tau}_p(e))}{\partial \hat{\tau}_p}$ follows from arguments in the proof of Lemma A.1 and the strict positivity of $\frac{d\hat{\tau}_p}{de}$ follows from Corollary A.1. Therefore, $\frac{d\Theta(\hat{\tau}_p(e))}{de} < 0$, which yields the unique threshold claim.
- Three cases partition the parameter space:
  1. Small e. If $e \in (0, \overline{e})$, then $\tau_p^*(e) \leq \hat{\tau}_p(e) < \hat{\tau}_p(\overline{e})$. The first inequality follows from Corollary A.3 and the second because $\hat{\tau}_p$ strictly increases in e (Corollary A.1).
  2. High σ. If $\sigma > \overline{\sigma}(\overline{e})$, then $\tau_p^*(e) \leq \hat{\tau}_\sigma < \hat{\tau}_p(\overline{e})$ for all $e \in \left(0, \frac{1}{2}\right)$. The first inequality follows from Corollary A.3 and the second from assuming $\sigma > \overline{\sigma}(\overline{e})$.
  3. High e and low σ. If $e \in \left(\overline{e}, \frac{1}{2}\right)$ and $\sigma < \overline{\sigma}(\overline{e})$, then $\tau_p^*(e) > \tau_p^*(\overline{e}) = \hat{\tau}_p(\overline{e})$. The equality follows from assuming $\sigma < \overline{\sigma}(\overline{e})$, and the inequality because $\hat{\tau}_p$ strictly increases in e (Corollary A.1) and we are assuming $e > \overline{e}$. ■

These considerations enable stating the unique subgame perfect equilibrium strategy profile of the game, the proof of which follows directly from these results.

Proposition A.1 (Equilibrium)**.**

- *If $\sigma > \overline{\sigma}(\overline{e})$ or $e < \overline{e}$, for $\overline{\sigma}$ defined in Lemma A.2 and $\overline{e}$ defined in Lemma A.5, then the rich grant majority rule. If $\sigma < \overline{\sigma}(\overline{e})$ and $e > \overline{e}$, then the rich repress. At the poor's revolution information set, it launches a revolution. Under minority rule, $\tau = 0$. Under majority rule, $\tau = \min\left\{\hat{\tau}_p, \hat{\tau}_\sigma\right\}$, for $\hat{\tau}_p$ defined in Lemma A.1 and $\hat{\tau}_\sigma$ defined in Lemma A.3. The rich sell domestically if $\tau \leq \hat{\tau}_\sigma$, and sell abroad if $\tau > \hat{\tau}_\sigma$.*

A.2 Additional Comments on Assumptions

The parameters μ and w are assumed to be independent of the size of the elite population for simplicity. However, all the results are identical (and in fact strengthened) under substantively plausible assumptions that the likelihood of repression succeeding increases in the size of the elite population and/or the costliness

of repression decreases in the size of the elite population.

Assuming that $\overline{y}$ is fixed follows Acemoglu and Robinson's (2006) and Boix's (2003) focus on relative income shares between groups rather than on income effects. This is a natural assumption in colonial Africa, where there was a fixed amount of land and higher European population shares decreased Africans' incomes by forcing them from their land. However, all the present results are qualitatively identical if higher e raises $\overline{y}$ but the income effect is low relative to the discrepancy in rich and poor agents' average incomes.

A.3 Challenges to Core Redistributive Assumptions

Although Assumptions 1 through 3 are empirically relevant for colonial Africa, they have received considerable scrutiny in the literature when applied to other cases. Briefly summarizing these critiques enables situating colonial African cases into the broader debate about the empirical relevance of redistributive political transition theories.

Assumption 1 states that divisions between rich and poor provide the main political cleavage. Haggard and Kaufman (2012) argue that class cleavages have been important in few cases of post-1980 transitions to or from democracy. Ansell and Samuels (2014) retain the focus on classes, but focus on the importance of splits between a stagnant landed elite and a growing industrial elite (in addition to the masses). They argue that splits within the elite have been critical for many important cases of franchise expansion, such as 19th century Britain, which a two actor model cannot capture. This also relates to the earlier "voluntarist" research agenda that posits the importance of elite splits in democratic transitions (O'Donnell and Schmitter, 1986). Epstein, Leventoğlu and O'Halloran (2012) provide a formal model in which there are separate class and racial cleavages in society while otherwise retaining the redistribution transitions setup.

Assumption 2 states that economic elites control minority regimes. By contrast, the state in many post-colonial countries does not—contra Karl Marx's famous aphorism—serve as the executive committee of the bourgeoisie. For example, Slater, Smith and Nair (2014) argue that the military usually does not act as a proxy for the wealthy. Considering the prevalence of military regimes prior to the end of the Cold War, this may help to explain Haggard and Kaufman's (2012) findings against the redistributive model. Slater (2010) distinguishes among political, economic, military, and ideological elites, all of whom exercise power that can be critical for an authoritarian regime's survival.

Assumption 3 states that minority regimes face a credible threat of revolution from below. However, in many empirical cases of franchise expansion, other factors were more important. In many cases of 19th cen-

tury franchise expansion, such as Britain, elite calculations related to securing public goods for themselves and their ability to survive broader political competition were more important than an imminent socialist revolution (Collier, 1999; Lizzeri and Persico, 2004; Llavador and Oxoby, 2005; Ziblatt, 2017). The spread of womanhood suffrage across Europe and offshoots in the early 20th century was more closely related to labor contributions during World War I and perhaps religious-based cultural differences (Przeworski, 2009). In recent decades, international actors such as the United States and European Union have demanded elections in return for foreign aid provision, which has contributed to transitions to more democratic regimes in many countries despite the absence of a threat from below (Levitsky and Way, 2010; Haggard and Kaufman, 2012).

A.4 Model Extension with European Metropole Actor

Redistributive transition models focus solely on domestic actors. Although domestic conditions in colonial Africa closely match the scope conditions of the theory, the colonial setting suggests also studying the European metropole. There are two natural ways to incorporate divisions between European settlers and European metropolitan actors into the model. The easiest is to allow rich agents to differ in their endowments (y^r and σ) and to assume that the balance of political power among Europeans determines which rich actor gets to choose policy. Given the argument that European settlers wielded considerable political influence, this more complicated model would yield similar implications as the baseline model under substantively relevant assumptions.

A less reduced form way to incorporate the metropole into the model is to make it a distinct actor. Consider the following simple extension of the baseline game. In the first move of the game, the metropole (M) decides whether to directly rule the colony or to delegate control to colonial administrators. If it takes direct control, then the metropole makes all the strategic decisions for the rich depicted in Figure A.1, and the "colonial agent" actor R from the baseline game consumes 0. However, direct rule imposes a cost on the metropole of $c > 0$ that corresponds to direct administration costs, electoral penalties suffered from losing support among the colonial lobby, and possible physical violence involved with wrestling colonial control away from Europeans within the colony. Therefore, to determine the metropole's utility under direct rule, replace every R node with M in Figure A.1. Based on its choices, M consumes the amount stated in the tree for R, minus the cost c. If instead the metropole delegates control, then M consumes 0 and the remainder of the game is identical to the baseline, with the non-metropole actor R making choices and consuming the

associated amounts stated in Figure A.1.

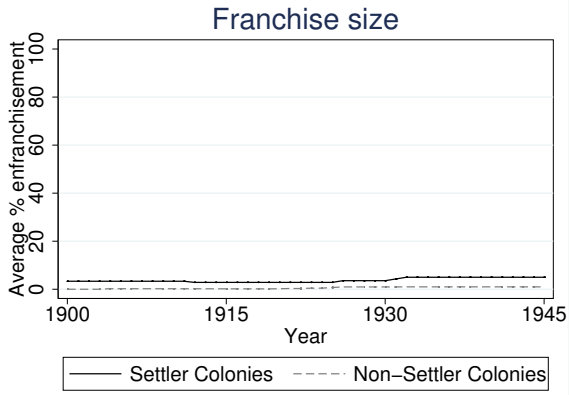
Even if the metropole prefers different policies than the colonial agent (R), M will delegate authority if c is sufficiently high. Therefore, the key argument is that this cost was indeed high in settler colonies, which relates to the evidence provided about the political influence of European settlers and their lobbies. Additional evidence from Kenya and Rhodesia (Zimbabwe) provides further corroboration. As noted, European settlers in Kenya exerted substantial influence on British colonial policy through the early 1950s. Unwilling to consider any degree of reforms before the Mau Mau rebellion began in 1952, "when James Griffiths, Colonial Secretary in the reformist Attlee Labour Government, visited Kenya in 1951, the settlers 'indicated that any [political] changes imposed on us against our wishes would be resisted, even to the extent of unconstitutional action"' (611). However, Kenya is an instructive case because the Mau Mau revolt plausibly lowered c. British troops were required to suppress the rebellion, at the cost of thousands of lives and more than 20 million pounds. It demonstrated that "small bodies of British settlers—like those in Kenya, Tanganyika [Tanzania], Nyasaland [Malawi], and Northern Rhodesia [Zambia]—were incapable of defending themselves. It also showed that the multiracial constitutions in these countries would be effective only as long as British force was available to underpin them" (Oliver and Atmore, 2005, 256). Kenyan settlers' dependence on Britain enabled the metropole to control the pace of subsequent decolonization reforms against the will of the settlers. This included an agreement in 1960 that the Legislative Council would contain an African majority, to which the leader of the right-wing United Party responded: "I regard the outcome of this conference as a death blow to the European community in Kenya" (Wasserman, 1976, 44-5).

By contrast, white settlers in Rhodesia (Zimbabwe) were able to go it alone despite considerable opposition from Britain because Rhodesia contained a larger settler population that was also well-organized politically and militarily. This kept c high even in the face of African resistance. Before Rhodesia's unilateral declaration of independence in 1965, Britain attempted to negotiate broader political rights for Africans (Spiro, 1963). And, after the independence declaration, Britain succeeded at lobbying United Nations' members from recognizing an independent Rhodesian state. However, despite Rhodesia's intransigence, "no country in the outside world was prepared to intervene by force of arms—certainly not Britain, which was still in international law responsible for Rhodesia" (Oliver and Atmore, 2005, 279). Rhodesian whites' control of the colonial military enabled it to withstand attacks from the African rebel groups ZANU and ZAPU for over a decade. The Rhodesian government agreed to British-brokered negotiations with African leaders in 1979.

B Additional Information for Data Description

B.1 Additional Preliminary Figures and Tables

Figure B.1: Settler vs. Non-Settler Colonies from 1900 to 1945



Notes: Data from V-Dem (Coppedge et al., 2016). Collier (1982, 34-44) discusses the lack of political representation in Africa prior to 1945.

Table B.1: European Settler Political Domination After World War II

Territory	*Eu. pop. %*	*Eu. settler % of legislative seats*
South Africa	20%	96%*
Algeria	11%	86%†
Southern Rhodesia	6%	100%*
Kenya	1%	72%*

* *Source:* Mosley (1983, 7). Figures are for 1960. † *Source:* Behr (1961, 41). Figure is for 1948. Elections for the Algerian Assembly were divided into two colleges, with 60 seats reserved for French citizens (i.e., settlers) and 60 seats for the rest of the colonial population. Due to widespread rigging, Algerian nationalist parties only won 17 of the 120 seats.

B.2 Additional Data Information

B.2.1 Sample

Regarding Libya and Somalia, Italy's defeat in World War II placed these colonies under temporary occupation by other European powers and eliminated any possible linkage between colonial-era European settlers and post-WWII violent secession from Italy. Indeed, most of Libya's fairly large Italian population had emigrated by the end of World War II (Christopher, 1984, 133). By contrast, former German colonies—all of which gained a new colonizer after World War I—are included because they experienced several decades of governance under their new colonizer. Additionally, excluding islands besides Madagascar is essentially

equivalent to excluding colonies that lacked an indigenous population, an important scope condition for a theory that focuses on interactions between European migrants and native Africans.

B.2.2 European Population Share

The European population share variable uses three sources that estimate Western European settlers as a percentage of the population. Lawrence (2010) provides a data point for each French colony between 1946 and 1950, Mosley (1983) for southern British colonies and several others in 1960, and United Nations (1965) for various colonies for up to three years ranging from 1946 to 1961. The latter two sources were identified using the replication data for Easterly and Levine (2016). This yields at least one data point for all but four colonies in the sample. I consulted additional secondary sources for these four that justified coding no settlers for any of them because the sources did not mention a European settler population. This coding rule follows Easterly and Levine (2016), who argue: "colonial histories (which are virtually all written by European historians) are extremely unlikely to fail to mention significant European settlements." For colonies in which multiple sources provided a European settlers estimate, I average the estimates. All the regression results are based on a variable that adds 0.1 to European population percentage and takes the natural log.

B.2.3 Colonial Liberation Wars

A major colonial liberation war is defined as a violent struggle against European colonizers—whether ruled by an overseas European country or by Europeans in the African territory—with some evidence of claims for liberation from colonial rule that involves at least 1,000 battle deaths. Although discerning concrete aims of wars can often be difficult, the article discusses how Africa experienced several decades of internal peace after 1919—which itself was preceded by a series of wars to gain initial colonial control, and a handful of anti-tax revolts—prior to the series of post-1945 anti-colonial wars. Therefore, in this region in particular, the pre- and post-1945 periods relatively neatly distinguish between wars to resist initial colonial penetration and wars with more concrete aims to end colonial rule. Every war coded as a liberation war in the present dataset occurred after 1945. Correlates of War's (COW; Sarkees and Wayman, 2010) coding coincides with this argument. COW distinguishes among inter-state, extra-state, intra-state, and non-state wars. Extra-state wars are fought between a member of the inter-state system and a non-member. They further disaggregate extra-state wars into two types: colonial wars in which the non-state member is a colony and "tend to occur

Table B.2: Data for European Population Share and Colonial Liberation Wars

Territory	*European pop. %*	*Territory*	*European pop. %*
Sierra Leone	0.0%	Lesotho	0.3%
Gambia	0.0%	Malawi	0.3%
Nigeria	0.0%	Cote d'Ivoire	0.3%
Congo, DRC	0.0%	Congo	0.4%
Chad	0.0%	**Guinea-Bissau**	**0.4%**
Burkina Faso	0.0%	Botswana	0.6%
Togo	0.0%	**Madagascar**	**0.9%**
Niger	0.1%	**Kenya**	**1.0%**
Mauritania	0.1%	Senegal	1.1%
Sudan	0.1%	**Mozambique**	**1.2%**
Central African Republic	0.1%	Djibouti	2.1%
Ghana	0.1%	Swaziland	2.3%
Rwanda	0.1%	Zambia	2.4%
Uganda	0.2%	Equatorial Guinea	2.5%
Benin	0.2%	**Morocco**	**2.7%**
Mali	0.2%	**Angola**	**2.7%**
Guinea	0.2%	**Tunisia**	**5.5%**
Burundi	0.2%	**Zimbabwe**	**6.0%**
Tanzania	0.2%	**Algeria**	**10.9%**
Cameroon	**0.3%**	**Namibia**	**12.9%**
Gabon	0.3%	**South Africa**	**20.1%**

Notes: **Bold** indicates that the country experienced a major colonial liberation war.

when a colony rebels and tries to become independent" (COW codebook), as opposed to imperial wars in which the non-state member is independent. Among wars between Europeans and Africans, 100% of post-1945 extra-state wars are colonial compared to 33% prior to 1945.

I consulted three sources to generate an initial list that includes all wars (except inter-state) fought in colonial Africa since 1945, which Table B.3 lists: Fearon and Laitin's (2003) civil war dataset (FL), COW, and the Armed Conflict Database (ACD; Gleditsch et al., 2002). For both FL and ACD, the conflict is listed under the European metropole. The easiest of these candidate episodes to code as major liberation wars were ones listed as colonial wars by COW (which uses a 1,000 battle death threshold) and in which either COW's or ACD's coding notes clearly indicate the goal was independence: Madagascar, Tunisia, Morocco, Algeria, Cameroon, Angola, Mozambique, and Namibia. Guinea-Bissau also meets the 1,000 battle death threshold (this is FL's threshold as well) and ACD's coding notes shows it exhibited independence aims. Kenya's Mau Mau rebellion is more complicated to code because although there were clear goals of expelling Europeans from the quality farmland in the Kenya highlands (Oliver and Atmore, 2005, 255), their independence demands were more vague. Still, some historians have argued that it was truly a nationalist movement (Rosberg and Nottingham, 1966). "The articulation of African grievances was a vital underlying

and conditioning factor with regard to the 'Mau Mau Revolution' we shall be examining. For over thirty years, and through a wide variety of African associations, a nationalist ideology was evolved which, to the Kikuyu peasant and worker, came to be symbolized in the expression and demand for 'Land and Freedom.' The tendency of this ideology to become more radical was a reflection of the intensifying struggle between a subordinate African majority, increasingly aware of its potential power, and a ruling European minority, ever fearful that its privileged position might be swept away in the rising current of African nationalism" (Barnett and Njama, 1966, 43).[16] Especially given the post-1945 distinction in type of extra-state wars in Africa, it seems appropriate to code this as a colonial liberation war, although the sample sensitivity regressions show that none of the results hinge on this coding choice. (Because Kenya's European population share was relatively small, Kenya is not an influential observation in the regressions.) COW codes South Africa and Zimbabwe as intra-state wars in which rebels fought to capture the center because these two countries were members of the inter-state system when the war began. In both cases, Africans fought for majority rule.

Of the candidate cases, only Rwanda and Western Sahara are not coded as liberation wars. COW codes Rwanda as a non-state war between Hutu and Tutsi in Rwanda in which the Hutu attempted to overthrow the Tutsi monarchy. "Although the Belgian authorities did try to combat the violence, the fighting was basically between the Hutu and the Tutsi peoples" (Sarkees and Wayman, 2010, 531). (See also Encyclopædia Britannica Online Academic Edition (2016).) The Western Sahara conflict did not reach 1,000 battle deaths (ACD codes it as reaching at least 25 battle deaths in two different years, but the cumulative total did not exceed 1,000), which is why neither FL nor COW include it. Also, because Western Sahara was a former Spanish colony that did not gain international independence, it is not included in the sample.

B.2.4 Political Enfranchisement

The enfranchisement data comes from Coppedge et al.'s (2016) V-Dem dataset. The variable *v2elsuffrage* measures the percentage of population that is legally enfranchised, and covers every African country since 1945 (including years in which countries were still colonies) in the core sample except Equatorial Guinea, with a handful of years of missing data for some countries.

B.2.5 Covariates

The following details the rationale and sources for the covariates:

[16] Mamdani (1996, 189) provides additional citations in the debate over the aims of Mau Mau.

Table B.3: Source Data for Colonial Liberation Wars

Case	FL (years)	COW (type, years)	ACD (years)
Algeria*	Yes (1954-61)	Yes (colonial, 1954-62)	Yes (1954-62)
Angola*	Yes (1961-75)	Yes (colonial, 1961-74)	Yes (1961-74)
Cameroon*	Yes (1955-60)	Yes (colonial, 1957-8)	Yes (1957-9)
Guinea-Bissau*	Yes (1962-74)	No	Yes (1963-73)
Kenya*	Yes (1952-6)	Yes (colonial, 1952-6)	Yes (1952-6)
Madagascar*	Yes (1947-8)	Yes (colonial, 1947-8)	Yes (1947)
Morocco*	Yes (1953-6)	Yes (colonial, 1953-6)	Yes (1953-6)
Mozambique*	Yes (1964-74)	Yes (colonial, 1964-75)	Yes (1964-74)
Namibia*	No	Yes (colonial, 1975-88)	Yes (1966-88)
Rwanda	Yes (1956-61)	Yes (non-state, 1959-62)	No
South Africa*	Yes (1983-94)	Yes (intra-state, 1987-94)	Yes (1981-8)
Tunisia*	Yes (1952-4)	Yes (colonial, 1952-4)	Yes (1953-6)
Western Sahara	No	No	Yes (1957-8)
Zimbabwe*	Yes (1972-9)	Yes (intra-state, 1972-9)	Yes (1967-8,73-9)

* indicates coded as a major colonial liberation war in the dataset used for this article.
Notes: Table B.3 lists every post-1945 colonial conflict listed in at least one of the source datasets. The table denotes whether or not the war is included in each dataset and, if so, the years. The COW column additionally lists the type of war.

Pre-colonial democracy. Hariri (2012) analyzes pre-colonial determinants of democracy. His main finding is that territories with a longer history as a centralized state have experienced less democracy. The state antiquity measure is a weighted average of a territory's combined years with government above the local level. Following Hariri (2012), the state antiquity index is calculated in 1500 and uses Putterman's (2008) dataset. I coded this variable for African countries excluded from Putterman's (2008) dataset. Hariri (2012) also controls for latitude in his regressions.

Pre-colonial violence. Nunn (2008) argues that the most significant interactions between Africans and Europeans prior to colonization involved slave trading. Considering evidence linking a country's slave exports to negative contemporary economic and behavioral outcomes (Nunn and Wantchekon, 2011), colonies with more slave exports might have been more hostile to European colonial rule. I therefore control for Nunn's variable, the log of total slave exports from a territory divided by land area (using modern country borders). It is also possible that territories experiencing more pre-colonial warfare would be more likely to experience conflict during decolonization. Besley and Reynal-Querol (2014) demonstrate a strong positive correlation in Africa between the number of years that a territory (using modern country borders) experienced warfare between 1400 and 1700 and civil war propensity in the post-colonial era, and I control for the log of this variable.

Geography of rebellion. Another set of covariates captures geographic factors that existing research ar-

gues to affect rebels' opportunities to combat and hide from the state. These include each colony's logged land area (World Bank, 2016) and Nunn and Puga's (2012) rugged terrain index that García-Ponce and Wantchékon (2017) have studied in the context of African decolonization.

Colonizer identity. The identity of the colonizer could have influenced both outcomes. Many have argued that Britain had a relatively coherent plan for decolonization and more flexible institutions than did the other colonizers, which diminished prospects for colonial liberation wars (Young, 1970, 488) and increased the likelihood of democratic gains during the colonial and immediate post-colonial period (Weiner, 1987). This contrasted with Fourth Republic France's weak parliamentary system that enabled capture by special interest groups (Spruyt, 2005). Decolonization in Portuguese colonies may be linked to hardline policies associated with authoritarian regime survival (Wilson, 1994). The colonizer identity specifications control for fixed effects for British, French, Portuguese, and Belgian colonialism.

Other colonial factors. Lawrence (2013, 132-65) argues that in territories that were invaded or occupied by Axis powers during World War II, nationalist groups faced an opening that enabled mobilization and increased the likelihood of a liberation war. I used Lawrence's coding of this binary variable for French colonies and coded it myself for the remaining colonies. Woodberry (2012) shows that colonies with larger Protestant missionary populations tended to experience greater levels of democracy after independence. His variable is number of Protestant missionaries per 10,000 people in 1923. I use the log of this variable because it is heavily right-skewed in Africa.

These specifications also include an indicator variable for post-1945 ruling monarchy, a proxy for very indirect colonial rule. Whereas many African ethnic groups existed as state-like political entities on the eve of colonization, in fewer colonies did the European colonizer allow a monarch to remain in power. In all the cases where one of the main ethnic groups retained a ruling monarch among after 1945, the colonizer had previously struck an agreement with the monarch that granted him wide powers in return for allegiance to the colonizer. Lemarchand (1977) includes case studies of many of these monarchies during the colonial era. To operationalize this concept, I began with [AUTHOR]'s list of African ethnic groups with states on the eve of colonization. Among groups that constituted one of the two largest ethnic groups in the colony (to avoid coding a colony as ruled very indirectly when this was true only for a minor ethnic group), I then coded which ones still had a ruling monarchy in 1945. The focus on monarchs that lasted for most of the colonial era also makes this variable relevant to control for in the instrumental variable regressions because in

many colonies with long-lasting monarchs, the colonizer agreed not to alienate land for European settlement even if the land would have been suitable (the introduction to the instrument in the article provides several examples). Burundi, Lesotho, Morocco, Rwanda, Swaziland, Tunisia, and Uganda are coded as post-1945 ruling monarchies.

Colonial value. Given the motivation for heterogeneity in colonial value discussed in the article, one specification controls for logged exports per capita and logged natural resource income per capita. Exports per capita uses Correlates of War's (Barbieri and Keshk, 2016; Barbieri, Keshk and Pollins, 2009) exports and population data and is measured in each country's first year of independence. Resource income per capita uses the sum of oil, gas, coal, and metals income from Haber and Menaldo's (2011) dataset and is measured in the country's first year of independence. Both variables for South Africa are measured in 1960, exports for Zimbabwe in 1965, and resource income for Zimbabwe in 1970.

Standard civil war correlates. Finally, it is also instructive to evaluate several commonly used covariates in the civil war literature: ethnic fractionalization (Fearon, 2003), population, and income per capita. The latter two are measured in 1950 from Maddison (2008). Following Fearon and Laitin (2003) and the bulk of the existing literature, I use the natural log of each variable.

Table B.4: Summary Statistics

Suffrage			
Variable	**Mean**	**Std. Dev.**	**N**
% pop. legally enfranchised	66.003	42.869	650
ln(European pop %)	-0.547	1.445	650
Latitude	13.701	9.995	650
State antiquity	0.161	0.231	650
ln(Slave exports/area)	0.515	2.218	650
ln(War years 1400-1700)	4.283	10.283	650
Rugged terrain	0.919	1.15	650
ln(Area)	12.549	1.481	650
British colony	0.369	0.483	650
French colony	0.458	0.499	650
Portuguese colony	0.074	0.262	650
Belgian colony	0.074	0.262	650
WWII occupied	0.172	0.378	650
ln(Protestant miss.)	-1.553	1.766	650
Post-1945 ruling monarchy	0.167	0.373	650
ln(Exports/pop)	2.636	1.911	650
ln(Resource income/pop)	1.995	2.25	650
ln(Population)	14.678	1.242	650
ln(GDP/capita)	6.619	0.566	650
Ethnic frac.	0.675	0.229	650
Liberation wars			
Variable	**Mean**	**Std. Dev.**	**N**
Colonial liberation war	0.286	0.457	42
ln(European pop %)	-0.516	1.456	42
Latitude	13.376	10.101	42
State antiquity	0.158	0.231	42
ln(Slave exports/area)	0.448	2.248	42
ln(War years 1400-1700)	4.143	10.257	42
Rugged terrain	0.907	1.146	42
ln(Area)	12.498	1.517	42
British colony	0.357	0.485	42
French colony	0.452	0.504	42
Portuguese colony	0.071	0.261	42
Belgian colony	0.071	0.261	42
WWII occupied	0.167	0.377	42
ln(Protestant miss.)	-1.503	1.779	42
Post-1945 ruling monarchy	0.167	0.377	42
ln(Exports/pop)	2.622	1.904	42
ln(Resource income/pop)	1.931	2.265	42
ln(Population)	14.627	1.292	42
ln(GDP/capita)	6.611	0.566	42
Ethnic frac.	0.669	0.234	42

C Additional Information for Statistical Evidence Section

C.1 Discussion of Other Coefficient Estimates in Tables 2 and 3

It is useful to examine which existing explanations from the literature find support in Tables 2 and 3 after accounting for European population share, although none of these theories specifically aim to explain liberation wars or franchise size during African decolonization. In contrast to existing arguments that longer history as a centralized state inhibited democracy in the 20th century (Hariri, 2012), longer state history instead correlates significantly with a larger franchise in Column 2 of Table 2 (albeit becomes insignificant in Column 9), although this is consistent with another implication of Hariri's theory that longer statehood decreased colonial interference. Some existing arguments used to explain higher rates of colonial liberation wars (Axis occupation during World War II; Lawrence, 2013) or post-colonial democracy (Protestant missionaries; Woodberry, 2012) also do not receive support. Consistent with existing arguments about differences among colonizers, Britain and France expanded the franchise earlier and more broadly whereas Portugal restricted political participation and was more likely to experience liberation wars. Finally, consistent with modernization theory, larger GDP per capita positively covaries with a larger franchise, and territories with larger populations tended to fight liberation wars more frequently (Lawrence, 2010).

C.2 Supplementary Regression Tables

Table C.1 considers alternative combinations of the covariates from Table 2. The difference in expected franchise size if hypothetically increasing a territory's colonial European population share from Ghana's to Zimbabwe's amount ranges from 22% (73% vs. 51%) in Column 3 to 33% (76% vs. 43%) in Column 1.

Table C.1: Alternative Groupings of Covariates for Table 2

	DV: % pop. legally enfranchised		
	(1)	(2)	(3)
ln(European pop %)	-9.668***	-8.947***	-6.403***
	(2.951)	(2.720)	(2.075)
Latitude	-0.780*		-0.697**
	(0.421)		(0.331)
State antiquity	61.58***		4.944
	(22.00)		(13.19)
ln(Slave exports/area)	-2.814		3.582**
	(2.711)		(1.693)
ln(War years 1400-1700)	-0.839**		-0.371*
	(0.367)		(0.208)
Rugged terrain	-4.741		-1.514
	(2.960)		(1.449)
ln(Area)	-2.138		1.184
	(3.583)		(2.564)
British colony		22.62**	26.35***
		(8.446)	(6.977)
French colony		52.60***	51.21***
		(8.285)	(6.879)
Portuguese colony		-28.02***	-27.13***
		(6.539)	(6.587)
Belgian colony		25.89	23.53*
		(16.95)	(13.72)
WWII occupied		4.327	1.112
		(6.429)	(5.569)
ln(Protestant miss.)		-1.319	-0.312
		(1.485)	(1.239)
Post-1945 ruling monarchy		-0.280	6.783
		(6.847)	(9.979)
ln(Exports/pop)		2.116**	2.025*
		(0.834)	(1.002)
ln(Resource income/pop)		-0.535	-1.940
		(1.662)	(1.206)
ln(Population)			-0.245
			(2.583)
ln(GDP/capita)			10.62**
			(4.166)
Ethnic frac.			-39.41**
			(17.39)
Territory-years	650	650	650
R-squared	0.253	0.426	0.456

Notes: Table C.1 summarizes a series of OLS regressions by presenting coefficient estimates, and country-clustered robust standard error estimates in parentheses. The unit of analysis is territory-years. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

Table C.2 considers alternative combinations of the covariates from Table 3. The positive difference in predicted probability of a liberation war if hypothetically increasing a territory's colonial European population share from Ghana's to Zimbabwe's amount ranges from 43% (15% vs. 58%) in Column 3 to 76% (4% vs. 80%) in Column 1.

Table C.2: Alternative Groupings of Covariates for Table 3

	DV: Major colonial liberation war		
	(1)	(2)	(3)
ln(European pop %)	0.221***	0.157***	0.125**
	(0.0503)	(0.0474)	(0.0598)
Latitude	0.00361		0.00958
	(0.0101)		(0.0104)
State antiquity	-0.00813		-0.243
	(0.336)		(0.551)
ln(Slave exports/area)	0.0498		-0.0473
	(0.0352)		(0.0480)
ln(War years 1400-1700)	0.00337		0.00313
	(0.00565)		(0.00580)
Rugged terrain	0.0237		-0.0502
	(0.0513)		(0.0428)
ln(Area)	0.0506		-0.112
	(0.0442)		(0.0900)
British colony		0.0894	-0.244
		(0.369)	(0.428)
French colony		0.214	0.0562
		(0.411)	(0.461)
Portuguese colony		0.923**	0.691
		(0.375)	(0.526)
Belgian colony		0.242	-0.0946
		(0.413)	(0.438)
WWII occupied		0.392**	0.354
		(0.175)	(0.248)
ln(Protestant miss.)		0.0703	0.0680
		(0.0503)	(0.0612)
Post-1945 ruling monarchy		-0.0593	-0.114
		(0.126)	(0.263)
ln(Exports/pop)		-0.0241	0.0238
		(0.0424)	(0.0390)
ln(Resource income/pop)		-0.00436	-0.0266
		(0.0413)	(0.0434)
ln(Population)			0.188*
			(0.0993)
ln(GDP/capita)			-0.0596
			(0.130)
Ethnic frac.			0.337
			(0.368)
Territories	42	42	42
R-squared	0.536	0.687	0.792

Notes: Table C.2 summarizes a series of OLS regressions by presenting coefficient estimates, and robust standard error estimates in parentheses. The unit of analysis is territories. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table C.3: Probit Regressions for Table 3

	DV: Major colonial liberation war								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	0.829***	0.797***	1.170***	0.892***	0.966***	0.743***	0.997***	1.460***	1.272***
	(0.167)	(0.198)	(0.380)	(0.203)	(0.216)	(0.207)	(0.311)	(0.461)	(0.325)
Latitude		0.00323							
		(0.0343)							
State antiquity		0.588							
		(1.168)							
ln(Slave exports/area)			0.310						
			(0.200)						
ln(War years 1400-1700)			0.0277						
			(0.0215)						
Rugged terrain				-0.0589					
				(0.305)					
ln(Area)				0.291					
				(0.292)					
British colony					0.736				
					(0.865)				
French colony					1.405				
					(0.862)				
Portuguese colony					-				
Belgian colony					-				
WWII occupied						0.982			
						(0.640)			
ln(Protestant miss.)						0.0530			
						(0.196)			
Post-1945 ruling monarchy						-0.636			
						(0.585)			
ln(Exports/pop)							-0.0728		
							(0.201)		
ln(Resource income/pop)							-0.0887		
							(0.154)		
ln(Population)								0.589**	0.502*
								(0.234)	(0.257)
ln(GDP/capita)								-0.710	
								(0.761)	
Ethnic frac.								2.558*	2.448*
								(1.522)	(1.436)
Territories	42	42	42	42	36	42	42	42	42

Notes: Table C.3 summarizes a series of probit regressions by presenting coefficient estimates, and robust standard error estimates in parentheses. The unit of analysis is territories. The Column 5 specification only contains British and French colonies because there is no variation on the outcome within any other empire, and therefore territories from the other empires are dropped by the probit model. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

C.3 Sensitivity to Unobserved Covariates

The coefficient estimates for European settlers in Tables 2 and 3 are quite insensitive to omitted variable bias from regressors not included in any of the specifications. A conventional formal heuristic for linear models is to compare the coefficient estimate of the main independent variable from a regression with covariates (denoted as $\hat{\beta}_{cov}$) to the coefficient estimate of the main independent variable from a bivariate regression (denoted as $\hat{\beta}_{biv}$) using the metric:

$$\hat{\alpha} = \frac{\hat{\beta}_{cov}}{\hat{\beta}_{biv} - \hat{\beta}_{cov}} \tag{C.1}$$

Altonji, Elder and Taber (2005) provide an econometric derivation of this metric and González and Miguel (2015, 31) list numerous recent applied articles that use this type of sensitivity analysis. A higher value of $\hat{\alpha}$ corresponds with a coefficient estimate more robust to hypothetically adding unobservable covariates to the regression. In cases of positive coefficient estimates (as in the colonial liberation war specifications), larger $\hat{\beta}_{cov}$ in the numerator increases $\hat{\alpha}$ by implying that selection on unobservables must be of larger magnitude to reduce the coefficient estimate—which already accounts for the confounding influence of the *observed* covariates—to 0. If $\hat{\beta}_{biv} - \hat{\beta}_{cov} > 0$, then a smaller difference between these two denominator terms also raises $\hat{\alpha}$ by implying that including the observed covariates reduces the bivariate coefficient estimate by less—which in turn implies that adding additional, unobserved, covariates would need to diminish the coefficient estimate by a greater magnitude to eliminate the positive effect estimate. If instead $\hat{\beta}_{biv} - \hat{\beta}_{cov} < 0$, then the estimated effect is *larger* when controlling for observables than in the bivariate regression, which implies that the direction of the bias from omitting unobservables must have the opposite sign as the bias from omitting the observables to eliminate the positive coefficient estimate. This circumstance suggests a highly robust result, at least absent a theory for why the bias from omitting observables should go in the opposite direction as the bias from omitting unobserved covariates. The interpretation is similar for estimates with negative coefficient estimates (as in the franchise size specifications). Larger positive values indicate a greater amount of bias from unobservables needed to explain away the effect estimate, and negative values occur when $\hat{\beta}_{cov}$ is larger in magnitude than $\hat{\beta}_{biv}$ and therefore the denominator is positive.

Table C.4 reports $\hat{\alpha}$ for European population share for each specification with covariates in Tables 2 and 3, thereby comparing the coefficient estimates from Columns 2 through 9—each of which include a different set of observed covariates—with the bivariate coefficient estimate from Column 1 of the corresponding

table. Seven of the 16 $\hat{\alpha}$ values are negative, indicating that bias from unobservables would have to go in the opposite direction as the bias from the included covariates if the true coefficient estimate is 0. Additionally, many of the positive coefficients are quite large. The right-hand side of Equation C.1 goes to infinity as $\hat{\beta}_{cov} \rightarrow \hat{\beta}_{biv}$. Therefore, for example, the small gap between the European settler coefficient estimates in Columns 1 and 9 of Table 3 generates a very high value of $\hat{\alpha}$. Altonji, Elder and Taber (2005, 155) provide a useful benchmark for interpreting positive values: "We find that selection on unobservables would need to be 3.55 times stronger than selection on observables in the case of high school graduation, which seems highly unlikely" (155). Only two of the values in Table C.4 fall below this threshold: the franchise size regressions with either colonizer fixed effects or colonial value controls. Even here, factors not captured by the covariates would have to be more than two times larger in magnitude than the bias induced by omitting the covariates in order to explain away the estimated European settlers effect.

Table C.4: Assessing Bias from Unobservables using Selection on Observables

Column in Table 2 or 3:	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$\hat{\alpha}$ for Eu. pop. share in Table 2	8.7	-14.3	7.8	2.6	-22.3	2.2	-2.5	-19.4
$\hat{\alpha}$ for Eu. pop. share in Table 3	13.9	-7.8	35.6	18.9	5.6	-18.3	-6.9	77.7

Notes: Table C.4 computes $\hat{\alpha}$ from Equation C.1 for all eight multiple regression specifications in each of Tables 2 and 3.

C.4 Robustness to Alternative Time Periods

Table C.5: Franchise Size, 1945-1989

	DV: % pop. legally enfranchised								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	-7.238***	-6.739***	-7.148**	-6.509***	-4.969***	-7.755***	-5.361**	-10.80***	-6.785***
	(2.273)	(2.016)	(2.722)	(2.349)	(1.685)	(2.067)	(2.498)	(2.228)	(2.112)
Latitude		-0.369							
		(0.267)							
State antiquity		35.30***							6.933
		(11.97)							(9.820)
ln(Slave exports/area)			-0.173						
			(1.466)						
ln(War years 1400-1700)			-0.266						
			(0.207)						
Rugged terrain				-2.699					
				(1.896)					
ln(Area)				-1.475					
				(2.103)					
British colony					35.35***				31.28***
					(7.045)				(8.621)
French colony					52.39***				45.89***
					(6.186)				(8.084)
Portuguese colony					13.19***				11.30**
					(4.310)				(4.991)
Belgian colony					36.06***				30.55***
					(8.332)				(11.29)
WWII occupied						16.99***			4.036
						(6.230)			(6.063)
ln(Protestant miss.)						-2.391			
						(1.632)			
Post-1945 ruling monarchy						-0.164			
						(3.884)			
ln(Exports/pop)							-0.113		
							(1.237)		
ln(Resource income/pop)							-2.007		
							(1.486)		
ln(Population)								0.0132	
								(2.078)	
ln(GDP/capita)								10.80***	2.586
								(3.881)	(2.688)
Ethnic frac.								-24.11**	-6.367
								(11.18)	(7.971)
Territory-years	1,826	1,826	1,826	1,826	1,826	1,826	1,826	1,826	1,826
R-squared	0.057	0.084	0.061	0.060	0.140	0.088	0.064	0.074	0.145

Notes: Table C.5 summarizes a series of OLS regressions by presenting coefficient estimates for each variable, and country-clustered standard error estimates in parentheses. For every territory in the core sample, Table C.5 contains an observation for each year between 1945 and 1989. $^{***}p < 0.01,^{**}\ p < 0.05,^{*}\ p < 0.1$.

Table C.6: Colonial Liberation War Incidence, 1945-1989

	DV: Major colonial liberation war incidence								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	0.0683***	0.0696***	0.0917***	0.0686***	0.0542***	0.0699***	0.0613***	0.0849***	0.0987***
	(0.0202)	(0.0247)	(0.0233)	(0.0189)	(0.0132)	(0.0234)	(0.0211)	(0.0264)	(0.0208)
Latitude		-0.000401							
		(0.00389)							
State antiquity		0.0543							
		(0.140)							
ln(Slave exports/area)			0.0318**						0.0389***
			(0.0127)						(0.0139)
ln(War years 1400-1700)			0.00177						
			(0.00185)						
Rugged terrain				-0.0241					
				(0.0227)					
ln(Area)				0.0147					
				(0.0225)					
British colony					-0.178				
					(0.152)				
French colony					-0.140				
					(0.157)				
Portuguese colony					0.160				
					(0.150)				
Belgian colony					-0.154				
					(0.157)				
WWII occupied						-0.000752			
						(0.0811)			
ln(Protestant miss.)						-0.00395			
						(0.0191)			
Post-1945 ruling monarchy						-0.0705*			0.0400
						(0.0402)			(0.0593)
ln(Exports/pop)							0.00605		
							(0.0170)		
ln(Resource income/pop)							0.00245		
							(0.0170)		
ln(Population)								0.00920	
								(0.0235)	
ln(GDP/capita)								-0.0462	
								(0.0655)	
Ethnic frac.								0.176	
								(0.144)	
Territory-years	808	808	808	808	808	808	808	808	808
R-squared	0.108	0.109	0.154	0.125	0.206	0.115	0.110	0.124	0.152

Notes: Table C.6 summarizes a series of OLS regressions by presenting coefficient estimates for each variable, and country-clustered standard error estimates in parentheses. For every territory in the core sample, Table C.6 contains an observation for each year between 1945 and 1989 in which the territory was colonized. The first and every subsequent year of a colonial liberation war is scored as a 1 on the dependent variable. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table C.7: Colonial Liberation War Onset, 1945-1989

	DV: Major colonial liberation war onset								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	0.00920***	0.00796**	0.0113***	0.00889***	0.00992***	0.00668**	0.0102***	0.00956**	0.00688***
	(0.00245)	(0.00304)	(0.00269)	(0.00250)	(0.00278)	(0.00275)	(0.00317)	(0.00360)	(0.00232)
Latitude		0.000286							
		(0.000618)							
State antiquity		0.0362							
		(0.0273)							
ln(Slave exports/area)			0.00289						
			(0.00181)						
ln(War years 1400-1700)			0.000474						
			(0.000392)						
Rugged terrain				-0.00122					
				(0.00271)					
ln(Area)				0.00336					
				(0.00280)					
British colony					0.00647				
					(0.0131)				
French colony					0.0199				
					(0.0163)				
Portuguese colony					0.0476***				0.0410***
					(0.0120)				(0.00823)
Belgian colony					0.0115				
					(0.0143)				
WWII occupied						0.0338*			0.0383***
						(0.0169)			(0.0140)
ln(Protestant miss.)						0.00144			
						(0.00301)			
Post-1945 ruling monarchy						0.000828			
						(0.00918)			
ln(Exports/pop)							-0.000561		
							(0.00234)		
ln(Resource income/pop)							-0.000673		
							(0.00254)		
ln(Population)								0.00672**	0.00661**
								(0.00296)	(0.00292)
ln(GDP/capita)								-0.00121	
								(0.00948)	
Ethnic frac.								-0.00630	
								(0.0262)	
Territory-years	718	718	718	718	718	718	718	718	718
R-squared	0.012	0.016	0.016	0.015	0.020	0.019	0.013	0.017	0.032

Notes: Table C.7 summarizes a series of OLS regressions by presenting coefficient estimates for each variable, and country-clustered standard error estimates in parentheses. For every territory in the core sample, Table C.7 contains an observation for each year between 1945 and 1989 in which the territory was colonized. The dependent variable scores a 1 in the first year of a colonial liberation war, and territory-years with an ongoing colonial liberation war are dropped.
$^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

D Additional Information for Instrumental Variables Results

D.1 Measuring the European Land Suitability Instrument

Table D.1: Factors Used to Construct the Instrument

Factor	Description
Mediterranean climate	White (1983) provides vegetation data for Africa, which Fenske (2014) converted into shapefiles, that were used to compute areas with Mediterranean climate.
High rainfall	Raster data from Hijmans et al. (2005) were used to compute shapefiles of areas with annual rainfall of at least 20 inches.
High elevation	Raster data from Hijmans et al. (2005) were used to compute shapefiles of areas with elevation of at least 3,000 feet.
Low tsetse fly	Raster data from Alsan (2014) were used to compute areas with the lowest quartile on her tsetse fly suitability index.

To calculate the instrument, I used ArcGIS to create shapefiles for each of the four conditions stated in Table D.1. I used the source datasets to calculate the intersection of high rainfall, high elevation, and low tsetse fly, and then for each colony divided the area of this intersection by the colony's total area. I excluded desert and semi-desert area—which were also calculated from White's (1983) and Fenske's (2014) spatial data—to eliminate territory where very few people, European or not, would settle. I performed the same calculation for Mediterranean climate. In northern Africa, all areas with high rainfall/high elevation/low tsetse fly are in Mediterranean climate territory, and therefore the percentage of territory with Mediterranean climate composes the value of the instrument for these countries. In South Africa, there is no overlap between the Mediterranean climate territory and the high rainfall/high elevation/low tsetse fly territory, and the areas of the two polygons were added to generate the value of the instrument for South Africa. The value of the instrument for all other countries equals the percentage of territory with high rainfall/high elevation/low tsetse fly. All the instrumental variable results are based on a variable that adds 0.1 to this variable and takes the natural log. Figures D.1 through D.4 depict each component of the instrument.

Figure D.1: Mediterranean Climate

Figure D.2: High Rainfall

Figure D.3: High Elevation

Figure D.4: Low Tsetse Fly

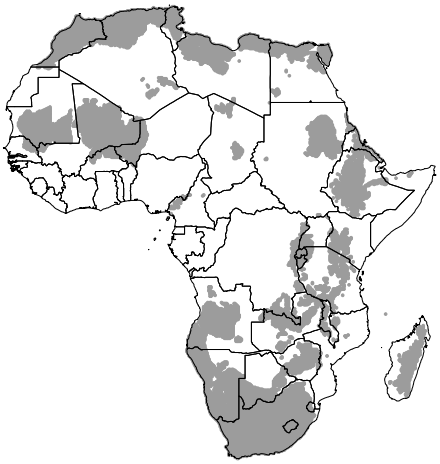
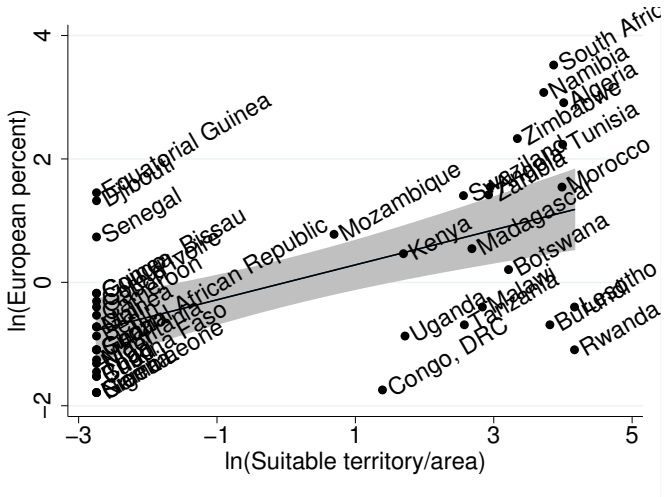


Figure D.5: First-Stage Correlation Between Instrument and European Population Share

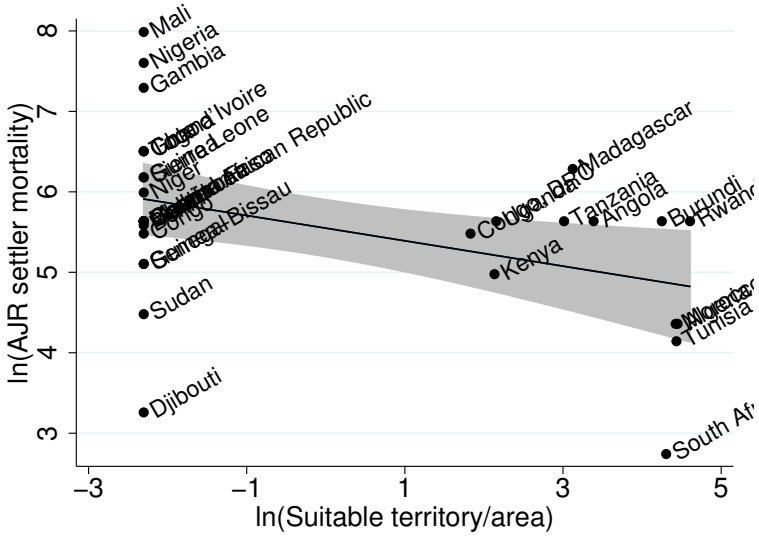


Notes: Figure D.5 presents the scatterplot for a regression of European population share on the instrument along with the regression line and 95% confidence interval.

D.2 Comparison with Acemoglu et al.'s (2001) Settler Mortality Instrument

This instrumental variables approach is related to but avoids key concerns that scholars have raised about the identification strategy in Acemoglu, Johnson and Robinson (2001), which uses estimated settler mortality rates as an instrument for estimating the effect of economic institutions on development. Specifically, for each country, Acemoglu, Johnson and Robinson (2001, 1382) use the log of "the death rate among 1,000 soldiers where each death is replaced with a new soldier" among soldiers, laborers, and bishops in the 19th century. This variable is strongly correlated with the present instrument. Figure D.6 depicts a scatterplot to demonstrate the strong negative correlation between the present instrument and Acemoglu, Johnson and Robinson's (2001) settler mortality measure. A bivariate regression (not shown) demonstrates that the coefficient estimate is statistically significant at 5%. However, their variable is missing data for nine of the 42 countries in the present sample. Additionally, Albouy (2012) details concerns about measurement error in their variable because it does not measure death rates of actual European settlers and it extrapolates from data points in a small number of countries. None of these problems apply to the present instrument.

Figure D.6: Correlation Between European Land Suitability and Settler Mortality Rates



D.3 Additional IV Results

Table D.2: Table 4 Specifications with Covariate Estimates

	DV: % pop. legally enfranchised								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	-19.59***	-20.70***	-26.95***	-19.83***	-10.50***	-22.13***	-22.97***	-25.33***	-13.40***
	(5.004)	(6.487)	(7.264)	(5.008)	(2.342)	(6.261)	(7.839)	(4.561)	(2.665)
Post-1945 ruling monarchy	4.111	-1.799	-20.54	12.43	2.341	-0.259	4.884	-18.45*	-2.135
	(11.77)	(8.424)	(17.06)	(22.12)	(7.459)	(8.826)	(12.76)	(9.533)	(9.331)
Latitude		0.531							
		(0.846)							
State antiquity		38.67							
		(25.07)							
ln(Slave exports/area)			-8.781**						1.707
			(3.934)						(1.388)
ln(War years 1400-1700)			0.0179						
			(0.424)						
Rugged terrain				-2.480					
				(7.095)					
ln(Area)				1.736					
				(4.086)					
British colony					16.19*				4.855
					(8.395)				(9.014)
French colony					47.11***				30.15***
					(8.673)				(8.790)
Portuguese colony					-31.36***				-43.20***
					(6.943)				(10.33)
Belgian colony					15.46				
					(17.34)				
WWII occupied						39.61**			7.816
						(17.07)			(5.904)
ln(Protestant miss.)						-0.270			
						(3.152)			
ln(Exports/pop)							2.932		
							(4.198)		
ln(Resource income/pop)							0.717		
							(2.863)		
ln(Population)								0.0234	
								(3.285)	
ln(GDP/capita)								35.03***	11.82**
								(8.517)	(4.945)
Ethnic frac.								-77.88***	-30.76**
								(24.88)	(13.67)
Territory-years	650	650	650	650	650	650	650	650	650
R-squared	0.052	0.108		0.053	0.412	0.115		0.203	0.429
Partial F-test for IV in first stage	23.2	12.3	14.9	21.4	44.6	11.1	13.5	57.1	16

Notes: Table D.2 summarizes a series of two-stage least square regressions in which log percentage of a colony's area that is suitable for European agriculture instruments for log European population share, and the dependent variable is franchise size. Country-clustered standard error estimates are in parentheses, and the unit of analysis is territory-years. The bottom of the table reports the partial F-test for the instrument in the first-stage regression between the instrument and European settlers. Appendix Tables D.4 and D.5 present the corresponding first stage and reduced form estimates. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table D.3: Table 5 Specifications with Covariate Estimates

	DV: Major colonial liberation war								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	0.268***	0.320***	0.339***	0.253***	0.272***	0.387**	0.343***	0.248***	0.210***
	(0.0591)	(0.0949)	(0.0939)	(0.0611)	(0.0515)	(0.151)	(0.105)	(0.0701)	(0.0494)
Post-1945 ruling monarchy	-0.0981	-0.0778	0.160	0.0720	-0.0929	-0.114	-0.104	0.0200	-0.0195
	(0.128)	(0.109)	(0.188)	(0.153)	(0.154)	(0.0964)	(0.121)	(0.135)	(0.0987)
Latitude		-0.00888							
		(0.0115)							
State antiquity		0.239							
		(0.320)							
ln(Slave exports/area)			0.0934						
			(0.0556)						
ln(War years 1400-1700)			0.00188						
			(0.00449)						
Rugged terrain				-0.0411					
				(0.0479)					
ln(Area)				0.0465					
				(0.0479)					
British colony					0.345				
					(0.278)				
French colony					0.427				
					(0.268)				
Portuguese colony					0.922***				0.593***
					(0.259)				(0.174)
Belgian colony					0.498				
					(0.327)				
WWII occupied						-0.0770			
						(0.351)			
Protestant missionaries						-0.214			
						(0.140)			
ln(Exports/pop)							-0.0446		
							(0.0573)		
ln(Resource income/pop)							-0.0286		
							(0.0418)		
ln(Population)								0.102***	0.110***
								(0.0368)	(0.0304)
ln(GDP/capita)								-0.0677	
								(0.142)	
Ethnic frac.								0.303	
								(0.364)	
Territories	42	42	42	42	42	42	42	42	42
R-squared	0.418	0.364	0.452	0.463	0.555	0.340	0.363	0.563	0.664
Partial F-test for IV in first stage	22.1	11.1	13.5	19.5	38.4	10.1	12.3	50.5	18.3

Notes: Table D.3 summarizes a series of two-stage least square regressions in which log percentage of a colony's area that is suitable for European agriculture instruments for log European population share, and the dependent variable is major colonial liberation war. Robust standard error estimates are in parentheses, and the unit of analysis is territories. The bottom of the table reports the partial F-test for the instrument in the first-stage regression between the instrument and European settlers. Appendix Tables D.6 and D.7 present the corresponding first stage and reduced form estimates. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

Table D.4: Franchise Size: First Stage Estimates for Table 4

	DV: ln(European pop %)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(% area suitable for Eu. agri.)	0.378***	0.291***	0.292***	0.368***	0.434***	0.332***	0.261***	0.335***	0.322***
	(0.0727)	(0.0732)	(0.0710)	(0.0781)	(0.0671)	(0.0825)	(0.0645)	(0.0394)	(0.0484)
Post-1945 ruling monarchy	-1.145*	-1.183**	-1.575**	-1.203	-0.597	-1.093*	-0.742	-1.415***	-1.317***
	(0.628)	(0.482)	(0.599)	(0.820)	(0.514)	(0.583)	(0.478)	(0.344)	(0.322)
Latitude		0.0554**							
		(0.0215)							
State antiquity		0.625							
		(0.820)							
ln(Slave exports/area)			-0.249**						-0.122*
			(0.101)						(0.0712)
ln(War years 1400-1700)			0.0186						
			(0.0134)						
Rugged terrain				0.0643					
				(0.286)					
ln(Area)				0.0199					
				(0.141)					
British colony					-1.819***				0.896*
					(0.456)				(0.481)
French colony					-0.934**				1.143**
					(0.427)				(0.496)
Portuguese colony					-0.876***				2.011***
					(0.289)				(0.720)
Belgian colony					-3.594***				
					(0.402)				
WWII occupied						0.980*			0.0421
						(0.492)			(0.276)
ln(Protestant miss.)						0.0499			
						(0.107)			
ln(Exports/pop)							0.210*		
							(0.113)		
ln(Resource income/pop)							0.112		
							(0.0994)		
ln(Population)								-0.136	
								(0.103)	
ln(GDP/capita)								1.291***	1.136***
								(0.272)	(0.273)
Ethnic frac.								-1.612**	-1.384***
								(0.641)	(0.506)
Territory-years	650	650	650	650	650	650	650	650	650
R-squared	0.447	0.605	0.529	0.449	0.678	0.508	0.574	0.748	0.809

Notes: Table D.4 summarizes a series of OLS regressions in which log European population share is regressed on log percentage of a colony's area that is suitable for European agriculture. This provides the first-stage estimates for Table 4. Country-clustered standard error estimates are in parentheses, and the unit of analysis is territory-years. $^{***}p < 0.01,^{**}\ p < 0.05,^{*}\ p < 0.1$.

Table D.5: Franchise Size: Reduced Form Estimates for Table 4

	DV: % pop. legally enfranchised								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(% area suitable for Eu. agri.)	-7.404***	-6.026***	-7.864***	-7.306***	-4.558***	-7.340***	-5.996***	-8.474***	-4.310***
	(1.634)	(1.868)	(1.415)	(1.465)	(1.164)	(1.551)	(1.602)	(1.474)	(0.950)
Post-1945 ruling monarchy	26.53**	22.70**	21.91*	36.28**	8.610	23.94**	21.93**	17.39	15.50
	(11.47)	(10.68)	(12.13)	(13.89)	(7.992)	(10.20)	(10.04)	(11.77)	(10.58)
Latitude		-0.615							
		(0.490)							
State antiquity		25.73							
		(18.50)							
ln(Slave exports/area)			-2.066						3.342**
			(2.538)						(1.339)
ln(War years 1400-1700)			-0.484*						
			(0.285)						
Rugged terrain				-3.754					
				(2.971)					
ln(Area)				1.342					
				(3.639)					
British colony					35.29***				-7.153
					(6.964)				(11.03)
French colony					56.91***				14.84
					(7.494)				(11.57)
Portuguese colony					-22.16***				-70.15***
					(7.260)				(13.53)
Belgian colony					53.20***				
					(12.64)				
WWII occupied						17.92*			7.252
						(10.08)			(5.601)
ln(Protestant miss.)						-1.374			
						(2.817)			
ln(Exports/pop)							-1.886		
							(1.188)		
ln(Resource income/pop)							-1.862		
							(1.847)		
ln(Population)								3.466	
								(3.104)	
ln(GDP/capita)								2.344	-3.397
								(7.186)	(4.345)
Ethnic frac.								-37.05*	-12.22
								(21.47)	(14.75)
Territory-years	650	650	650	650	650	650	650	650	650
R-squared	0.191	0.206	0.217	0.200	0.419	0.220	0.211	0.213	0.413

Notes: Table D.5 summarizes a series of OLS regressions in which the percentage of enfranchised population is regressed on log percentage of a colony's area that is suitable for European agriculture. This provides the reduced form estimates for Table 4. Country-clustered standard error estimates are in parentheses, and the unit of analysis is territory-years.
$^{***}p < 0.01,^{**}\ p < 0.05,^{*}\ p < 0.1$.

Table D.6: Liberation Wars: First Stage Estimates for Table 5

	DV: ln(European pop %)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(% area suitable for Eu. agri.)	0.359***	0.270***	0.268***	0.368***	0.416***	0.288***	0.246***	0.318***	0.390***
	(0.0763)	(0.0811)	(0.0728)	(0.0834)	(0.0672)	(0.0909)	(0.0702)	(0.0447)	(0.0778)
Post-1945 ruling monarchy	-1.135*	-1.154**	-1.648**	-1.351	-0.533	-0.986	-0.740	-1.562***	-1.243*
	(0.644)	(0.505)	(0.619)	(0.871)	(0.541)	(0.591)	(0.511)	(0.433)	(0.687)
Latitude		0.0530**							
		(0.0228)							
State antiquity		0.470							
		(0.884)							
ln(Slave exports/area)			-0.292***						
			(0.102)						
ln(War years 1400-1700)			0.0196						
			(0.0144)						
Rugged terrain				0.0345					
				(0.294)					
ln(Area)				-0.0620					
				(0.165)					
British colony					-2.413***				
					(0.511)				
French colony					-1.562***				
					(0.491)				
Portuguese colony					-1.469***				0.449*
					(0.448)				(0.263)
Belgian colony					-4.181***				
					(0.516)				
WWII occupied						0.993*			
						(0.537)			
ln(Protestant miss.)						0.114			
						(0.114)			
ln(Exports/pop)							0.223**		
							(0.110)		
ln(Resource income/pop)							0.0908		
							(0.104)		
ln(Population)								-0.165	-0.280*
								(0.108)	(0.156)
ln(GDP/capita)								1.265***	
								(0.292)	
Ethnic frac.								-2.022**	
								(0.766)	
Territories	42	42	42	42	42	42	42	42	42
R-squared	0.401	0.533	0.522	0.405	0.679	0.466	0.519	0.723	0.465

Notes: Table D.6 summarizes a series of OLS regressions in which log European population share is regressed on log percentage of a colony's area that is suitable for European agriculture. This provides the first-stage estimates for Table 5. Robust standard error estimates are in parentheses, and the unit of analysis is territories. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table D.7: Liberation Wars: Reduced Form Estimates for Table 5

	DV: Major colonial liberation war								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(% area suitable for Eu. agri.)	0.0962***	0.0864***	0.0909***	0.0930***	0.113***	0.0787**	0.0845***	0.0788***	0.0818***
	(0.0253)	(0.0311)	(0.0277)	(0.0309)	(0.0216)	(0.0296)	(0.0308)	(0.0236)	(0.0266)
Post-1945 ruling monarchy	-0.403*	-0.447**	-0.399*	-0.270	-0.238	-0.391**	-0.358	-0.368**	-0.280
	(0.216)	(0.177)	(0.208)	(0.273)	(0.169)	(0.171)	(0.227)	(0.156)	(0.223)
Latitude		0.00805							
		(0.00858)							
State antiquity		0.389							
		(0.281)							
ln(Slave exports/area)			-0.00566						
			(0.0356)						
ln(War years 1400-1700)			0.00853						
			(0.00574)						
Rugged terrain				-0.0324					
				(0.0714)					
ln(Area)				0.0308					
				(0.0535)					
British colony					-0.312*				
					(0.157)				
French colony					0.00154				
					(0.132)				
Portuguese colony					0.522**				0.688***
					(0.197)				(0.169)
Belgian colony					-0.640***				
					(0.141)				
WWII occupied						0.427**			
						(0.162)			
ln(Protestant miss.)						0.0149			
						(0.0387)			
ln(Exports/pop)							0.0322		
							(0.0242)		
ln(Resource income/pop)							0.00259		
							(0.0402)		
ln(Population)								0.0611	0.0515
								(0.0482)	(0.0404)
ln(GDP/capita)								0.246*	
								(0.129)	
Ethnic frac.								-0.198	
								(0.325)	
Territories	42	42	42	42	42	42	42	42	42
R-squared	0.286	0.381	0.320	0.300	0.578	0.399	0.302	0.395	0.454

Notes: Table D.7 summarizes a series of OLS regressions in which the indicator for major colonial liberation wars is regressed on log percentage of a colony's area that is suitable for European agriculture. This provides the reduced form estimates for Table 5. Robust standard error estimates are in parentheses, and the unit of analysis is territories. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table D.8 considers alternative combinations of the covariates from Table 4. The difference in expected franchise size if hypothetically increasing a territory's colonial European population share from Ghana's to Zimbabwe's amount ranges from 22% (73% vs. 51%) in Column 3 to 71% (88% vs. 17%) in Column 1.

Table D.8: Alternative Groupings of Covariates for Table 4

	DV: % pop. legally enfranchised		
	(1)	(2)	(3)
ln(European pop %)	-20.66***	-12.81***	-6.523**
	(6.300)	(3.234)	(2.934)
Post-1945 ruling monarchy	-17.99*	1.964	6.637
	(10.68)	(7.284)	(11.66)
Latitude	0.189		-0.692**
	(0.696)		(0.318)
State antiquity	53.11**		4.837
	(25.53)		(13.31)
ln(Slave exports/area)	-6.767*		3.547*
	(3.453)		(2.014)
ln(War years 1400-1700)	-0.409		-0.371*
	(0.502)		(0.212)
Rugged terrain	-5.402		-1.518
	(4.250)		(1.454)
ln(Area)	-3.955		1.145
	(4.445)		(2.874)
British colony		14.41*	26.15***
		(8.395)	(8.318)
French colony		46.16***	51.05***
		(8.976)	(7.874)
Portuguese colony		-31.93***	-27.16***
		(6.584)	(6.661)
Belgian colony		14.15	23.24
		(19.22)	(15.60)
WWII occupied		8.917	1.207
		(6.902)	(5.699)
ln(Protestant miss.)		-1.036	-0.311
		(1.567)	(1.244)
ln(Exports/pop)		2.705**	2.036*
		(1.162)	(1.020)
ln(Resource income/pop)		0.403	-1.919
		(1.796)	(1.301)
ln(Population)			-0.206
			(2.997)
ln(GDP/capita)			10.65**
			(4.114)
Ethnic frac.			-39.50**
			(18.04)
Territory-years	650	650	650
R-squared	0.200	0.420	0.456
Partial F-test for IV in first stage	12	26.3	23.5

Notes: Table D.8 summarizes a series of two-stage least square regressions in which log percentage of a colony's area that is suitable for European agriculture instruments for log European population share, and the dependent variable is franchise size. Country-clustered standard error estimates are in parentheses. The unit of analysis is territory-years. The bottom of the table reports the partial F-test for the instrument in the first-stage regression between the instrument and European settlers. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table C.2 considers alternative combinations of the covariates from Table 5. The positive difference in predicted probability of a liberation war if hypothetically increasing a territory's colonial European population share from Ghana's to Zimbabwe's amount ranges from 62% (9% vs. 71%) in Column 3 to 100% (0% vs. 100%) in Column 1.

Table D.9: Alternative Groupings of Covariates for Table 5

	DV: Major colonial liberation war		
	(1)	(2)	(3)
ln(European pop %)	0.320***	0.233***	0.181
	(0.107)	(0.0814)	(0.107)
Post-1945 ruling monarchy	0.319*	-0.103	-0.0479
	(0.180)	(0.138)	(0.288)
Latitude	-0.00453		0.00705
	(0.0126)		(0.0109)
State antiquity	0.0130		-0.194
	(0.339)		(0.558)
ln(Slave exports/area)	0.0955*		-0.0313
	(0.0522)		(0.0554)
ln(War years 1400-1700)	-0.000998		0.00275
	(0.00659)		(0.00595)
Rugged terrain	0.0101		-0.0485
	(0.0546)		(0.0485)
ln(Area)	0.0804		-0.0938
	(0.0534)		(0.0954)
British colony		0.266	-0.155
		(0.395)	(0.429)
French colony		0.357	0.123
		(0.417)	(0.463)
Portuguese colony		1.016**	0.698
		(0.386)	(0.513)
Belgian colony		0.489	0.0335
		(0.456)	(0.480)
WWII occupied		0.302	0.311
		(0.185)	(0.269)
ln(Protestant miss.)		0.0646	0.0674
		(0.0530)	(0.0610)
ln(Exports/pop)		-0.0353	0.0181
		(0.0494)	(0.0406)
ln(Resource income/pop)		-0.0225	-0.0363
		(0.0415)	(0.0491)
ln(Population)			0.170
			(0.102)
ln(GDP/capita)			-0.0744
			(0.135)
Ethnic frac.			0.375
			(0.393)
Territories	42	42	42
R-squared	0.519	0.666	0.787
Partial F-test for IV in first stage	9.8	20.2	13

Notes: Table D.9 summarizes a series of two-stage least square regressions in which log percentage of a colony's area that is suitable for European agriculture instruments for log European population share, and the dependent variable is major colonial liberation war. Robust standard error estimates are in parentheses. The unit of analysis is territories. The bottom of the table reports the partial F-test for the instrument in the first-stage regression between the instrument and European settlers. The p-value for the European settlers coefficient estimate in Column 3 is 0.104. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Controlling for historical population density follows from Acemoglu, Johnson and Robinson's (2002) argument that more developed pre-colonial societies with higher population density prevented European settlement. The present data uses their same source, McEvedy and Jones (1978), and measures the variable in 1800 for every African country.

Table D.10: Franchise Size IV Results with Historical Population Density Control

	DV: % pop. legally enfranchised								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	-18.38***	-21.64***	-28.41***	-17.69***	-9.606***	-20.96***	-20.16***	-27.83***	-12.91***
	(4.771)	(7.645)	(8.376)	(5.424)	(2.386)	(5.638)	(7.283)	(5.361)	(3.140)
Pop. dens. in 1800	-0.278	0.0342	-0.926*	-0.212	0.895***	-0.243	-0.239	-0.706	0.761**
	(0.271)	(0.323)	(0.487)	(0.556)	(0.265)	(0.263)	(0.255)	(0.492)	(0.305)
Latitude		0.622							
		(1.007)							
State antiquity		37.87							
		(25.64)							
ln(Slave exports/area)			-7.392**						1.093
			(3.501)						(1.220)
ln(War years 1400-1700)			-0.0611						
			(0.392)						
Rugged terrain				-1.114					
				(4.786)					
ln(Area)				-0.0849					
				(4.723)					
British colony					15.79*				15.36***
					(7.907)				(4.837)
French colony					46.85***				41.21***
					(8.868)				(5.797)
Portuguese colony					-32.75***				-31.76***
					(7.520)				(6.531)
Belgian colony					-0.308				
					(12.07)				
WWII occupied						37.10**			7.898
						(15.98)			(5.409)
ln(Protestant miss.)						-1.013			
						(3.019)			
ln(Exports/pop)							1.784		
							(3.732)		
ln(Resource income/pop)							0.248		
							(2.767)		
ln(Population)								0.141	
								(3.574)	
ln(GDP/capita)								37.09***	12.54**
								(10.15)	(4.978)
Ethnic frac.								-70.54***	-20.20*
								(23.38)	(10.79)
Territory-years	650	650	650	650	650	650	650	650	650
R-squared	0.075	0.094		0.086	0.427	0.136	0.050	0.174	0.439
Partial F-test for IV in first stage	27.5	13.6	10.7	27	67.5	14.9	15.3	32	10.8

Notes: Table D.10 summarizes a series of two-stage least square regressions in which log percentage of a colony's area that is suitable for European agriculture instruments for log European population share, and the dependent variable is franchise size. Country-clustered standard error estimates are in parentheses. The unit of analysis is territory-years. The bottom of the table reports the partial F-test for the instrument in the first-stage regression between the instrument and European settlers.
$^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table D.11: Colonial Liberation War IV Results with Historical Population Density Control

	DV: Major colonial liberation war								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	0.244***	0.273***	0.352***	0.245***	0.258***	0.320**	0.294***	0.251***	0.203***
	(0.0557)	(0.0993)	(0.108)	(0.0560)	(0.0449)	(0.137)	(0.0869)	(0.0787)	(0.0446)
Pop. dens. in 1800	0.00131	0.00172	0.00831	0.00844	0.00160	-0.000554	0.00136	0.00130	-0.00217
	(0.00478)	(0.00517)	(0.00795)	(0.00676)	(0.00655)	(0.00441)	(0.00495)	(0.00555)	(0.00322)
Latitude		-0.00461							
		(0.0128)							
State antiquity		0.198							
		(0.299)							
ln(Slave exports/area)			0.0836*						
			(0.0492)						
ln(War years 1400-1700)			0.00254						
			(0.00447)						
Rugged terrain				-0.0235					
				(0.0460)					
ln(Area)				0.0649					
				(0.0512)					
British colony					0.288				
					(0.270)				
French colony					0.378				
					(0.262)				
Portuguese colony					0.894***				0.592***
					(0.261)				(0.166)
Belgian colony					0.350				
					(0.321)				
WWII occupied						0.0186			
						(0.347)			
Protestant missionaries						-0.153			
						(0.132)			
ln(Exports/pop)							-0.0267		
							(0.0477)		
ln(Resource income/pop)							-0.0220		
							(0.0393)		
ln(Population)								0.102**	0.0999***
								(0.0376)	(0.0314)
ln(GDP/capita)								-0.0688	
								(0.143)	
Ethnic frac.								0.302	
								(0.358)	
Spanish colony									-0.317***
									(0.106)
Territories	42	42	42	42	42	42	42	42	42
R-squared	0.435	0.419	0.438	0.482	0.564	0.427	0.417	0.563	0.675
Partial F-test for IV in first stage	26.3	12.3	9.7	24.5	58.1	13.6	13.9	28.3	14.1

Notes: Table D.11 summarizes a series of two-stage least square regressions in which log percentage of a colony's area that is suitable for European agriculture instruments for log European population share, and the dependent variable is major colonial liberation war. Robust standard error estimates are in parentheses. The unit of analysis is territories. The bottom of the table reports the partial F-test for the instrument in the first-stage regression between the instrument and European settlers.
$^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table D.12: Franchise Size IV Results without Monarchy or Population Density

	DV: % pop. legally enfranchised								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	-18.68***	-21.43***	-30.45***	-18.12***	-10.10***	-22.23***	-21.04***	-27.62***	-13.57***
	(4.976)	(7.520)	(9.922)	(6.326)	(2.422)	(6.471)	(7.743)	(5.253)	(3.077)
Latitude		0.590							
		(0.910)							
State antiquity		38.06							
		(25.39)							
ln(Slave exports/area)			-8.046**						1.753
			(3.872)						(1.323)
ln(War years 1400-1700)			0.0475						
			(0.475)						
Rugged terrain				-0.862					
				(5.047)					
ln(Area)				0.603					
				(4.000)					
British colony					17.92**				5.235
					(7.972)				(9.173)
French colony					48.65***				30.63***
					(8.955)				(8.414)
Portuguese colony					-30.40***				-42.54***
					(7.012)				(10.97)
Belgian colony					18.74				
					(14.34)				
WWII occupied						39.71**			7.848
						(17.45)			(5.953)
ln(Protestant miss.)						-0.240			
						(3.096)			
ln(Exports/pop)							2.303		
							(3.924)		
ln(Resource income/pop)							0.424		
							(2.869)		
ln(Population)								-0.454	
								(3.542)	
ln(GDP/capita)								38.84***	12.14**
								(10.35)	(5.375)
Ethnic frac.								-63.64***	-29.34***
								(22.60)	(10.54)
Territory-years	650	650	650	650	650	650	650	650	650
R-squared	0.067	0.097		0.078	0.413	0.114	0.033	0.164	0.429
Partial F-test for IV in first stage	17.2	8	6.9	14.4	64.8	8.6	10.2	30.2	4.9

Notes: Table D.12 summarizes a series of two-stage least square regressions in which log percentage of a colony's area that is suitable for European agriculture instruments for log European population share, and the dependent variable is franchise size. Country-clustered standard error estimates are in parentheses. The unit of analysis is territory-years. The bottom of the table reports the partial F-test for the instrument in the first-stage regression between the instrument and European settlers.
$^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table D.13: Colonial Liberation War IV Results without Monarchy or Population Density

	DV: Major colonial liberation war								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(European pop %)	0.245***	0.285***	0.375***	0.263***	0.257***	0.315**	0.299***	0.251***	0.205***
	(0.0584)	(0.103)	(0.133)	(0.0658)	(0.0440)	(0.153)	(0.0967)	(0.0775)	(0.0464)
Latitude		-0.00622							
		(0.0119)							
State antiquity		0.208							
		(0.297)							
ln(Slave exports/area)			0.0917						
			(0.0574)						
ln(War years 1400-1700)			0.00145						
			(0.00531)						
Rugged terrain				-0.0309					
				(0.0476)					
ln(Area)				0.0411					
				(0.0433)					
British colony					0.291				
					(0.266)				
French colony					0.380				
					(0.258)				
Portuguese colony					0.898***				0.600***
					(0.258)				(0.164)
Belgian colony					0.384				
					(0.277)				
WWII occupied						0.0291			
						(0.366)			
Protestant missionaries						-0.147			
						(0.148)			
ln(Exports/pop)							-0.0299		
							(0.0520)		
ln(Resource income/pop)							-0.0229		
							(0.0392)		
ln(Population)								0.103***	0.110***
								(0.0364)	(0.0296)
ln(GDP/capita)								-0.0724	
								(0.150)	
Ethnic frac.								0.290	
								(0.320)	
Territories	42	42	42	42	42	42	42	42	42
R-squared	0.434	0.406	0.380	0.452	0.565	0.432	0.411	0.563	0.664
Partial F-test for IV in first stage	16.8	7.5	6.4	13.4	57.3	8	9.5	27.4	10.8

Notes: Table D.13 summarizes a series of two-stage least square regressions in which log percentage of a colony's area that is suitable for European agriculture instruments for log European population share, and the dependent variable is major colonial liberation war. Robust standard error estimates are in parentheses. The unit of analysis is territories. The bottom of the table reports the partial F-test for the instrument in the first-stage regression between the instrument and European settlers.
$^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

D.4 Assessing Sensitivity to Exclusion Restriction Violations

Because the exclusion restriction is unlikely to be perfectly satisfied in any social scientific research, it is important to assess how badly the exclusion restriction would have to be violated for the results presented above to be invalid. Conley, Hansen and Rossi (2012) provide a suitable method with the stated purpose: "Often the instrument exclusion restriction that underlies the validity of the usual IV inference is suspect; that is, instruments are only plausibly exogenous. We present practical methods for performing inference

while relaxing the exclusion restriction" (260). They assume that instead of Equation 1, the dependent variable is generated by:

$$Y_i = \beta_0 + \beta_E \ln E_i + \gamma \ln Z_i + \boldsymbol{X}_i' \beta_X + \epsilon_i, \tag{D.1}$$

If $\gamma \neq 0$, then the instrument directly affects the outcome, i.e., the exclusion restriction is not perfectly satisfied. Although it is likely that $\gamma \neq 0$ in any applied research situation, this is only problematic for the present 2SLS estimates of the European settler coefficient if γ is large in magnitude. Because γ is unobservable, it is crucial to examine how the results would change for different hypothetical values of γ. Table D.14 states for each specification in Tables 4 and 5 the value of γ for which the p-value of the 2SLS estimated effect of European population share would equal either 0.05 or 0.10. In Panel A, if the true γ is negative and smaller in magnitude than the amount stated in the table, then the coefficient estimate for European settlers from the stated column in Table 4 is statistically significant at the stated threshold. In Panel B, if the true γ is positive and smaller in magnitude than the amount stated in the table, then the coefficient estimate for European settlers from the stated column in Table 5 is statistically significant at the stated threshold. If instead the true γ is positive in Panel A or is negative in Panel B, then the magnitude of the coefficient estimate from the regression table is *downwardly* biased. The numbers in parentheses in Table D.14 state the γ thresholds as a percentage of the reduced form estimated effect of the instrument on either franchise size or colonial liberation wars when controlling for the stated set of covariates (see Tables D.5 and D.7).

Table D.14: Sensitivity of IV Results to Exclusion Restriction Violations

	Panel A. % enfranchised population								
Column in Table 4:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Stat. sig. at 5% if $\gamma \geq$	-4.16	-2.54	-4.95	-4.39	-2.45	-4.20	-2.50	-5.61	-2.57
(% of reduced-form estimate)	(56%)	(42%)	(63%)	(60%)	(54%)	(57%)	(42%)	(66%)	(60%)
Stat. sig. at 10% if $\gamma \geq$	-4.72	-3.13	-5.49	-4.90	-2.78	-4.77	-3.18	-6.08	-2.85
(% of reduced-form estimate)	(64%)	(52%)	(70%)	(67%)	(61%)	(65%)	(53%)	(72%)	(66%)
	Panel B. Major colonial liberation war								
Column in Table 5:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Stat. sig. at 5% if $\gamma \leq$	0.054	0.036	0.044	0.044	0.066	0.029	0.034	0.034	0.038
(% of reduced-form estimate)	(56%)	(42%)	(48%)	(47%)	(61%)	(37%)	(40%)	(43%)	(44%)
Stat. sig. at 10% if $\gamma \leq$	0.060	0.044	0.052	0.051	0.073	0.037	0.42	0.042	0.045
(% of reduced-form estimate)	(62%)	(51%)	(57%)	(55%)	(67%)	(47%)	(50%)	(53%)	(52%)

Table D.14 demonstrates that the 2SLS estimates are quite insensitive to relatively large violations of the exclusion restriction, which is somewhat remarkable considering the small number of territories in the

sample. In seven of the nine franchise size regressions, at least 50 percent of the reduced form effect of the instrument on franchise size must occur through channels other than European settlement for the European population share coefficient estimate not to be significant at least at the 5% level. In eight of the nine liberation war regressions, at least 40 percent of the reduced form effect of the instrument on franchise size must occur through channels other than European settlement for the European population share coefficient estimate not to be significant at least at the 5% level. These thresholds are even higher for the 10% significance level. There are no existing alternative hypotheses suggesting that nearly—or more than—half of the effect of land suitability conditions on either franchise size or colonial liberation wars should have occurred through other channels than European settlement (and that are not captured by covariates in the various specifications), which is needed explain away the relationship between European settlers and either dependent variable.

D.5 Strength of First Stage Correlation and Bias from Exclusion Restriction Violations

A related exclusion violation consideration is that including the post-1945 colonial monarchy covariate (or, population density in 1800) makes the coefficient estimates less sensitive to any violations of the exclusion restriction by increasing the strength of the first stage relationship between Europeans settlers and the land suitability instrument. Ignoring the log terms for simplicity, Equations D.1 and 2 can be rewritten after partialing out the other covariates in auxiliary regressions:

$$Y_i = \tilde{\beta}_E \tilde{E}_i + \tilde{\gamma}\tilde{Z}_i + \tilde{\epsilon}_i \tag{D.2}$$

$$E_i = \tilde{\beta}_Z \tilde{Z}_i + \tilde{\epsilon}_{Z,i} \tag{D.3}$$

The instrumental variables estimator for European settlers is $\hat{\beta}_{E,IV} = \left(\tilde{Z}'\tilde{X}\right)^{-1}\tilde{Z}y$. If the explanatory variables are uncorrelated with the error terms but $\gamma \neq 0$, then $\hat{\beta}_{E,IV}$ converges to $\tilde{\beta}_E + \frac{Var(\tilde{Z})}{Cov(\tilde{Z},\tilde{X})} \cdot \gamma$. If adding covariates increases the magnitude of the correlation between the land suitability instrument (after partialing out covariates) and European settlers (after partialing out covariates), i.e., increases $Cov(\tilde{Z}, \tilde{X})$, then this decreases the magnitude of bias induced by any direct effects of land suitability on the outcomes.

E Additional Information for Land Inequality Results

Among territories in the sample, the European land alienation variable is missing data for Angola, Djibouti, Equatorial Guinea, Guinea-Bissau, Madagascar, Morocco, Mozambique, Sudan, and Tunisia. The following territories have greater than 0 percent European land allocation: South Africa (89%), Zimbabwe (49%), Swaziland (49%), Algeria (34%), DRC (9%), Kenya (7%), Botswana (6%), Ghana (5%), Namibia (5%), Malawi (5%), Zambia (3%), Rwanda (2%), Burundi (2%), and Tanzania (0.9%). Hailey (1957, 687) states that the percentage is less 0.5% for all other territories for which he has data. Broadly, these estimates have face validity. For example, the figures for South Africa, Zimbabwe, and Kenya are very similar to those in Table 1 despite Lutzelschwab (2013) using different sources (among data points used in the present sample, Algeria is the only one that did not come from Hailey (1957), instead from Lutzelschwab (2013)), and the data points are also very similar to those listed by Mosley (1983, 7). However, several of the individual data points induce measurement error given the underlying concept of interest. For example, although the Belgian Congo/DRC had a relatively large amount of alienated land, over 95% of this land was alienated for private companies rather than for European settlers (Peemans, 1975, 180). And the figure for South-West Africa/Namibia is too low. There is broad agreement among historians that the extent of European land penetration in South-West Africa was among the highest in the continent. For example, Duignan and Gann (1975, 11) state: "Outside South Africa and *South-West Africa*, the European impact was most far-reaching in Southern Rhodesia" [emphasis added]. According to Schmokel (1985, 99), in the 1960s, about 5,200 European settlers and corporate officials owned half the colony's land. Later that decade, South Africa began to implement the Odendaal Plan, which reserved 60% of South-West Africa's land for whites (Oliver and Atmore, 2005, 297-8). However, in the absence of systematic information that could be used to adjust Hailey's (1957) figures for all colonies, I used his original estimates.

The privately owned land indicator is missing data for Algeria, Equatorial Guinea, Madagascar, Morocco, and Tunisia. The following countries are scored 1 on the variable: Kenya, Malawi, Mauritania, Namibia, South Africa, Swaziland, and Zimbabwe. Once again, this scoring of "significant" amounts of privately held land has face validity when compared to historical narratives. Herbst (2000) discusses the outlying case of Mauritania and argues that its post-colonial rulers (recall that this variable is measured in the 1990s rather than the colonial era) were more easily able to introduce private land reform after independence because only a tiny fraction of its land is arable and this land is located close to the capital.

Table E.1: Statistically Assessing Land Inequality

DV:	Reserved land %		Private land index		% pop. legally enfranchised		Colonial liberation war	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ln(% area suitable for	3.077**		0.417**					
Eu. agri.)	(1.273)		(0.181)					
ln(European pop %)		9.509***		1.063***				
		(3.279)		(0.357)				
Reserved land %					-0.796***		0.0687**	
					(0.166)		(0.0339)	
Private land index						-33.38***		2.159**
						(12.20)		(0.947)
Observations	33	33	37	37	506	570	33	37
R-squared	0.227	0.522			0.147	0.094		
Model:	OLS	OLS	Logit	Logit	OLS	OLS	Logit	Logit

Notes: Columns 1 and 2 summarize a series of OLS regressions with robust standard errors in which the unit of analysis is territories. Columns 3, 4, 7, and 8 summarize a series of logit regressions with robust standard errors in which the unit of analysis is territories. Columns 5 and 6 summarize a series of OLS regressions with country-clustered robust standard errors in which the unit of analysis is territory-years. $^{***}p < 0.01,^{**} p < 0.05,^{*} p < 0.1$.

F Decolonization Beyond Africa

F.1 Summary of Findings

The main findings focus on Africa to match scope conditions of redistributive models as closely as possible and to reduce heterogeneity among units in the sample. However, the correlations remain strong when expanding the sample either to all post-1945 independence cases or to all former Western European colonies. For the pre-20th century independence cases, theoretically, redistributive tensions help to explain resistance to franchise expansion, although alternative mechanisms better explain why many early settler colonies fought liberation wars.

Appendix Tables F.3 and F.4 show that European population share continues to be statistically significantly associated with the two outcomes when expanding the sample to all countries that gained independence from Western Europeans after World War II (Appendix Table F.2 provides summary statistics). The hypotheses correctly anticipate that because very few colonies outside Africa in this sample had sizable European populations (see Appendix Table F.1), the non-African colonies (a) tended to have higher legal enfranchisement rates and (b) only three of 25 experienced a colonial liberation war. These three cases (Indonesia, Malaysia, Vietnam) all had small European population shares. A better explanation than economic redistribution for the handful of non-African liberation wars is that Japanese occupation during World War II and its sudden departure created space for the formation of rebel movements that rejected continued colonial rule when European occupation resumed in 1945, which relates to Lawrence's (2013) thesis about decolonization from the French empire. Notably, all the results thus far have included a specification that controls for whether Axis powers disrupted European colonial rule during World War II.

The correlation between European settlers and colonial liberation wars is also robust to expanding the sample to all former Western European colonies (Appendix Table F.5). Consistent with the hypothesis, all the Spanish American colonies,[17] Brazil, and the United States—each with a large European population share—experienced a colonial liberation war. The magnitude of the estimates in Appendix Table F.5 are somewhat lower than in Table 3 because three major British settler colonies (Canada, Australia, and New Zealand) all avoided liberation wars, perhaps because Britain began implementing gradual reforms in its

[17]Because it is not sensible to code colonial liberation wars for non-existent political units, these regressions break mainland Spanish America into four observations that correspond to the empire's viceroyalties (New Granada, New Spain, Peru, Rio de la Plata) and Cuba.

major settler colonies after its debacle in the United States. Although it is not possible to estimate the franchise size regressions when including the early independence cases because V-Dem data begins in 1900, Miller's (2015) dataset—which distinguishes country-years with limited franchises from those with broader franchises—shows that the franchise was indeed limited throughout the New World in the 19th century. Of the 12 New World countries with 19th century data and European population shares of at least 10 percent, only three experienced high participation in at least one year: Canada (1887-), United States (1872-), and Venezuela (1893-7).

Although fear of redistribution does not provide a compelling explanation for liberation wars in these early independence countries, it does help to explain resisted enfranchisement. Whereas all the African cases featured small settler minorities that faced a revolutionary threat from below, Europeans composed a majority of the population in the four "neo-Britains." This suggests the need to modify the theory for the empirically rare settler colonies in which the elite were also the majority, and is consistent with Collier and Hoeffler's (2004) argument about ethnic dominance and incentives for repression. South American countries tended to feature smaller European populations, but the European creole class composed a landed elite that expected to continue dominating the political arena after independence. Unlike in Africa, *European* elites spearheaded the drive for independence in the United States and across Spanish America in the late 18th and early 19th centuries. To the extent that redistribution played a role in these wars, it tended to concern a desire to prevent wealth outflows from the colony to the metropole, rather than a fear of losing power to domestic non-Europeans.

However, elites in New World territories with European minorities had much to fear from expanding the franchise and diminishing their political power. Similar to African settler colonies, Europeans in Spanish America had dominated landholdings since the colonial era (Skidmore and Smith, 2005, 22) and "the nature of large landowners and other elite sectors was crucial for the intensity of resistance against democratization" (Rueschemeyer, Stephens and Stephens, 1992, 155) throughout the 19th and 20th centuries. These cases closely match scope conditions of redistributive models and provide supportive post-colonial cases for the theory, in contrast to late 20th century cases scholars have argued do not support the redistribution mechanism (Haggard and Kaufman, 2012; Slater, Smith and Nair, 2014). Notably, Boix (2013) also highlights the relevance of 19th century cases for empirically assessing redistributive models.

F.2 Supplemental Information for Larger Sample

Table F.1: List of European Settler Colonies (≥1% of pop. at independence)

Country	Eu. pop. share	Year indep.
Canada	98.5%	1867
New Zealand	93.7%	1907
United States	80.7%	1783
Australia	75.4%	1901
Uruguay	57.0%	1829
Cuba	44.2%	1902
Chile	42.3%	1818
Argentina/Rio de la Plata	33.0%	1824
Ecuador	32.4%	1830
Colombia/New Granada	32.4%	1820
Guatemala	28.9%	1839
Venezuela	26.4%	1830
Brazil	23.4%	1823
Panama	21.7%	1903
South Africa	20.1%	1910
Mexico/New Spain	18.1%	1821
Namibia	12.9%	1990
Peru	12.6%	1824
Algeria	10.9%	1962
Costa Rica	9.4%	1838
Paraguay	8.0%	1811
Mauritius	7.1%	1968
Haiti	6.3%	1819
Zimbabwe	6.0%	1969
Bolivia	5.9%	1825
Honduras	5.7%	1838
Tunisia	5.5%	1958
Guyana	5.4%	1966
Suriname	3.6%	1975
Nicaragua	3.5%	1838
Trinidad and Tobago	3.2%	1962
El Salvador	2.8%	1840
Angola	2.7%	1975
Morocco	2.7%	1956
Equatorial Guinea	2.5%	1968
Fiji	2.4%	1970
Zambia	2.4%	1964
Swaziland	2.3%	1968
Djibouti	2.1%	1977
Cape Verde	2.0%	1975
Mozambique	1.2%	1975
Senegal	1.1%	1960
Jamaica	1.1%	1962
Kenya	1.0%	1963

F.2.1 Sample

The sample in Tables F.3 and F.4 consists of all countries in Fearon and Laitin's (2003) dataset that gained independence from a Western European power after World War II. The territories contained in Tables F.3 and F.4 not included in Tables 2 and 3 are Bahrain, Bhutan, Cambodia, Cyprus, Fiji, Guyana, India, Indonesia, Israel, Jamaica, Jordan, Kuwait, Laos, Lebanon, Libya, Malaysia, Mauritius, Myanmar, Pakistan, Papua New Guinea, Philippines, Singapore, Somalia, Sri Lanka, Syria, Trinidad and Tobago, United Arab Emirates, and Vietnam. The sample of all former Western European colonies for Table F.5 additionally includes Australia, Brazil, Canada, Cuba, Egypt, Haiti, Iraq, New Granada (corresponds to modern-day Colombia, Ecuador, Panama, and Venezuela), New Spain (corresponds to modern-day Mexico and Central America minus Panama and Belize), New Zealand, Peru, Rio de la Plata (corresponds to modern-day Argentina, Bolivia, Paraguay, and Uruguay), and the United States. I use the four viceroyalties of the mainland Spanish America empire at the turn of the 19th century rather than modern-day countries (except Peru, where the colonial viceroyalty mapped into a post-independence political unit) because it is not meaningful to code whether or not a territory that was not a distinct colony fought a liberation war. Unless stated otherwise, the data point for each of the four Spanish America viceroyalties is taken from the modern-day country in which the capital city was located: Colombia for New Granada, Mexico for New Spain, and Argentina for Rio de la Plata. Countries once-colonized by a Western European country that did not receive independence from a white government—hence obviating the possibility of a liberation war against Europeans—are excluded (Bangladesh and Dominican Republic; Eritrea, East Timor, and South Sudan are outside the temporal scope, anyway). Papua New Guinea is included because it gained independence from Australia, a white settler colony.

F.2.2 Variables Used in Tables F.3 and F.4

- *European population share.* Data from Easterly and Levine's (2016) dataset. For each colony, I used the provided data point closest to the year of independence. The one exception is that Easterly and Levine's (2016) data point for Mauritius in 1962 (29.9%) of the population is problematic because their estimate combines the "white and mixed" population. This overstates the European settler percentage of the population in this former plantation colony in which Lange (2009, 67) states that only 2% claim European heritage. I instead incorporated information from Mauritius' 1962 census (Statis-

tics Mauritius, n.d.) on the percentage of inhabitants that primarily spoke either English or French in their homes at the time of the census (16). Even this figure of 7.1% is likely an overestimate of European settlers for two reasons. First, the census counted "all persons physically present in Mauritius and its Dependencies at the time of the Census, whether they were residents or not" (1), and Europeans are more likely to have lived temporarily in a colony. Second, whereas some non-Europeans may have spoken romance languages in their homes, Europeans would not have spoken non-romance languages. Of the countries listed above, all have a value for this variable except Israel. Easterly and Levine (2016) assessed that it would be impossible to measure the percentage of Israeli settlers that came from Western European countries given the tumultuous circumstances of Jewish settlement before, during, and immediately after World War II (personal correspondence)—a quite different pattern than in typical settler colonies.

- *Franchise size.* Same as Tables 2 and 3. In addition to missing data for one African country, Equatorial Guinea, this variable is also missing for Bahrain, Kuwait, Singapore, and the United Arab Emirates.

- *Colonial liberation war.* For the post-1945 cases, I used Fearon and Laitin's (2003) civil war dataset. For the pre-1945 independence cases, I consulted Correlates of War's data (Sarkees and Wayman, 2010) and secondary sources.

- Covariates:

  - *Pre-colonial democracy specification*. These variables are unchanged from Tables 2 and 3. State antiquity is missing for Bahrain, Bhutan, Kuwait, and United Arab Emirates.

  - *Pre-colonial violence specification*. Nunn's (2008) slave export data and Besley and Reynal-Querol's (2014) pre-colonial warfare data are coded only for Africa, and therefore these variables are not used in any specification in Tables F.3 through F.5.

  - *Geographic specification.* These variables are unchanged from Tables 2 and 3. To provide calculation notes for the complicated cases, New Granada's land area sums Colombia, Ecuador, Panama, and Venezuela. Rio de la Plata's land area sums Argentina, Bolivia, Paraguay, and Uruguay. Because the territorial extent of Mexico/New Spain, the United States, and Canada have changed considerably since independence, I consulted secondary sources to compute the land area of each country at independence.

– *Colonizer fixed effects specification*. Table F.5 with all former colonies adds a Spanish colonialism dummy because of the prevalence of Spanish colonies among early-decolonizing countries.

– *Other colonial specification*. None of these regressions include the post-1945 ruling monarchy variable, which was coded only for Africa. Tables F.3 and F.4 include World War II occupation and Protestant missionaries. In Table F.5, the dummy variable for occupation during World War II is not included because this variable is missing for all pre-WWII independence cases. Woodberry's (2012) Protestant missionary variable is missing for Australia, Canada, New Zealand, and the United States.

– *Standard democracy/civil war covariates specification.* In Tables F.3 and F.4, these specifications are unchanged from Tables 2 and 3. In Table F.5, ethnic fractionalization is not included because it is measured more than 100 years after independence for most of the pre–WWII independence cases. Although Maddison's (2008) dataset has the best temporal coverage among available datasets for population and income, there are still problems of sparse data. Among the post-1945 sample, population data is complete and GDP data is available for all countries except five (Bhutan, Cyprus, Fiji, Guyana, and Papua New Guinea). Among the pre-WWII independence cases, only in Australia and New Zealand is population measured in their respective year of independence. Data for Canada is 1870 and Cuba is 1900. Data for Egypt and Iraq is from 1913. All other pre–WWII independence cases are 1820. New Granada's figure sums population figures for Colombia, Ecuador, Panama, and Venezuela. New Spain's figure sums Mexico, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. Rio de la Plata's figure sums Argentina, Bolivia, Paraguay, and Uruguay. GDP per capita data are even more scant. Canada is measured in 1870, Australia is 1901, and New Zealand is 1907. Iraq and Egypt are each 1913. Cuba is the 1900 data point for "Total 21 small Caribbean countries." The remainder of the GDP data is for 1820. United States and Brazil each have unique data points. Mexico has the only data point of any of the New Spain countries, and therefore composes New Spain's data point. Haiti is the data point for "Total 21 small Caribbean countries." The same data point is used for each of New Granada, Peru, and Rio de la Plata: "Total 8 Latin America countries."

Table F.2: Summary Statistics for Broader Samples

Suffrage, post-1945 decolonization			
Variable	**Mean**	**Std. Dev.**	**N**
% pop. with franchise	72.617	39.27	1034
ln(European pop %)	-0.878	1.522	1018
Latitude	15.924	10.728	1034
State antiquity	0.27	0.307	1018
ln(Area)	12.23	1.727	1034
Rugged terrain	1.191	1.289	1034
British colony	0.449	0.498	1034
French colony	0.366	0.482	1034
Portuguese colony	0.046	0.21	1034
Belgian colony	0.046	0.21	1034
WWII occupied	0.232	0.422	1034
ln(Protestant miss.)	-1.39	1.718	1034
ln(Population)	14.76	1.529	1034
ln(GDP/capita)	6.756	0.623	954
Ethnic frac.	0.62	0.238	1034
Liberation wars, post-1945 decolonization			
Variable	**Mean**	**Std. Dev.**	**N**
Colonial liberation war	0.214	0.413	70
ln(European pop %)	-0.936	1.527	69
Latitude	15.936	10.905	70
State antiquity	0.264	0.306	66
ln(Area)	11.995	1.959	70
Rugged terrain	1.128	1.268	70
British colony	0.471	0.503	70
French colony	0.343	0.478	70
Portuguese colony	0.043	0.204	70
Belgian colony	0.043	0.204	70
WWII occupied	0.229	0.423	70
ln(Protestant miss.)	-1.328	1.763	70
ln(Population)	14.578	1.644	70
ln(GDP/capita)	6.875	0.839	65
Ethnic frac.	0.616	0.236	70
Liberation wars, all former colonies			
Variable	**Mean**	**Std. Dev.**	**N**
Colonial liberation war	0.277	0.45	83
ln(European pop %)	-0.357	2.144	82
Latitude	17.762	11.867	83
State antiquity	0.251	0.303	79
ln(Area)	12.338	2.095	83
Rugged terrain	1.111	1.192	83
British colony	0.47	0.502	83
French colony	0.301	0.462	83
Portuguese colony	0.048	0.215	83
Belgian colony	0.036	0.188	83
Spanish colony	0.072	0.261	83
ln(Protestant miss.)	-1.368	1.68	79
ln(Population)	14.634	1.551	83
ln(GDP/capita)	6.897	0.813	78

F.2.3 Regression Analysis

Table F.3: Franchise Size: All Post-1945 Decolonization

	DV: % pop. legally enfranchised						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ln(European pop %)	-7.290***	-5.152*	-8.075***	-5.696**	-7.011***	-11.97***	-6.816***
	(2.564)	(2.601)	(2.208)	(2.367)	(2.474)	(2.657)	(2.230)
Latitude		-0.659**					-0.480*
		(0.301)					(0.281)
State antiquity		27.87***					19.09**
		(8.987)					(8.673)
ln(Area)			-4.395*				-4.211***
			(2.277)				(1.534)
Rugged terrain			-8.477***				-3.805**
			(3.107)				(1.701)
British colony				3.572			
				(9.789)			
French colony				22.17***			16.89***
				(8.324)			(3.931)
Portuguese colony				-59.11***			-56.31***
				(9.805)			(7.473)
Belgian colony				-1.648			
				(12.67)			
WWII occupied					11.69*		2.926
					(5.993)		(5.507)
ln(Protestant miss.)					-0.841		
					(2.555)		
ln(Population)						0.604	
						(1.995)	
ln(GDP/capita)						15.37**	6.330*
						(5.939)	(3.760)
Ethnic frac.						-20.13*	-8.415
						(11.51)	(10.61)
Territory-years	1,018	1,002	1,018	1,018	1,018	938	938
R-squared	0.079	0.140	0.151	0.272	0.097	0.185	0.390

Notes: Table F.3 summarizes a series of OLS regressions by presenting coefficient estimates, and country-clustered standard error estimates in parentheses. The unit of analysis is territory-years. $^{***}p < 0.01,^{**}p < 0.05,^{*}p < 0.1$.

Table F.4: Colonial Liberation Wars: All Post-1945 Decolonization

	DV: Major colonial liberation war						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ln(European pop %)	0.121***	0.143***	0.120***	0.105***	0.123***	0.148***	0.110***
	(0.0326)	(0.0332)	(0.0274)	(0.0335)	(0.0324)	(0.0287)	(0.0264)
Latitude		-0.000981					
		(0.00538)					
State antiquity		0.326*					
		(0.188)					
ln(Area)			0.0671***				0.0245
			(0.0215)				(0.0185)
Rugged terrain			0.0194				
			(0.0235)				
British colony				-0.156			
				(0.178)			
French colony				-0.0244			
				(0.186)			
Portuguese colony				0.600***			0.748***
				(0.176)			(0.115)
Belgian colony				-0.202			
				(0.173)			
WWII occupied					0.362***		0.339***
					(0.123)		(0.114)
ln(Protestant miss.)					-0.00648		
					(0.0270)		
ln(Population)						0.101***	0.0448
						(0.0356)	(0.0286)
ln(GDP/capita)						0.0573	
						(0.0547)	
Ethnic frac.						0.0603	
						(0.204)	
Territories	69	65	69	69	69	64	69
R-squared	0.198	0.230	0.292	0.340	0.337	0.361	0.550

Notes: Table F.4 summarizes a series of OLS regressions by presenting coefficient estimates, and robust standard error estimates in parentheses. The unit of analysis is territories. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

Table F.5: Colonial Liberation Wars: All Former Colonies

	DV: Major colonial liberation war						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ln(European pop %)	0.107***	0.145***	0.0932***	0.0839***	0.152***	0.116***	0.143***
	(0.0241)	(0.0209)	(0.0248)	(0.0270)	(0.0179)	(0.0235)	(0.0201)
Latitude		-0.00756*					-0.00726*
		(0.00453)					(0.00398)
State antiquity		0.433**					0.353**
		(0.168)					(0.159)
ln(Area)			0.0488**				-0.00822
			(0.0196)				(0.0232)
Rugged terrain			0.0211				
			(0.0250)				
British colony				-0.265			
				(0.183)			
French colony				-0.0794			
				(0.194)			
Portuguese colony				0.488**			0.639***
				(0.194)			(0.143)
Belgian colony				-0.292			
				(0.179)			
Spanish colony				0.148			
				(0.253)			
ln(Protestant miss.)					-0.0238		
					(0.0254)		
ln(Population)						0.0766**	0.0901**
						(0.0327)	(0.0362)
ln(GDP/capita)						-0.0324	
						(0.0599)	
Territories	82	78	82	82	78	77	78
R-squared	0.257	0.303	0.301	0.422	0.385	0.344	0.466

Notes: Table F.5 summarizes a series of OLS regressions by presenting coefficient estimates, and robust standard error estimates in parentheses. The unit of analysis is territories. $^{***}p < 0.01, ^{**}p < 0.05, ^{*}p < 0.1$.

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