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NATION-BUILDING AND EDUCATION*

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Democracies and dictatorships have different incentives when it comes to choosing how much and by what means to homogenise the population, i.e., 'to build a nation'. We study and compare nation-building policies under the transition from dictatorship to democracy in a model where the type of government and borders of the country are endogenous. We find that the threat of democratisation provides the strongest incentive to homogenise. We focus upon a specific nation-building policy: mass primary education. We offer historical discussions of nation-building across time and space, and provide correlations for a large sample of countries over the 1925–2014 period.

> There cannot be a firmly established political state unless there is a teaching body with definitely recognised principles. If the child is not taught from infancy that he ought to be a republican or a monarchist, a Catholic or a free-thinker, the state will not constitute a nation; it will rest on uncertain and shifting foundations; and it will be constantly exposed to disorder and change.
>
> –Napoleon I, 1805[1]

From the French Revolution and throughout the nineteenth century, French rulers expressed the imperative 'to form French citizens'.[2] Following the unification of Italy in 1860, Massimo d'Azeglio, a member of the Northern elite that led the unification process, remarked: 'Italy has been made; now it remains to make Italians'. During the nineteenth and early twentieth centuries, French and Italian rulers adopted a range of policies aiming to build commonality among the population and to form suitable 'Frenchmen' and 'Italians'. A critically important policy to this end was the introduction of state-controlled education, including compulsory elementary schooling. Other nation-building policies included the introduction of a 'national language' in schools, religious services, and administration, and the introduction of compulsory military service, which often had the explicit aim of integrating and mixing individuals from different parts of the country.

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The data and codes for this paper are available on the Journal website. They were checked for their ability to reproduce the results presented in the paper.

Alberto passed away a few months after resubmitting this paper. Alberto's creativity and brilliance came with such warmth and joy that it was a true privilege to experience and is a deep loss to be without.

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[1] Quote from Ramirez and Boli (1987, p.8).

[2] Quote from Félix Pécaut in 1871 (Weber, 1979, p. 334). He conducted a general inspection of public education for the French government. See Weber (1979) for many more examples.

France and Italy are just two examples. Tilly (1975) notes that 'Almost all European governments eventually took steps which homogenized their populations: the adoption of state religions, expulsion of minorities. . . institution of a national language, eventually the organization of mass public instruction' (p. 43-44). According to Hobsbawm (1990), 'States would use the increasingly powerful machinery for communicating with their inhabitants, above all the primary schools, to spread the image and heritage of the "nation" and to inculcate attachment to it', and that 'The official or culture-language of rulers and elites usually came to be the actual language of modern states via public education and other administrative mechanisms'. Indeed, a vast body of work has documented the nation-building motives for the development of compulsory state education systems across European states (Weber, 1979; Ramirez and Boli, 1987).

The goal of this paper is to analyse nation-building through education in different political regimes. The terms 'state-building' and 'nation-building' are sometimes used interchangeably. However, state-building generally refers to the construction of bureaucratic institutions necessary for a functioning state, one able to collect revenues, provide public goods, fight wars, etc., while nation-building is the construction of a national identity, which in turn may also facilitate state-building. Thus, we define nation-building as a process leading to the formation of countries in which citizens feel a sufficient amount of commonality of interests, goals and preferences that they do not wish to separate from each other.

We consider different types of regimes (non-democratic and democratic) and their different incentives to nation-build. We begin with a completely secure non-democratic ruling elite (the 'ruler' for short) who is not threatened by any overthrow. The ruler extracts rents from his territories. He builds the type of government and adopts policies that match his preferences. He has no interest in costly nation-building. We show that a non-democratic ruler facing a probability of overthrow and the establishment of democracy has very different incentives to nation-build. If overthrow and democracy were to occur, the ruler would lose his rents, and the newly formed democracy may choose public goods and policies that differ from the preferences of the ruler or elite. In addition, when installed, a democratic regime may break apart the territories of the ruler in ways that would be costly for him. Homogenisation and indoctrination allow a ruling elite to better maintain their preferred policies and a larger country if democracy prevails. More homogenisation, if it reduces distaste towards the existing government, may also reduce the incentive of the population to overthrow the ruler in the first place. In more colourful terms: threatened rulers will indoctrinate people in order to teach them to 'enjoy' the current regime and the current borders of the country and not break away from them.[3]

Well-functioning democracies also have reasons to promote the homogenisation of their citizens. Within a country, individuals share the same public goods and policies, and therefore increasing commonality can increase welfare. Our model shows that nation-building is lowest in a 'safe' dictatorship, while elites threatened by democratic revolutions undertake the highest levels of homogenisation. Our main result finds that the threat of democratisation provides strong incentives to implement homogenisation policies. We show that this implication of the model is consistent with historical examples from different continents and time periods, and econometric evidence on a large sample of countries.

Education facilitates nation-building in several ways. It can change individual preferences by indoctrination, that is, by convincing individuals who dislike the ruling government that it is not

[3] In this paper, we focus on internal factors that motivate governments to implement nation-building policies. Aghion *et al.* (2019) and Alesina *et al.* (2020) study the importance of external motives for nation-building, namely the threat of external wars. Internal and external motives to nation-build may coexist as we will show.

so bad after all. Cantoni *et al.* (2017) show that a Chinese education reform, introduced with the explicit aim of shaping ideology, shifted the attitudes of students towards the ideological position of the government in aspects such as their view of free market economics and the political system. Schools, say in France or Scandinavia, emphasise the benefits of regulation and social welfare, while in the United Kingdom and the United States the merits of individualism are stressed more (Alesina and Glaeser, 2005). Mass education can also facilitate nation-building by teaching a common language. For example, in France and Italy the language of the elites became, via mass instruction, the national language. Teaching a common language can help individuals to better communicate with the government and access public services. You (2018) studies the effect of the Chinese reform in 1960, which enforced the use of Mandarin in all schools in China with the explicit goal of reducing diversity. Clots-Figueras and Masella (2013) show that compulsory Catalan language education encouraged Catalan identity.[4]

While the social benefits and redistributive effects of public education are obvious and important, most state education systems were established before democratisation, without any apparent social welfare motive. We contribute to a literature that examines the introduction of mass education by elites with goals other than social welfare in mind. Gellner (1983) argues that industrial societies, based upon markets, require better means of communication and that education was a response to this. In recent work, Hauk and Ortega (2020) provide a framework that examines the choice of elites to invest in education to increase mobility and productivity following an industrialisation shock. War is also a motive to establish mass education, to build a better educated and more obedient army (Ramirez and Boli, 1987; Darden and Mylonas, 2016; Aghion *et al.*, 2019).[5]

Our framework shows that the transition to democracy is a core driver of mass education. Elites invested in mass education to homogenise nations, both in order to reduce the threat of overthrow and to maintain their interests under a future democracy.[6]

Our model can also account for 'reverse homogenisation', namely, policies of 'divide and rule'. While native elites may have incentives to spend parts of their rents to homogenise the population, colonisers do not. They do not care about building a nation for the long run because they are there simply to extract rents for the short or medium run. Therefore, they may even engage in policies that pitch one ethnic group against another. These policies may prevent the formation of a coalition of native ethnicities against the coloniser, precisely divide and rule.

Our paper is related to several strands of literature. The first is research that compares education policies across democratic and non-democratic regimes. Aghion *et al.* (2019), using annual data on 137 countries from 1830 to 2001, find that autocracies have higher enrolment rates in primary education than democracies. Consistent with this finding, Mulligan *et al.* (2004) examine cross-country data from 1960 to 1990 and find no evidence that democracies spend more on public education than non-democratic regimes. Bursztyn (2016) finds that democracies spend less on public education than non-democracies for below-median income countries. Lott (1999) also examines education expenditure data from 99 countries in the period 1985–92 and finds that

[4] It is worth noting that homogenisation and repression by the central state could also backfire, leading to a backlash (see Dehdari and Gehring, forthcoming; Rozenas and Zhukov, 2019; Fouka, 2020; Komisarchik *et al.*, 2020).

[5] See Smith (1998) for a detailed description of and key references in the development of the study of nationalism and Laitin (2007) for a discussion of nationalism, national identity and state formation.

[6] Green (1990) and Hobsbawm (1990) discuss education as a way to protect the social order, but, as far as we are aware, there is no explicit discussion linking this to democratic transitions and the motive of preserving policies that favour the elite.

an increase in totalitarianism increases education spending, again with the strongest effects for lower-income countries.

The second strand is the literature on endogenous borders by Alesina and Spolaore (1997; 2003). These authors take the diversity of preferences among individuals as given, whereas in our model the degree of divergence of preferences among the population is endogenous.[7]

The third strand studies policy reforms implemented by forward-looking elites when they are threatened with overthrow. Acemoglu and Robinson (2000), Aidt and Jensen (2014) and Aidt and Franck (2015) examine how a threat of revolution can prompt elites to democratise for strategic reasons. Acemoglu and Robinson (2008) argue that democratic transitions motivate elites to invest in institutions that allow them to maintain a higher degree of power under democracy and mitigate their economic losses. Besley *et al.* (2016) present evidence that rulers facing a greater threat of loss of power invest in institutional reforms, namely strengthening executive constraints, to limit the ability of future regimes to act against their interests. Our model is related to both these points. First, we show that elites might nation-build to try to reduce the threat of revolution itself. Second, our model shows that forward-looking elites threatened with democracy invest heavily in nation-building as a means to maintain their interests and their borders under a future democracy.

The fourth strand is the literature on 'state capacity', as in Besley and Persson (2009; 2010), which examines the development of state institutions in the formation of successful states. This work emphasises the role of war as an engine for building the ability of the state to raise taxes and establish law and order. Alesina *et al.* (2020) discuss how indoctrination may motivate soldiers during wars and become part of state-building. The role of wars and democratisation as complements in the formation of the modern 'state capable nation' is discussed in the paper.

Finally, our paper is related to the literature on the need for education for the better functioning of institutions, as in Glaeser *et al.* (2007) or Bourguignon and Verdier (2000). Papers by Gradstein and Justman (2002) and Ortega and Tangers (2008) examine schooling as a means to improve communication across groups and so increase growth.

This paper is organised as follows. Section 1 presents the model and Section 2 solves it to examine nation-building via education under different regimes. Section 3 describes several historical examples that speak to the relationship between mass education, nation-building and the threat of democratisation under non-democratic regimes. Section 4 presents correlations between mass education and the probability of a regime being overthrown for a large sample of 172 countries from 1925 to 2014. The last section concludes.

1. A Model of Nation-Building

We consider a two-period model in which governments can choose to nation-build. In the first period, a ruler (also referred to as 'the elite') runs the country. In the second period, the population either becomes democratic or remains governed by the ruler. We first take the probability of democratisation as exogenous, and then later endogenise it.

[7] Bolton and Roland (1997) consider separatism due to income differences rather than differences in preferences.

1.1 *Homogenisation and Distance*

Assume a continuum of individuals of mass 1, with heterogeneous ideal points distributed uniformly on the segment [0, 1]. At time t individual i lives in a country with a government located at j. Individual i's per period utility function at time t is given by

$$u_{it} = g(1 - a_t^j d_{ij}) + y - r_t. \tag{1}$$

The first term $g(1 - a_t^j d_{ij})$ measures the value of the government to individual i. With the term 'government' we refer to a set of public goods and policies provided by the authority, democratic or not. The term d_{ij} is the preference distance of individual i from government j. The value of the government to individual i falls with his distance from the government. We think of distance as the language, cultural, ideological or preference differences between individual i and the public goods and policies provided by government j. The value a_t^j measures the cost of this distance.[8] The parameter g is the maximum utility an individual receives from the government when distance is zero. The remaining terms are income y, which is exogenously given, identical for everyone, and identical across time periods, and taxes in period t, r_t.

We model 'homogenisation' as a technology that uses state education to reduce the cost of distance from the government. Specifically, government j at time t implements a homogenisation policy $\lambda_t^j \in [0, 1]$ such that $a_t^j = (1 - \lambda_t^j)a$, where a is the initial cost of heterogeneity at time zero. Homogenisation λ_t^j reduces the costs to individual i of facing policies and public goods j that are different from his ideal. From now on we use the term 'distance' to summarise any difference in preferences, and the term 'homogenisation' to refer to a reduction in the costs of such a distance through education policies. Homogenisation is durable: languages learned today are not forgotten tomorrow, preferences influenced by schooling today are persistent. The cost of the homogenisation policy λ_t^j for a country of mass s is $s[C(\lambda_t^j) - C(\lambda_{t-1}^j)]$, where λ_{t-1}^j is the homogenisation of this population by government j in the previous period. That is, homogenisation by government j in the previous period persists such that $\lambda_t^j \geq \lambda_{t-1}^j$ and the cost of the homogenisation policy this period covers only additional homogenisation. We assume that homogenisation policies influence the cost of distance from a government and therefore homogenisation by a different previous government is irrelevant if the location of the government changes.[9]

ASSUMPTION 1. *The function $C(\cdot)$ is strictly increasing, strictly convex, and twice continuously differentiable as λ_t^j increases from 0 to 1. With $C(0) = 0$, $C'(0) = 0$, and $\lim_{\lambda_t^j \to 1} C'(\lambda_t^j) = \infty$.*

[8] For example, Laitin and Ramachandran (2016) show that an individual's language distance from the official language negatively affects his or her socioeconomic outcomes.

[9] For example, teaching French reduces the cost of accessing government services and jobs provided in French, but it does not necessarily affect the cost of accessing government services and jobs provided in German. An alternative way to model homogenisation policies is that they work by influencing preferences directly. In our model, this would mean that homogenisation shifts an individual's ideal point and therefore the term d_{ij}. Both of these assumptions work through the term $a_t^j d_{ij}$ and push this term in the same direction; we think of them as interchangeable. The only difference between them is that from a modelling perspective a shift in ideal point towards government j will also change the distance of an individual's ideal point vis-à-vis other government locations, and this can complicate the analysis.

The cost of the homogenisation policy is paid with period t taxes. Throughout the paper we assume the cost of homogenisation is split equally among the country's population. We generalise this in Online Appendix B.[10]

1.2 *Country Formation*

In period 1, a non-democratic ruler is located at $1/2$ and rules over the whole population. We model the ruler or elite as measure zero. Alternatively, we could represent the elite by a group of mass δ with their ideal point at $1/2$ or in an interval around $1/2$. Such an extension would complicate notation and algebra with little advantage in terms of insight. In the paper we provide results for a ruler located at $1/2$, while in Online Appendix B we show that the key results hold for a ruler located anywhere on the unit interval.

In period 2, either the non-democratic regime survives, or democracy prevails. In a democracy, the population will choose whether to maintain the borders of the single country or to split into two equal-sized countries, A and B, comprising the intervals of ideal points $[0, 1/2]$ and $(1/2, 1]$ respectively. We adopt the restriction of at most two equal-sized countries for simplicity.[11] This split of the population assumes that preferences are perfectly correlated with geography.[12] If there were no correlation between geography and preferences we might end up with countries that are not geographically connected. Alesina and Spolaore (2003) provide a discussion and justification of this assumption in the context of a model of country formation. Each country has a single government located at some point within it, j. The borders and the location of the government can be altered by a democracy at the beginning of period 2 at no cost.

The cost of government in period t is k. Because k can be divided among all citizens in the country, this captures the benefits of a larger country.[13] When the population splits into two countries, each country is more homogeneous and the government of each country is closer to the median citizen, but the costs of government are higher in per capita terms. In a democracy, therefore, the voters face a trade-off between homogeneity and the costs of government. Some individuals in the population may prefer to split into two countries and face higher costs, rather than be part of a single country with a government that poorly represents their preferences. Only a democracy in period 2 would have an incentive to separate. An elite would never split the country because they would have to provide two governments.

The government budget constraint at time t for a country of mass s is thus

$$sr_t = k + s[C(\lambda_t^j) - C(\lambda_{t-1}^j)],$$

where taxes r_t are identical for all individuals in the country.

[10] In our model, income is exogenous. However, at least up to a point, diversity of skills, education, background and culture may increase productivity. In this case a reduction in diversity would have costs and benefits. The latter are already modelled. The former would include not only the costs modelled above but also a reduction in productivity, therefore of income. Given that income enters linearly in the utility function and taxes are lump sum, we can treat a reduction in productivity as part of the tax.

[11] Alesina and Spolaore (1997), in a model of country formation without homogenisation, show that a stability condition of indifference at the border delivers countries of equal size. We do not allow for unilateral secession, namely a situation in which, without any majority vote, a group of citizens form a third country.

[12] See Michalopoulos and Papaioannou (2014) and Campante *et al.* (2019) for evidence consistent with this assumption.

[13] Alesina *et al.* (2000) and Alesina and Spolaore (2003) investigate the sources of benefits of size, like the dimension of the market and diversity of inputs in productivity, or economies of scale in the provision of some public goods.

1.3 *Decision-Making and Timing*

In the initial period the ruler or elite runs the country, and in the second period democracy may prevail. Utility for a normal citizen located at i in period t, is denoted u_{it} and is given by (1). Utility for the ruler located at $i = 1/2$ in period t is denoted $U_{it} = u_{it} + R$, where u_{it} is given by (1) and $R \geq 0$ is rents received by the ruler. Thus, under a non-democratic regime, the utility of the ruler is equal to the same utility as a normal citizen located at $i = 1/2$, plus some exogenously given positive rents $R > 0$. Under a democracy the ruler does not collect rents so $R = 0$ and the ruler receives exactly the same utility as a normal citizen who is located at $i = 1/2$. A choice of rents by the ruler is relevant only when democratisation is endogenous (Subsection 2.3) and we discuss endogenising rents at that point in the paper.

1.3.1 *Period 1*

An elite rules the population and locates the government at $1/2$. The elite decides how much to invest in homogenisation in period 1 to maximise expected utility $U_{i1} + E[U_{i2}]$, where $E[U_{i2}]$ takes into account the probability of democratisation in period 2.

1.3.2 *Period 2*

If the elite remains in power in period 2, it leaves the government at $1/2$, and chooses homogenisation to maximise utility U_{i2}.

If democracy arises, decisions are made by majority rule with the order of voting as follows:

(*i*) The population decides whether to form a single country or split into two. For tie-breaking, we assume that when the population is indifferent between one country or two, the single country remains in place.
(*ii*) The population of each country decides where to locate the government in that country.
(*iii*) The population of each country decides the homogenisation policy in that country.

2. Solving the Model

We solve the model backwards, starting with the decisions made by a democracy in period 2. We then consider the decisions of a ruler or elite in the different cases when democratisation is exogenous and endogenous.

2.1. *A Democracy*

If democracy prevails in period 2, the population chooses whether to form a single country or split, where to locate the government, and how much to homogenise. The democracy's choices in period 2 are solved in detail in Online Appendix A. Here we summarise the basic intuition.

For individual i the level of homogenisation that equalises the marginal cost and marginal benefit is given by $gad_{ij} = C'(\lambda_t^j)$. The optimal level of homogenisation for individual i depends on the distance of individual i from the government and the cost of the homogenisation technology. As we assume that the cost of homogenisation falls equally on those close to and far from the government, homogenisation is a transfer from the centre to the periphery, because the latter benefits more. In other words, a technology that reduces the distance to the government may be especially beneficial to people with distant preferences. Of course, distant minorities may

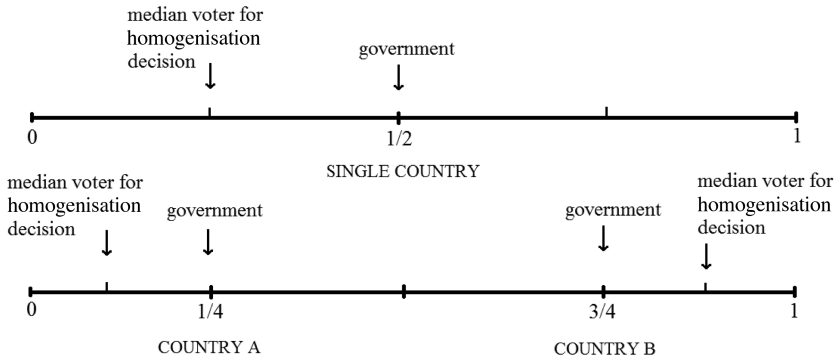

Fig. 1. *Homogenisation Choices and Government Location under a Democracy, for a Single Country and a Split.*

also resist homogenisation attempts, as they may be made to pay more for homogenisation via a higher tax bill, or may be the target of more extensive homogenisation or more painful, repressive policies. In Online Appendix B we model unequal costs of homogenisation, where the burden falls on distant minorities, and show that our results continue to hold.

Preferences over homogenisation are single-peaked; thus, a democracy homogenises up to the point at which the marginal cost of homogenisation equals the marginal benefit for the individual at median distance from the government. If homogenisation by the ruler in period 1 exceeds this amount, then a democracy will undertake no additional homogenisation in period 2.

The preference interpretation of homogenisation, literally speaking, implies that an individual chooses a policy that changes her preferences, knowing that after the change she would feel happier in the country in which she lives. This argument becomes more plausible if we think of a dynamic extension in which parents transmit values and educate their children in a way that makes them fit better in the country in which they live by adopting certain social norms and types of behaviour.[14] This is not contradictory to strong attachment to cultural values which can be captured by very high costs of homogenisation.

A democracy locates the government at the median ideal point in the population, namely the centre of the country. Thus, in a single country, the government is located at $j = 1/2$. In Countries A and B, the government is located at $j = 1/4$ and $3/4$ respectively. These results are illustrated in Figure 1. We denote by $\lambda^m_{1/2}$ the optimal homogenisation of the median voter for the homogenisation decision in a single country, given no prior homogenisation. We denote by $\lambda^m_{1/4}$ the optimal homogenisation of the median voter for the homogenisation decision in a split country, given no prior homogenisation.

The choice of whether to form a single country or split captures the trade-off between the benefits of a larger country and the costs of heterogeneity. In our model, however, a democracy also has the option of homogenising. It is perfectly possible that with $\lambda^j_t = 0$ a democracy would decide to split into two countries, but the option of choosing $\lambda^j_t \in [0, 1]$ would lead a democracy to homogenise somewhat and form a single country. This is democratic nation-building.

[14] For models related to parents 'choosing' values for children, see Bisin and Verdier (2000). Algan *et al.* (2021) discuss the costs of lack of assimilation in France. They document a substantial increase in salaries for children of Arabic families who signal assimilation by choosing French rather than Arabic first names.

Normal citizens and the elite face utility u_{i2} in period 2, whose value is influenced by the former elite's choice of homogenisation in period 1. Therefore, by homogenising, the period 1 ruler can influence the decisions made by a democracy. The first lemma states how the choice of homogenisation by the ruler in period 1 will influence the decisions of a democracy.

LEMMA 1. *For a given g, a, k and $C(\cdot)$, there exists a level of homogenisation $\lambda^* \in [0, 1)$ such that:*

(*i*) *If the ruler homogenises by at least λ^* in period 1, a democracy in period 2 will form a single country and locate the government at $1/2$.*
(*ii*) *If the ruler homogenises less than λ^* in period 1, a democratic population in period 2 will choose to split and locate the new governments at $1/4$ and $3/4$ respectively.*

This proof and the proofs of other results in the paper are found in Online Appendix A. Homogenisation implemented by the ruler in period 1 changes citizens' relative payoffs from different types of government: it increases a citizen's period 2 utility from the ideal government of the ruler at 1/2 relative to other government locations. It also reduces the costs of heterogeneity and so makes separation less attractive. Enough homogenisation will, therefore, change the choices of a democracy in period 2 in the direction of the ruler.

2.2. *Democratisation*

Suppose that with exogenous probability p, democracy arises in period 2. Given the choice of homogenisation by the elite in period 1, a democracy behaves as described above in period 2. Here we consider the homogenisation choices a ruler makes in period 1 and, if still in power, in period 2.

With probability $1 - p$ the elite maintains power in period 2. Because this is the final period, there is no threat of democracy. The elite maintains the same ideal government and undertakes no additional homogenisation. The elite's utility in this case is $g + y - k + R$. With probability p, democracy prevails in period 2 and the elite's utility u_{it} is given by (1) where the country choice, location of the government, and homogenisation choice in period 2 are made by majority rule.

In period 1 the elite is forward-looking. Define $\lambda_1^{1/2}$ as the homogenisation level chosen in period 1 by the elite located at 1/2. Suppose $\lambda_1^{1/2} < \lambda^*$. From Lemma 1, a democracy would choose to split and the elite is located at the border between the two countries, thus at the farthest point from the two governments. The elite's expected utility is

$$\left[g + y - k - C(\lambda_1^{1/2}) + R\right] + p\left[g - (1 - \lambda_{1/4}^m)ga/4 + y - 2k - C(\lambda_{1/4}^m)\right] + (1 - p)\left[g + y - k + R\right].$$

Suppose $\lambda_1^{1/2} \geq \lambda^*$. From Lemma 1, a democracy chooses a single country and the government is located at $1/2$, which is the elite's ideal point, although the elite loses its rents. The elite's expected utility if $\lambda_1^{1/2} \geq \lambda^*$ (for this example assume also $\lambda_1^{1/2} \geq \lambda_{1/2}^m$) is

$$\left[g + y - k - C(\lambda_1^{1/2}) + R\right] + p\left[g + y - k\right] + (1 - p)\left[g + y - k + R\right].$$

The elite faces a trade-off between paying a higher cost of homogenisation in period 1, which is of no direct benefit to the elite in period 1, but which ensures the elite's ideal government

and a single country in period 2, should democracy prevail. In other words, homogenisation enables the elite to maintain public goods and policies that the elite likes under democracy; the only loss would be the rents. The more likely the event of democratisation, the more the elite is willing to invest in homogenisation. When the probability of democracy is sufficiently high and homogenisation is not too costly, then the ruler will nation-build to ensure that the country does not split under a democracy. This brings us to Proposition 1.

PROPOSITION 1. *In period 1, the ruler undertakes a level of homogenisation that is (weakly) increasing in the probability of democratisation, p.*

The next corollary builds on Proposition 1 and shows that secure rulers undertake less homogenisation than a democracy would undertake, while unsafe rulers homogenise more than a democracy would. Corollary 1 also highlights that homogenisation by the ruler has a long-run impact on the homogeneity of a population even after the population becomes democratic. Take two identical populations that both become democratic in period 2. But suppose in period 1 one of these populations is governed by a ruler who faces a low probability of democracy and one is governed by a ruler who faces a high probability of democracy. The ruler who faces a high probability of democracy has enacted more homogenisation and, after democratisation, this population remains more homogeneous and forms a larger country than the other. The implication is that today's democracies that followed a 'smooth' path to democracy (that is, where elites foresaw the advent of democracy) may be more homogeneous and bigger than they would be otherwise as a result of nation-building by those elites. This is a testable implication for future research.

In Corollary 1, we refer to 'baseline' homogenisation as the level of homogenisation that would be undertaken by the democracy in period 2 if previous homogenisation were zero.

COROLLARY 1. *For a given g, a, k and $C(\cdot)$, there exists a threshold $\bar{p} \in (0, 1]$ such that:*

(*i*) *For $p \leq \bar{p}$, the period 1 ruler chooses a strictly lower level of homogenisation than baseline and, if democracy prevails in period 2, the democracy will increase homogenisation to baseline.*
(*ii*) *For $p > \bar{p}$, the period 1 ruler undertakes homogenisation such that if democracy prevails in period 2 then homogenisation in period 2 will be higher than baseline.*

When the probability of democracy is low, a 'safe' ruler has little incentive to homogenise. A safe ruler has his ideal government, faces little threat of overthrow and break-up, and has no concern for general welfare, so he is largely unconcerned with the heterogeneity of the population in period 1 and expects the same in period 2. In contrast, a democracy homogenises to improve the welfare of its citizens, particularly those at the periphery. Thus, a democracy undertakes more nation-building than a relatively safe non-democratic regime.

When the probability of democracy is high, an 'unsafe' ruler will homogenise in period 1 and a democracy can end up more homogeneous than it otherwise would have been under the baseline. Under some parameters, a ruler will homogenise in period 1 to such an extent as to avoid secession and ensure his ideal government persists in period 2; whereas, without any homogenisation by the ruler, a democracy in period 2 would choose less homogenisation, split and opt for governments representing preferences very different from the ruler's.[15] Thus, an

[15] There are two situations under which $\bar{p} = 1$ in Corollary 1, implying a ruler undertakes less homogenisation than a democracy whatever the probability of overthrow. These situations are straightforward to interpret. These occur (1) when

unsafe non-democratic regime may overinvest in homogenisation compared to a democracy in order to ensure that the regime's ideal government is preserved in the future.

2.3. *Endogenous Democratisation*

Homogenisation undertaken in period 1 can also affect the democratic transition itself by reducing opposition to the ruler's regime. Through schooling, non-democratic governments can indoctrinate the population to lower the perceived value of overthrowing that regime.

Suppose, as above, a democratic opportunity arrives at the beginning of period 2 with probability p. We now assume that if a democratic opportunity arises, the population can decide whether or not to overthrow the non-democratic regime and install a democracy. If the population chooses overthrow, then democracy prevails in period 2; if not, the ruler continues to hold power. The cost of overthrowing the ruler is $L > 0$. If a democratic regime is installed, then the utility attained by individual i in period 2 is denoted $u_{i2,dem}$, and if a non-democratic regime is in power in period 2, then the utility attained by individual i is denoted $u_{i2,ruler}$. Given the choices in period 1, the choices a democracy or a ruler will make in period 2 are known, and so the values of $u_{i2,dem}$ and $u_{i2,ruler}$ are known at the beginning of period 2. Then individual i prefers overthrow if

$$u_{i2,dem} - u_{i2,ruler} - L \geq 0. \tag{2}$$

An overthrow occurs if a majority prefers it to the status quo and so the median voter is critical. Consider the median value of (2) as a measure of opposition to the ruler's regime.

PROPOSITION 2. *Opposition to the ruler's regime is decreasing in homogenisation by the ruler in period 1. For a given g, a, k, L, and $C(\cdot)$, there exists a threshold, $\bar{\lambda} \in [0, 1)$, such that if the ruler homogenises to $\bar{\lambda}$ or above in period 1, the population will choose not to overthrow the ruler.*

Proposition 3 describes the choices of a ruler.

PROPOSITION 3. *In period 1, the ruler undertakes a level of homogenisation that is (weakly) increasing in the probability of a democratisation opportunity, p.*

The proof is in Online Appendix A. Two forces now generate the positive relationship between homogenisation and threat of democracy. In addition to the one discussed above, now homogenisation also reduces the probability of democratisation and the subsequent loss of rents, R. It follows that the higher the rents available to the ruler, the more homogenisation he will undertake to try to protect those rents. In other words, rulers who extract more rents are also more willing to homogenise using possibly unpleasant means.

COROLLARY 2. *In period 1, the ruler undertakes a level of homogenisation that is (weakly) increasing in the size of rents, R.*

2.4. *Endogenous Rents*

If rents could be manipulated by the ruler, he might also want to reduce them strategically to lower opposition to the regime. Rents, in other words, could be a further tool to try to avoid

homogenisation is extremely costly and the ruler cannot preserve his ideal government without a very large cost, and (2) when the ruler's ideal policies are preserved anyway with very little or no homogenisation.

overthrow. Let us briefly consider what happens if rents are endogenous. Suppose the elite can choose rents R in the range $[0, \bar{R}]$, and suppose the cost to a normal citizen of this rent extraction is $c(R)$, which is increasing in the rents extracted R. The utility of a normal citizen i at time t if the elite is in power and choose to extract rents R is $u_{it} - c(R)$, where u_{it} is given by (1). As above, with probability p, a revolution opportunity occurs at the beginning of period 2. If a revolution opportunity arises, the population decides whether to overthrow the regime and install a democracy. An individual prefers to overthrow if $u_{i2,dem} - u_{i2,ruler} - L \geq 0$, where overthrow occurs if a majority approves. The ruler can lower rents R to increase the utility of normal citizens under the ruler in period 2, $u_{i2,ruler}$, and thereby reduce opposition to the regime. However, for this to prevent overthrow, the ruler needs some way to commit to low rents in period 2. If the ruler promises low rents but has no way to commit to them, then once the population chooses not to overthrow the ruler, he can go ahead and extract the maximum rents in period 2. This point, that the promise of future redistribution to avoid overthrow suffers from a credibility problem, is made in Acemoglu and Robinson (2000).

We assume exogenous rents because once we allow for endogenous rents in our model, lowering rents is not credible and therefore not a tool to avoid overthrow. In contrast, because homogenisation is persistent, nation-building to avoid democratisation does not suffer a commitment problem.

2.5. *Divide and Rule*

Our framework uncovers two different motives for the ruler to homogenise when faced with a threat of democratisation. One motive is to reduce the threat of democracy. The other is to build a more homogeneous nation that reflects the ruler's preferences, so that if democracy prevails the population will choose to maintain the status quo. Notice that the relevance of each motive depends on the type of non-democratic regime. The motive to homogenise to maintain the status quo after democratisation only applies if the ruler or elite expects to stay in the country after democratisation. It does not apply if a ruler or elite expects to be kicked out or physically eliminated if democracy prevails. For example, harsh dictators might expect to be kicked out or captured and punished/killed, in which case this incentive to homogenise is not relevant. In contrast, in nineteenth-century Europe, elites largely foresaw the advent of democracy that progressed over the course of that century. European elites were in most part not eliminated and remained part of the new democracies. Thus, European elites faced an incentive to homogenise to try to preserve policies that favoured their position in society. The incentives of native elites who expect to remain in the country and those who know they will leave are different.

We now consider the possibility that homogenisation policies make democratisation more likely. In some cases, revolutions are considered to be more likely when a population is more homogeneous because people can communicate better and more easily take collective action. By the same argument, policies that increase diversity and its costs can hinder collective action, implying rulers may face an incentive to increase heterogeneity. Indeed the term 'divide and rule' was coined to capture precisely this effect. Thus, in this section we also give rulers the option to increase heterogeneity within the population when we introduce into the framework the idea that more homogeneity can make democratisation more likely. That is, we allow for both positive and negative homogenisation to specifically model the notion of divide and rule.

We allow for positive and negative homogenisation policies, $\lambda_t^j \in [-1, 1]$, in any period and by any regime. We need to update the assumption on costs to allow for negative

homogenisation. This updated assumption can be found in the proof of Proposition 4 in Online Appendix A. We now assume that the probability of a democratic opportunity is given by $v(p, \lambda_1^{1/2})$, which depends on both $p \in [0, 1]$ (exogenous factors affecting the likelihood of democratisation), and the homogenisation undertaken by the ruler in period 1, denoted $\lambda_1^{1/2}$. The function $v : [0, 1] \times [-1, 1] \to (0, 1)$ is strictly increasing in p, strictly increasing and convex in $\lambda_1^{1/2}$, and twice continuously differentiable. That is, both a higher exogenous threat of a revolution opportunity and higher homogeneity increase the probability of a revolution opportunity arising. If a revolution opportunity arises, we assume democracy occurs in period 2. Convexity in $\lambda_1^{1/2}$ ensures a unique optimal homogenisation policy. Otherwise, the framework is exactly as detailed so far. We make one simplifying technical assumption, that a democracy always locates the government at the centre of the country. Under a sufficient condition, detailed in Online Appendix A, which implies that the marginal effect of p on the revolution opportunity is not too sensitive to homogenisation, we obtain Proposition 4.

PROPOSITION 4. *For a given g, a, k, $C(\cdot)$, and $v(\cdot, \cdot)$, there exists a threshold $\hat{p}$ such that in period 1:*

(*i*) *If $p \leq \hat{p}$, the ruler undertakes strictly negative homogenisation (divide-and-rule policies).*
(*ii*) *If $p > \hat{p}$, the ruler undertakes positive homogenisation.*

A democracy never chooses negative homogenisation. However, a period 1 ruler may choose to undertake strictly negative homogenisation, that is to divide and rule. A ruler has an incentive to increase the costs of diversity (to divide and rule) only when homogenisation increases the probability of collective action. The proof is in Online Appendix A.

The ruler faces two conflicting forces. On the one hand, if he implements the divide-and-rule policy he makes collective action more difficult and reduces the probability of a revolution. On the other hand, if he implements the divide-and-rule policy and democracy prevails, then the country may split and the new government may not reflect the interests of the elite. Homogenisation to ensure the status quo post-democratisation is costly and therefore when conditions make democracy unlikely, p low, the incentive to divide and rule dominates. When conditions favour democracy, p high, the probability of democracy is high enough that the elite wants to put safeguards in place should democracy occur and so the incentive to homogenise dominates.[16]

As noted above, the elite's motivation to homogenise to maintain certain policies and borders under democracy does not apply if the elite expects to leave if overthrown, which is the case for colonisers. Thus, colonisers have lower incentives to homogenise than native dictators and, if homogenisation increases the ability of the population to engage in collective action and therefore increases the probability of democratisation, colonizers may even have incentives to follow policies of divide and rule.

Higher rents R increase the incentive of the ruler or elite to avoid overthrow and maintain rents, and in this case higher rents reduce homogenization and increase divide-and-rule policies.

COROLLARY 3. *In period 1 the ruler undertakes a level of homogenization that is (weakly) decreasing in the size of rents, R.*

[16] Because we limit assumptions on the function $v(\cdot, \cdot)$, we can also have the degenerate cases in Proposition 4 where homogenisation is negative for all $p \in [0, 1]$ or homogenisation is positive for all $p \in [0, 1]$.

This is in contrast to Corollary 2, where we showed that when homogenization reduces the willingness of the population to overthrow the regime, then higher rents increase homogenisation. Thus, higher rents could increase or decrease homogenisation depending on whether the dominant effect of homogenisation is to reduce or increase the chance of overthrow.

3. Historical Examples

In this section we present a range of case studies examining a number of autocratic regimes at various levels of threat of democratisation and spanning different geographical regions and periods of time. We also focus on colonial regimes where the ruler is not a native. Overall, the literature on political history and comparative education that we reviewed appears consistent with our model. Threatened autocratic regimes of all kinds expanded and extended their education programmes, in large part, with nation-building in mind. We document that such education reforms followed periods of unrest and were implemented by governments with the stated aim to mitigate the effects of democratisation. In the next section, we present more systematic evidence on a large sample of 172 countries.

The model's main prediction is that mass education came before democratisation and occurred in response to the rise of that very threat to power (Proposition 1 and, under endogenous democratisation, Propositions 3 and 4). For simplicity, we group the main historical experiences by geographical region and study colonies separately. Overall our case studies make the following points:

(*i*) Mass education was used to nation-build, to indoctrinate in order to preserve the status quo, and to reduce the threat of overthrow.
(*ii*) The timing of education reforms are consistent with our prediction: states implemented mass education before democracy, mass education tended to occur in decades right before democracy, and education reform tended to come in response to threats to the regime, such as riots. Regimes facing the risk of democratisation during the nineteenth century, like France, Japan and Britain, instituted compulsory primary education relatively early, while those facing the same threat later, like Turkey and Thailand, did so later. In a comprehensive analysis, Paglayan (2018) provides evidence consistent with this view by showing that compulsory education preceded democratisation by an average of half a century in a sample of European and Latin American countries. Twenty years before democratisation, the world average primary enrolment rate was already 60%. It is clear, then, that states made proactive efforts to ensure that the bulk of their population was educated on the state's terms before democratisation.
(*iii*) Colonisers implemented few, if any, mass education reforms intended to homogenise the colonised population, contrasting with the often immense effort in their own country. Colonisers instead followed policies of divide and rule.

Europe

During the nineteenth century, European countries moved from little to no government-supported schooling (and low enrolment rates) to centralised, compulsory, mass primary

schooling. In many cases it occurred decades before other welfare policies, was driven by elites on the eve of democracy, and was generally unpopular with the masses.

France Consistent with our finding that safe elites have weak incentives to homogenise, Weber (1979) writes that the Ancien Régime showed 'little concern with the linguistic conquest of the regions under its administration' and that 'diversity had not bothered earlier centuries very much' (pp. 9,70). Ruling elites made a point of distinguishing themselves from the masses, using language as a barrier (Gellner, 1983). Under the Ancien Régime, primary schooling was predominantly provided by the church (Katznelson and Weir, 1985). The French Revolution was a turning point for threats to traditional elites and marks the start of homogenisation and public instruction as a key concern of French elites (Tilly, 1975). Weber (1979) notes, 'the Revolution had brought with it the concept of national unity as an integral and integrating ideal at all levels' (p. 9). He writes that linguistic diversity 'became significant when it was perceived as a threat to political—that is, ideological unity' (p. 72). The Convention (the legislative assembly from September 1792 to October 1795) decreed that in the Republic children should learn to 'speak, read and write in the French language' (Weber, 1979, p. 72).

The first serious attempt to implement mass schooling was made in 1833 following a period of major rebellion (the 'July Revolution', 1830–2). Schooling was in no way a concession to the demands of the population; state-provided schooling was, at least into the last quarter of the nineteenth century, largely unpopular (Katznelson and Weir, 1985; Weber, 1979). What was perhaps the most intense period of schooling reform followed the establishment of the Third Republic in 1870. Hobsbawm (1990) describes this period as one in which the inevitability of a shift of power to the wider population became clear. Schooling was regarded as a key tool in moving the values and way of life of the population towards those of the elite. Weber (1979) highlights the chasm between the way of life and culture of the urban elite and that of the rural masses throughout much of the nineteenth century, and of the perceived need after the Revolution to integrate this part of the population and to make it 'French': 'the unassimilated rural masses had to be integrated into the dominant culture as they had been integrated into an administrative entity' (p. 486). Weber notes, 'The village school, compulsory and free, has been credited with the ultimate acculturation process that made the French people French—finally civilised them, as many nineteenth-century educators liked to say' (p. 303).

Policies of homogenisation were also motivated by concerns of secession. A report on the Breton departments in the 1880s noted that 'Brittany, which was not willingly joined to France, which never wholeheartedly accepted its annexation, which still protests' had still to be merged into the nation. The report urged the use of education to 'Frenchify Brittany as promptly as possible...integrate western Brittany with the rest of France', and that only schooling could 'truly unify the peninsula with the rest of France and complete the historical annexation always ready to dissolve'.[17] Historian Joseph Strayer describes the apparently successful efforts of the state in homogenising southern France, writing, 'Languedoc was very like Catalonia and very unlike Northern France, yet it finally became thoroughly French' (Tilly, 1975, p. 43).

Italy Northern elites completed Italian unification in the 1860s, with virtually no involvement of local populations. Southern regions saw reunification more as a conquest by the elites of the North. At the time of unification, Italy included a diverse population speaking a range of very different languages and dialects. At best, 10% of the population spoke what would become

[17] Weber (1979, pp.100, 313).

Italian (Duggan, 2007). This was a time of increasing pressure for more democracy (the largest proportion of adult males were enfranchised in Italy in 1912). The governing elite considered homogenisation vital to ensure internal stability. Duggan (2007) asserts 'During the 1860s the government had embarked on intensive discussions about what form of Italian should be adopted as the national language' (p. 277). He writes, 'There was a strong feeling in official circles that linguistic centralisation was needed to complement political unity.' Tuscan was chosen. Linguistic homogenisation was to be achieved mainly through schooling and, despite the frequent lack of popularity within the population, 'The official line remained that Italian should as far as possible be enforced, with "Italian" texts being used in schools and dialect literature (of which there was a distinguished tradition in many regions) being discouraged' (Duggan, 2007, p. 277). Holding the country together and avoiding a break-up was a major concern and goal of the rulers.

In Italy, the motive to introduce compulsory schooling as a result of the threat of democratisation, as well as the motive to mitigate that threat, can be read directly from statements of politicians of the time. Francesco Crispi, the Italian Prime Minister from 1887 to 1891 and 1893 to 1896 wrote: 'I do not know if we should feel regret at having broadened the popular suffrage before having educated the masses' (Duggan, 2002, p. 430). Politician Nicola Marselli claimed that Italy had introduced freedom before educating the masses, without learning lessons from countries like Britain that had educated first. Michele Coppino, the author of the 1877 Italian compulsory education reform, declared that primary schooling should ensure the masses were 'content to remain in the condition that nature had assigned to them' and that the aim of elementary education should be to 'create a population...devoted to the fatherland and the king'. Enough education to homogenise, but not too much to create rebellious masses.[18]

England Public education first appeared in minimal form in 1833, following three years of widespread rioting in rural England and the Great Reform Act of 1832. With further political reforms in the 1860s, the eventual 'full democratization of the political realm was seen as inevitable' (Ramirez and Boli, 1987, p. 9). Green (1990) writes that the 'Education Act of 1870, which established a quasi-national system, was a result, as much as anything, of the desire to control the political effects of the extension of the franchise in 1867 to the skilled working class'. The connection between democratisation and the introduction of mass education can be read directly from the English political debate of the time. The desire to protect the status quo, and the idea of using education to do so, is explicitly stated by those implementing the reforms. In an address in 1867, British politician Robert Lowe (later Home Secretary and Chancellor of the Exchequer), highlighted the urgency for education reforms following the 1867 Reform Act as a means to protect the status quo: 'We cannot suffer any large number of our citizens, now that they have obtained the right of influencing the destinies of the country, to remain uneducated...it is a question of self-preservation—it is a question of existence, even of the existence of our Constitution.'[19] In 1870, when W.E. Forster put forward the bill for his education act in Parliament, he argued that if people were given the vote it was necessary to educate them to maintain the current system: 'Upon this speedy provision [of elementary education] depends also, I fully believe, the good, the safe working of our constitutional system. To its honour, Parliament has lately decided that England shall in future be governed by a popular government...now

[18] Statements of politicians from Duggan (2007), pp. 289, 280.
[19] Quote from Marcham (1973, p. 180). The 1867 act enfranchised a part of the male urban working-class population.

that we have given [the people] political power we must not wait any longer to give them education.'[20]

Prussia In 1763, Frederick II implemented changes to the school system with the School Regulations for the Rural Schools law which introduced a common curriculum and was broadly viewed as a way to promote loyalty to the king (Paglayan, 2018). These changes were introduced as a response to peasant revolts that plagued Prussia in 1740 and 1750. Peasants revolted to protest an increase in the days they were required to work, a change demanded by landlords as a reaction to an increase in grain prices. The first attempt of Frederik II to stop peasants' discontent was the introduction of an agrarian reform. After that response failed, a change in the school system was implemented to re-establish loyalty to the king. Paglayan (2018) notes that historians generally view Prussian autocratic rulers as conceiving compulsory schooling to impose social control and to indoctrinate submission to Prussian rulers.

Russian Empire Alexander III, who reigned from 1881 to 1894, was the first Russian ruler to implement 'Russification' as an official policy. This included Russian being made the compulsory language of instruction in state schools in the Baltic provinces in 1887 and later extended to all private schools (Andersen, 2016). He also imposed Russian language and Russian schools elsewhere in the population, including on Finnish and Polish subjects. Alexander III's political ideal was a nation containing only one nationality, one language, one religion (Florinsky, 2020).

Alexander III's nation-building policies were implemented in part in response to threats of revolution and to his predecessor's (Alexander II) moves to create more representative institutions. Under Alexander II, peasants were freed from serfdom, elected assemblies were introduced at the local level, the 1860s saw revolutionary groups emerge and a major Polish uprising. The 1870s saw revolutionary activity by university students that eventually led to the assassination of Alexander II himself in 1881 (Wachtel *et al.*, 2020).

For all these cases, an alternative explanation is that rioters demanded public education and the latter was a concession under duress on the part of the rulers. Yet, state-run mandatory schooling was often unpopular and opposed by peasantry for much of the nineteenth century. Systematic examination of the motives behind collective uprisings in the nineteenth century finds little evidence of a demand for education. In England, the Royal Commission into the Poor Laws in 1834, which was set up in part in response to the spread of violent and non-violent protests in the early 1830s, asked the following question: 'Can you give the commissioners any information respecting the causes and consequences of the agricultural riots and burning of 1830 and 1831?' In England, 526 parishes responded. The main causes cited were labour concerns (unemployment, wages and mechanisation of jobs that previously provided employment) and subsidies for the poor. Not a single response considered anything related to education as a cause of the unrest (Holland, 2005). Similarly, Tilly (1998) details episodes of collective disturbances in France between 1830 and 1860 with information on the objective of the group involved in the disturbance. Education is not mentioned.

[20] Quote from Young and Handcock (1964, p.907). Bandiera *et al.* (2018) highlight this side of nation-building in the context of the United States. Americans introduced compulsory education, in large part, to civilise and instil common civic and other values in migrants, to influence their participation in American life.

If education in the nineteenth century was provided with a nation-building motive, we should expect differences in the implementation of education compared to welfare policies such as social security or healthcare, especially because direct redistributive concerns were closer to population demands. There are indeed stark differences in the timing of education reforms and redistributive policies. The earliest European non-voluntary government insurance system was introduced in 1883 and the first voluntary system in 1871; in contrast, most European countries had compulsory universal education by the time welfare reforms were introduced, and in some countries it was highly developed. Welfare reforms tended to follow franchise extension. In contrast, education reforms preceded it. We test this hypothesis more formally in Subsection 4.1.2.[21]

Latin America

Paglayan (2018) shows that, like Europe, Latin American states introduced compulsory mass primary education before universal male suffrage and democratisation. Below we discuss the expansion of primary education in Chile and Argentina. Our evidence is drawn from Paglayan (2017; 2018).

Chile Paglayan (2017) examines education provision in Chile in the years before and after the 1860 General Law of Education that transferred control of primary education to the Chilean central government. Immediately before, in 1859, there were mass rebellions in the north of the country. Paglayan (2017) examines quantitative data on the subsequent expansion of primary education by the government of Chile, and shows that the number of new primary schools established in a province and enrolment in primary schools by province was positively related to the extent of rebellion in that province. As with the introduction of education in Europe, there was no apparent demand for education by the masses or by rebels. Political discourse at the time is consistent with a nation-building motive behind education reforms and highlights the power of education as a means to indoctrinate and prevent future rebellion. The Amunategui brothers (politicians heavily involved in influencing education at this time) wrote, 'Children generally acquire in school habits of order, of submission', and 'The best way to prevent future revolutions is to educate children' (Paglayan, 2017, p. 38).

Argentina Paglayan (2017) argues that a similar pattern is evident in Argentina. The Argentinean government faced a series of civil wars from 1814 to 1880, which were followed by the Law of Common Education in 1884 to introduce government regulation and funding, and to mandate primary education. It was believed that schooling would instil certain moral values and help to reduce future opposition to the government.

Asia

Japan The Meiji Restoration in 1868 ousted 'the last shogun' and returned power to the emperor. The Meiji Restoration marked a turning point in Japanese politics and the introduction of significant nation-building policies. Takayama (1988) describes the Meiji regime as 'confronted with the double threat of Western civilization and internal disintegration' (p. 331). By the 1870s, the new regime met significant opposition from within Japan, including rebellion from samurai and peasant uprisings. A civil rights movement generated pressure towards 'wider participation' and the 'creation of a constitutional government', and the government responded by promising a

[21] This is consistent with the historical discussion in Acemoglu and Robinson (2000) on the extension of the franchise. They suggest that in many cases redistributive concessions were not credible before franchise extension (Germany, which introduced the first European insurance systems, being an exception).

constitution by 1890.[22] In this context of threats to the regime, the Japanese government started to nation-build.

Compulsory education was a way to impose both 'state Shinto' and a unified Japanese language. The Imperial Rescript on Education in 1890 was the core education reform that reinforced these principles.[23] Takayama (1988) describes state Shinto as 'essentially the newly devised religion of Japanese nationalism at the time of the Meiji Restoration in 1868' (p. 331), with the emperor cult as its central element. The idea was that the imperial system would be used 'as an ideological weapon for controlling the entire Japanese population' (Takayama, 1988, p. 331). The Imperial Rescript on Education pushed state Shinto and loyalty to the emperor through schools. In the 1890s, the head of the Ministry of Education's Compulsory Education Agency also put forward a process to deal with unified speech: first to 'artificially refine' a version of Japanese, which 'would then be delivered to the public through the new compulsory education system' (Shimoda, 2010, p. 725). Shimoda (2010) writes, 'Just as a French state previously indifferent to linguistic inconsistency' was replaced by one concerned with unity, 'a newly national Imperial Japan took a similar turn' (p. 721). Education reforms in Japan occurred well before the introduction of social welfare and state provision of health services, which did not begin to develop until the 1920s (Odaka, 2002).

Siam (Thailand) Nation-building policies in Thailand were implemented by Wachirawut, who reigned from 1910 to 1925. Alongside measures like providing an official rewriting of history, Wachirawut introduced compulsory state-controlled primary education and free government schools, granted education to girls, and brought all private schools under the control of the state as a part of the Private School Act (Thomas and Postlethwaite, 2014; Andersen, 2016). These measures were also part of a process of 'Thai-ification' of Chinese schools and Chinese society in Thailand (Suryadinata, 1997). Wachirawut's nation-building policies were a response to a threat of revolution, challenge and criticism from the middle class, and demands for a constitutional democracy. Such challenges included a failed military-led coup in 1912 that aimed to replace the monarchy with a constitutional democracy (Suryadinata, 1997).

Middle East and North Africa

Turkey Like the Ancien Régime in France, the nineteenth-century rulers of the Ottoman Empire were largely unconcerned by the diversity of their population. Pluralism of language, religion and culture were tolerated. One illustration of this is the 'millet system' under which a religious community was allowed a large degree of autonomy in aspects such as law and education. As the Ottoman Empire lost more territory from external pressure and through secession, particularly towards the end of the nineteenth-century, homogenisation policies were introduced.

Both nation-building policies and the arrival of democracy came later in Turkey than in Europe. Homogenising practices were implemented in force after the founding of the Turkish Republic in 1923 by Kemal Atatürk. The focus was to create a 'Turkish' nation. Secularisation reforms abolished religious education. In 1924 the Law on the Unification of Education brought education under the control of the state and instituted a common curriculum. Over the following years, education reforms included a mandatory five hours of Turkish teaching, teachers had to have Turkish as their native language, and later all children had to attend a Turkish primary school.[24]

[22] Encyclopaedia Britannica (2018).
[23] Lawson *et al.* (2019).
[24] Aslan (2007).

Zürcher (2010) writes that this Turkish identity was 'imposed gradually on the population through a process of nation-building in which... historiography and linguistics played a key role, as did suppression of alternative or sub-identities'.

Colonial rulers

Colonisers are different from domestic rulers because if overthrown they can leave the country and go home where they maintain a 'high status' as part of the elite. Thus, colonisers face lower incentives to homogenise to preserve the status quo and avoid break-up after democratisation. Consistent with our model, and in stark contrast to domestic rulers, there is little evidence of an expansion of compulsory education by colonisers. Instead, in many cases, colonisers used policies of divide and rule.

The British Caribbean In Britain itself, education was made compulsory for children between the ages of 5 and 10 in 1880 and by the early 1890s, 82% of children aged 5 to 10 attended school.[25] Education in the British territories in the Caribbean during the same period looked vastly different. Compulsory education came much later, for example, in 1915 in British Honduras and in 1921 in Trinidad (Lewis, 2000). Yet, even when education was made compulsory, it was largely on paper only. In 1931, a commission ordered by the British government to assess educational systems in the British Caribbean stated that 'compulsion is applied only in a few islands, and even in these not effectively' (Gordon, 1964, p. 7). In general, the report highlighted the 'backwardness of primary education' and the lack of adequate financial provision.

Even though compulsory schooling was established in 1915 in British Honduras, Lewis (2000) writes, 'Like other schools in the British Empire, education was a missionary effort' and describes how, in 1923, rather than the British government, it was religious organisations who 'took it upon themselves to establish a clear educational policy' (pp. 8-9). Lewis (2000) summarises the education system as 'based on the British colonial model', which was 'a model that did not want to educate the colonized' (p. 5).

Kenya Under colonisation, British divide-and-rule policies involved exacerbating ethnic divisions within Kenyan borders. One way this was done was to prohibit any form of inter-ethnic cooperation, for example, by prohibiting settlement in between neighbouring ethnic entities (Weber, 2009). Similar to other African colonies, education in Kenya was left in the hands of missionaries. Only in the first years of the twentieth century, did the British start to take an interest in education, with the exclusive aim to expand the colony's economy. A British commission in 1919 opposed the spread of a common language, Swahili, as the lingua franca, and instead allowed the use of any vernacular language for the preliminary stages of education (Urch, 1971). This policy stands in stark contrast to the previous examples of domestic rulers who used primary education to create a common language.

India Indian leaders tried to step in where the British had not. In 1906 the Indian National Congress declared education 'the birthright of the people of India' and that the government should make education free and compulsory (Mondal, 2017, p. 3). In the same year, the Maharaja of Baroda made education compulsory and free for all young boys and girls in his state.[26] The British government responded to these developments, and to pressure for compulsory education in Bombay, by appointing a commission in 1906, which concluded that the time for compulsory

[25] UK Parliament (2020).
[26] Mondal (2017).

education had not yet come, because of 'backwardness among the large masses' and the risk that it might 'cause endless friction between the Government and the people' (Saiyidain *et al.*, 1952, p. 22).[27]

Other colonisers The Italian colonisation of Ethiopia is another case of divide and rule. Under Italian rule, many schools were closed and those that stayed open were intended to teach fascist values and loyalty to Italy. Instead of Ethiopia's national languages, colonial education officials recommended teaching lessons in local administrative languages. This was expressly to sow disunity among the Ethiopian population (Bishaw and Lasser, 2012).

Education in French and Belgian colonies was even more neglected than in British colonies. Lewis (2000) points to estimates that in 1940 the enrolment level in French colonies was about 50 years behind that of British colonies. This should be compared to the French education policy in France itself, which was arguably widespread and effective from the late 1870s. These differences may reflect a lower willingness to depart in the event of political overthrow, due to the relatively more commercial nature of some colonial business interests. In terms of our model, this points to the idea that the type of colonial power most likely to nation-build through education is one that does not see itself as having an easy choice of abandoning its investments and place in the colonised society. Examples like Australia, Canada, and perhaps Brazil and South Korea, in which the colonial power viewed the colony as something like a fully fledged part of the larger nation, would therefore not be expected to fall under a divide-and-rule strategy.

4. Econometric Evidence

In the empirical analysis we test the main prediction of the model: the threat of democratisation motivates rulers to homogenise (Proposition 1 and, under endogenous democratisation, Propositions 3 and 4). We do so by focusing on the provision of mass primary education. When testing this prediction, we rule out alternative stories or confounding effects that could be driving our results. We also test whether homogenisation reduces the probability of the ruler being overthrown (Proposition 2).

4.1. *Data and Specification*

4.1.1. *Sources and variable definitions*

Education. We use an unbalanced panel with ten-year averages data on primary educational enrolment per capita for 172 countries between 1925 and 2014. Our measure of imputed reform is a dummy indicating if enrolment grew by more than 20% over the previous ten-year period. For robustness, we also report results using a binary variable set equal to one if enrolment grew by more than 10% over the previous ten-year period. We collapse the data into ten-year averages

[27] Laitin (1989) provides an interesting discussion on the consequences of lack of nation-building under colonial powers for the case of India. Laitin (1989) describes a contemporary multilinguistic state: Hindi and English are the de facto common language across states; Indians also learn their state official language (often primary education is taught in the language of the state); and some Indians, in addition, have a mother tongue that is neither Hindi, English, nor their state language. This does not reflect a lack of desire by elites for a single language: Laitin (1989) discusses attempts by Congress to introduce a single unified language, and attempts by state governments to do so within states. Our framework suggests democracies (like India after independence), given they have to take into account the wishes of the wider population to a greater degree, are more restricted in the homogenisation they can undertake. A country that moves from colonisation to democracy misses the 'opportunity' for intense nation-building by elites, implying it may be more heterogeneous today (or even break up).

so as to minimise measurement error.[28] For a sample of 14 European countries, we also use a dummy indicating whether and when an education reform was adopted. The data are from Flora (1983), who defines educational reforms as any new law that extended compulsory education; lowered the cost of education (by abolishing school fees or providing free primary education); or increased the number of schools (by making it compulsory for each municipality to set up at least one primary school).[29]

Political regimes. The autocracy variable is constructed from the polity2 variable taken from the Polity IV database (Marshall *et al.*, 2016). This variable ranges from −10 to 10, where a higher score means that the country is more democratic. The variable is based on information on constraints on the executive, the openness and competitiveness of the executive recruitment, and the competitiveness of political participation. We define autocracy when the polity2 variable is lower than zero.[30]

Threat to the current regime. Data on threats to the current regime are taken from the CNTS database (Banks and Wilson, 2018). We use three different variables, all of which should proxy for the likely probability of threatening the current government:

(*i*) *Major government crises*: documents any rapidly developing situation that threatens to bring the downfall of the present regime.
(*ii*) *Revolutions*: documents any illegal or forced change in the top government elite, any attempt at such a change, or any successful or unsuccessful armed rebellion whose aim is independence from the central government.
(*iii*) *Weighted conflict average (WCI)*: a weighted average of all the conflict indicators contained in the data set.[31]

In some of our specifications we measure the safety of a ruler by using the variable *durable* from the Polity 4 database. This variable measures the number of (cumulative) years since the last substantive change in authority characteristics (defined as a three-point change in the polity2

[28] The variable on primary enrolment is defined according to the UNESCO criteria and expressed per 10,000 inhabitants. The data come from the CNTS Data Archive of Banks and Wilson (2018).

[29] We look at the relationship between our measure of imputed reform and the measure of legal reform provided by Flora (1983) in a panel regression where the left-hand side is our measure of imputed reforms and the controls include population growth, country and period fixed effects. The coefficient on the measure by Flora is 0.8 and significant at the 10% level.

[30] Democracy indices are subject to considerable measurement error. Acemoglu *et al.* (2019), following Papaioannou and Siourounis (2008), improve on the measurement of democracy. Their measure is, however, available only after 1960 and as a result is not useful for our research question. Like Aghion *et al.* (2019) we use the measure of autocracy based on polity2 because it is the only one available for a long period of time.

[31] The CNTS data set contains various measures of domestic conflict. In addition to the ones mentioned above it also contains the following variables: *assassinations*: records the occurrence of any politically motivated murder or attempted murder of a high government official or politician. *General strikes*: lists strikes of 1,000 or more industrial or service workers that involve more than one employer and that are aimed at national government policies or authority. *Guerrilla warfare*: gives information about armed activities, sabotage or bombings carried out by independent bands of citizens or irregular forces and aimed at the overthrow of the present regime. *Purges*: identifies any systematic elimination by jailing or execution of political opposition within the ranks of the regime or the opposition. *Riots*: records the occurrence of any violent demonstration or clash of more than 100 citizens involving the use of physical force. *Anti-government demonstrations*: records any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority, excluding demonstration of a distinctly anti-foreign nature. We do not consider any of these as part of our analysis, as some of them seem less strongly related to the probability of the regime being overthrown (riots, anti-government demonstrations, general strikes). Guerrilla warfare could also be relevant but it does not refer to a desire of regime overthrow from the general population, whereas assassination refers to the assassination of any high government official and not only to the assassination of the ruler.

Table 1. *Descriptive Statistics.*

	Obs.	Mean	SD
Educational reform: 10% threshold	977	0.350	0.477
Educational reform: 20% threshold	977	0.255	0.436
Autocracy	977	0.514	0.461
Government crises	977	0.224	0.358
Revolutions	977	0.214	0.353
All internal conflicts	977	1.080	1.451
Population growth	977	0.187	0.152
Legal reform (Flora, 1983)	110	0.464	0.501
Autocracy	110	0.038	0.164
Government crises	110	0.441	0.622
Revolutions	110	0.049	0.214
All internal conflicts	110	0.839	1.631
Population growth	110	0.054	0.039
Leader's number of years in power	1,002	5.388	6.406
Growth in primary education	1,002	0.017	0.058
Autocracy	1,002	0.394	0.489
International war	1,002	0.004	0.034
Population growth	1,002	0.017	0.012
Urbanisation	1,002	4.740	12.409
Trade	1,002	12.957	27.243
Log(revenue)	971	1,335.47	222.28
Log(per capita GDP)	971	8.506	0.890

score). Various scholars argue that the current stability of the regime is the best predictor of future regime stability (Clemens and Cook, 1999; Gates *et al.*, 2006; Poyker, 2021).

Control variables. We control for population growth to limit the possibility that our measure could be affected by demographic population shifts, because our measure of educational reform is based on enrolment per capita, rather than enrolment per school-age child. Additional controls included in some of our specifications are whether the country was involved in an external war in the previous ten years (the variable is taken from the Correlates of War database); fiscal capacity, measured as revenue and expenditure over GDP (taken from the CNTS data set); GDP per capita (taken from Madison); and a measure of trade, measured as the proportion of world trade represented by the country, and a measure of urbanisation, measured as the population of cities with more than 100,000 (both taken from the CNTS data set).

Data set on leaders. We use the *Archigos* data set (Goemans *et al.*, 2009) to test a second prediction of the model. This data set contains information on leaders for 188 countries from 1875 to 2004. This data set constitutes an advantage to the standard Polity 4 data set because it allows us to identify political changes in autocracies not apparent in data that consider only the democratic nature of institutions. Descriptive statistics for all our variables are provided in Table 1.[32]

4.1.2. *Empirical specification*

Our baseline regression equation is expressed as:

$$\begin{aligned} \textit{educational reform}_{it} = {} & \alpha_0 + \alpha_1 \textit{autocracy}_{i,t-1} + \alpha_2 \textit{threat to regime}_{i,t-1} \\ & + \alpha_3 \textit{autocracy}_{i,t-1} \cdot \textit{threat to regime}_{i,t-1} + \alpha_4 X_{i,t-1} + \delta_i + \gamma_t + \epsilon_{it}. \end{aligned} \tag{3}$$

[32] Figure C1 in the Online Appendix describes the fraction of countries implementing educational reforms in our sample, by continent. As is apparent from the figure, the results are not driven by a specific continent, and there is sufficient heterogeneity to identify the effects.

Our coefficient of interest is α_3, which indicates that more unstable autocracies are likely to implement education reforms. All our specifications include country (δ_i) and year (γ_t) fixed effects and population growth. We also test the robustness of our results to a larger set of controls, $X_{i,t-1}$, including the level of development, trade, urbanisation, fiscal capacity and whether the country was involved in a war in the previous ten years. SE are clustered at the country level.

Table 2 shows the results of our baseline estimation (equation 3). Columns 1–3 show the results when education reform is defined as an increase in primary enrolment higher than 10 % from the previous 10 years, whereas columns 4–6 report the results with the 20% threshold. Columns 7–9 use the definition of reform constructed by Flora (1983) and it is limited to a sample of 14 European countries. Our coefficient of interest, α_3, is always positive and significant, indicating that the threat to the regime is associated with an increase in educational enrolment.

Many other explanations or confounding effects could explain our results. Aghion *et al.* (2019) show that the threat of war is associated with increased primary education enrolment (considered a measure of nation-building), but that the threat of war may only be relevant when countries are sufficiently democratic. This result is consistent with our model: a dictator can force armies to fight by fear, but in a more democratic regime it may be more difficult to do so and teaching nationalism may be more compelling and necessary (see also Alesina *et al.*, 2020).

We add to our specification a variable indicating whether the country was involved in an external war in the previous ten years, and an interaction term with the fraction of years spent under autocratic regimes (Table C1, columns 1–3). Consistent with Aghion *et al.* (2019), we find that education reforms respond more positively to military threats in democracies; however, the interaction term between threat to democracy and the presence of autocratic regimes remains significant and of similar magnitude. We see our argument about nation-building for fear of democratisation and splitting of countries, and state-building for fear of aggression, as complementary.

The second confounding effect is 'state capacity', in terms of raising taxes and establishing law and order. It could be that states view nation-building as a necessity or complement in being able to build state capacity. However, the timing of state-building versus nation-building does not suggest that motives for the two are completely interlinked. In Europe, the period of state-building begins roughly in 1500. Over the following three centuries European states invested in state-building. In contrast, nation-building policies based on education only began to occur after the French Revolution, once there was a major threat to old aristocracies throughout Europe. We nevertheless control for this theory by including revenue as a proxy for state capacity, and our results still hold (Table C1, columns 4–6).

A third prominent theory is that industrialisation prompted governments to undertake significant nation-building. Gellner (1983) argues that an industrial society, based upon broad markets needs better means of communication than an agrarian society.[33] We use GDP per capita and a measure of urbanisation as proxies of industrialisation. Neither of the two variables alter our main findings (Table C1, columns 7–12). This is also consistent with several scholars who question the timing of this theory. Green (1990) and Smith (1998) argue that education reforms were implemented country by country in a way that is inconsistent with industrialisation acting as a major driver. In many continental European countries there was no industrial development when nationalism and the beginnings of mass education first emerged, while in England, education reforms arrived long after the Industrial Revolution. Also inconsistent with the argument that

[33] See also Bowles (1998) on this point and for a survey of other models in which preferences are endogenous and can be influenced by various institutions.

Table 2. *Educational Reforms and Threat to Democracy.*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Educational reform: 10% threshold			Educational reform: 20% threshold			Legal reform, based on Flora (1983)		
Autocracy × gov. crises	**0.174***			**0.161**			**0.460*****		
	(0.090)			**(0.100)**			**(0.208)**		
Autocracy × revolutions		**0.169****			**0.225*****			**1.796****	
		(0.079)			**(0.075)**			**(0.697)**	
Autocracy × all internal conflicts			**0.055****			**0.052****			**0.163***
			(0.022)			**(0.023)**			**(0.079)**
Autocracy	−0.083	−0.071	−0.103*	−0.006	−0.011	−0.026	−0.493	−0.296	−0.472
	(0.057)	(0.055)	(0.059)	(0.066)	(0.058)	(0.064)	(0.376)	(0.305)	(0.416)
Pop. growth	0.314	0.295	0.301	0.026	−0.007	0.012	0.082	0.352	0.103
	(0.210)	(0.214)	(0.211)	(0.165)	(0.163)	(0.162)	(0.989)	(0.922)	(0.928)
Gov. crises	−0.156**			−0.117**			0.019		
	(0.060)			(0.054)			(0.081)		
Revolutions		−0.015			−0.005			0.262	
		(0.065)			(0.057)			(0.175)	
All internal conflicts			−0.026			−0.014			0.026
			(0.017)			(0.016)			(0.041)
Number of countries	172	172	172	172	172	172	14	14	14
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	977	977	977	977	977	977	110	110	110
R^2	0.453	0.452	0.452	0.406	0.414	0.408	0.641	0.643	0.645

Notes: ***, ** and * indicate significance at the 1%, 5% and 10% level. Observations are ten-year country averages, for the 1925–2014 period. Educational reform is a dummy if primary per capita school enrolment increased more than 10% (20%) from the previous ten years (columns 1–3, and columns 4–6). Legal reform is a dummy if the country experienced at least one legal reform during the ten-year period (the definition and timing of legal reforms come from Flora, 1983). All explanatory variables are lagged. SE are clustered at the country level.

education was provided as a result of industrialisation, Green (1990) suggests that state education, when implemented, did not provide children the appropriate technical skills.

Education may also be related to trade. Openness to trade should positively effect education when there is a strong complementarity between education and technology (Collins, 1971; Murtin and Viarengo, 2011). Controlling for trade does not alter our results (Table C1, columns 13–15).

Autocracies might start with a lower initial level of public education provision, therefore, when a threat to democracy is looming, they might react by providing more public education to appease the masses. Various papers have compared education policies across democratic and non-democratic regimes. Aghion *et al.* (2019), using annual data on 137 countries from 1830 to 2001, find that autocracies have higher enrolment rates in primary education than democracies. Consistent with this, Mulligan *et al.* (2004) examine cross-country data from 1960 to 1990 and find no evidence that democracies spend more on public education than non-democratic regimes. Looking at the same data set, Bursztyn (2016) finds that democracies spend less on public education than non-democracies for below-median income countries. We also explore this hypothesis more directly in our data set. We do not find any systematic difference in education between autocratic and democratic countries (Online Appendix, Table C2).

Another possibility is that the introduction of education provision simply had a redistributive and equal opportunities motive, rather than a nation-building motive. If autocratic regimes provided education for redistributive reasons, they should have also implemented other types of welfare reforms. We use data from Flora (1983) on four types of reforms with a redistributive nature: health insurance, pension insurance, unemployment insurance and occupational injuries reforms. We do not find that the threat to democracy was in general associated with other types of redistributive reforms to compensate the masses (Table C3, columns 1–4). This is consistent with Lott (1999), who examines education expenditure data from 99 countries in the period 1985–92 and finds that an increase in totalitarianism increases education spending, again with the strongest effects for lower-income countries. As a comparison with other public policies, Lott (1999) also examines health care expenditure, finding either no effect of totalitarianism or a negative effect.[34]

The threat of revolution could also be related to the extension of the voting franchise in Europe. Acemoglu and Robinson (2000), Aidt and Jensen (2014) and Aidt and Franck (2015) show theoretically and empirically that the extension of the franchise by elites can be a reaction to a strong threat of revolution as a way to avoid that revolution. Our analysis relies on the idea that not all crises, unrest or revolutions necessarily result in an immediate extension of the franchise (which is also consistent with the literature above). In our data we have many incidents of government crises, unrest and revolutions that increased the perceived threat to the elite but did not result in immediate franchise extension, and so gave elites time to implement nation-building policies in line with our theory. We show this in Table C3, column 5, where we use our sample and the data provided by Aidt and Jensen (2014) on the extension of the franchise.

One of the implications of Proposition 2 is that homogenisation by a ruler will reduce opposition to the regime and the population may not choose to overthrow the ruler. In other words, autocratic leaders who implemented nation-building policies are more likely to stay in power. We try to look at this possibility by using a data set on leaders by Goemans *et al.* (2009). This data set allows us to calculate for each leader and each country the number of years in power. Table 3 shows the results of a regression where the left hand side is the number of years in power starting from the decade of their first regime, whereas the controls (in addition to the level of GDP, country, and

[34] Because the different measures of threat to democracy provide similar results, we just report the interaction with the measure on government crises.

Table 3. *Leaders' Number of Years in Power and Increase in Education During Their Reign.*

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Number of years in power					
Autocracy × (growth in primary education)	**13.810****	**14.483****	**14.834****	**13.471****	**13.692****	**13.959****
	(6.719)	**(6.724)**	**(6.046)**	**(6.356)**	**(6.721)**	**(6.671)**
Growth in primary education	−8.296*	−8.752**	−7.137*	−6.743	−8.254*	−8.359*
	(4.314)	(4.308)	(3.997)	(4.103)	(4.311)	(4.268)
Autocracy	1.594**	1.539**	1.714***	1.878***	1.559**	1.556**
	(0.686)	(0.683)	(0.591)	(0.569)	(0.681)	(0.687)
International war		4.158				
		(3.956)				
Autocracy × (international war)		0.204***				
		(0.007)				
Pop. Growth	−13.441	−14.175	−27.418	−32.935	−11.224	−11.320
	(15.870)	(15.887)	(17.393)	(20.147)	(15.756)	(15.637)
Log(revenue)			0.031***	0.024***		
			(0.004)	(0.004)		
Log(per capita GDP)				4.295***		
				(1.244)		
Urbanisation					0.043	
					(0.044)	
Trade						0.021**
						(0.010)
Number of countries	106	106	104	104	106	106
Country fixed effects	yes	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes	yes
Observations	1,002	1,002	971	971	1,002	1,002
R^2	0.497	0.502	0.584	0.597	0.498	0.500

Notes: ***, ** and * indicate significance at the 1%, 5% and 10% level. SE are clustered at the country level.

decade fixed effects) are the increase in the level of primary education during the reign, a dummy for whether the leader was autocratic, and an interaction between these two variables. We find nation-building policies helped the leader to stay in power.

4.1.3. *Summary of robustness checks*

In this section, we summarise additional exercises performed to probe the robustness of our findings, which are described in more detail and presented extensively in Online Appendix D.

Our measures of threat to democracy are only available after 1925. To test the robustness of our results to a longer time period, we use a variable on the durability of the regime (see Subsection 4.1.1 detailing the data). The idea behind it is that the current durability of the regime is the best proxy for its future durability. Our theory predicts that unsafe rulers are the ones more likely to implement nation-building policies. The prediction is that durable (safe) rulers should be less likely to implement nation-building reforms. We find that this is indeed the case, showing that our results are not only valid but even stronger when we extend our period of analysis (Table D1).

Our model also makes predictions about the possibility that a country separates if it is not homogeneous enough. We do not test this prediction in this paper because it has been the object of study in the 'size of nations' literature (Alesina and Spolaore, 1997; 2003). In our context, however, it has direct implications for the selection of countries in our sample: if countries can potentially break apart, the sample of countries and their endogenous choices with regard to

homogenisation will be a result of this selection process. Our results are robust when we restrict the sample to countries that never split. The results stay the same (Table D2).[35]

In our main specification all the explanatory variables are lagged, therefore limiting the possibility of reverse causality. To further limit endogeneity concerns, we also attempt an instrumental variable strategy using system generalised method of moments (Table D5).

To improve our estimate of the impact of the instability of the regime on education, in Table D6 we also estimate a regression in levels for primary education, which will help us to better estimate the dynamics of the educational variable (see Acemoglu *et al.*, 2019).

5. Conclusion

We have studied when and how governments nation-build. We developed a framework that captures a technology that rulers can use to homogenise the population and we examined when they will choose to do so. We find that safe dictators who do not fear any revolt do not have an incentive to homogenise. They allow the population to remain heterogeneous because they face little threat of overthrow and do not care about population welfare; they simply extract rents. In contrast, non-democratic regimes homogenise when threatened by democratisation. Democratisation may split the country, turn the former elite into a minority not in control of policies, and leave the elite facing a loss of rents. Threatened elites homogenise to better preserve the status quo should democracy prevail, as well as to lower the threat of democracy itself.

Mass primary education is a central policy instrument used to homogenise populations, and so we studied this policy empirically. We reviewed many historical examples, which have several features in common. First, government implementation of mass primary education occurs under non-democratic regimes, before the largest extensions of the franchise. Second, the timing of expansions of mass primary education is linked to threats of democratisation. Third, expansions of mass primary education occurred with nation-building goals in mind. We then analysed cross-country data on mass primary schooling and educational reforms. Using evidence on a large sample of countries and covering more than 150 years of data, we confirm that the threat of democracy is an important driver of nation-building education policies. We successfully compare our explanation for education policies against several alternative hypotheses.

Diametric to homogenisation, our framework also captures policies that increase diversity and its costs: divide-and-rule policies. If dividing the population makes the organisation of a revolt more difficult, under certain conditions a ruler may choose a policy of divide and rule. Colonisers are not native and have less interest in remaining in the country if a democratic revolution succeeds. We showed that as a result they have lower incentives to homogenise and may even choose policies of divide and rule, encouraging animosity among ethnic groups. This is consistent with our review of historical evidence comparing mass education reforms by domestic versus colonial rulers. This lack of nation-building policies by colonisers is one of the reasons why former colonies have had difficulties in their transition to independence, due to internal divisions and no communal sense of a nation.

[35] Figure C1 indicates that the results are not driven by some specific continents. We also rule out this possibility more formally, by controlling for continent-specific linear trends (Tables D3 and D4).

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Additional Supporting Information may be found in the online version of this article:

Online Appendix
Replication Package

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