A Theory of Elite-Biased Democracies

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Abstract

Elite-biased democracies are those democracies in which former political incumbents and their allies coordinate to impose part of the autocratic institutional rules in the new political regime. We document that this type of democratic transition is much more prevalent than the emergence of pure (popular) democracies in which the majority decides the new political rules. We then develop a theoretical model explaining how an elite-biased democracy may arise in an initially autocratic country. To this end, we extend the benchmark political transition model of Acemoglu and Robinson (2006) along two essential directions. First, population is split into majority *versus* minority groups under the initial autocratic regime. Second, the minority is an insider as it benefits from a more favourable redistribution by the autocrat. We derive conditions under which elite-biased democracies emerge and characterise them, in particular with respect to pure democracies.

Keywords: Elite-biased democracy, institutional change, minority/majority, economic favouritism, inequality, revolution.
JEL classification.: D72, C73

1 Introduction

Minorities have been the focus of several political economy and political science studies in the last decades. One of the earliest is due to Hirshleifer (1991) and his celebrated "paradox of power". Smaller groups, which are typically (much) poorer and less powerful initially, can be markedly more motivated than the bigger and more powerful groups to invest in conflictual activity and fight, eventually ending in a dominant position. Two other streams in public economics and political economy have put forward the role of minorities; the literature on redistribution and provision of public goods (see for example, Shayo, 2009) and the literature on the causes of social and political conflicts (see, Esteban and Ray, 2011). In particular, the latter is essentially based on the concept of polarisation according to which powerful enough minorities play a key role in major conflicts.

This paper provides a theory linking dominant minorities and institutional change. The political economy literature is much less abundant on this topic in contrast to political science. Albertus and Menaldo (2018) is a representative example of the latter. These authors make the key observation that a significant fraction of democracies are substantially departing from what is usually associated with this form of political regime, e.g. inclusiveness, income redistribution from the rich to the poor, strong welfare states. According to Albertus and Menaldo, this anomaly can be traced back to the different roles of minorities in the democratic transition. Minorities may be partners of the autocratic regime (*insider minorities*) and, under revolutionary threat, both political actors can form a coalition resulting in an 'elite-biased' democracy. Minorities may also be *outsider minorities* under the initial authoritarian regime and form a coalition with a rebelling majority to take down the autocratic elite, resulting in a more egalitarian form of 'pure' democracy.

We are concerned with the first case.[1] A paradigmatic example of elite-biased democracies is the so-called democratic transition in Spain in the late seventies.[2] The new constitution elaborated by Adolfo Suarèz, the first democratically elected prime minister in 1976, was partly shaped with the help of many Franco's allies, including the oligarchs connected to the Franco regime. So while dictatorship ended in 1976, the rules of the new formal Spanish democracy favoured the former insider minorities, conducting to large and persistent inequalities, certainly much above than what a pure democracy triggered by a popular uprising would have delivered. Our stylised facts in Section 2 highlight that the vast majority of democratic transitions have been biased towards insider elites.

We propose a theory explaining how and under which conditions an elite-biased democracy can emerge. To this end, we extend the benchmark political transition model built up by Acemoglu and Robinson (2006) along two essential directions.[3] First, we assume that the population is split into majority and minority groups under the initial autocratic regime. Second, the minority group is favoured by the autocratic elite. This is the insider characteristic of the minority highlighted by Albertus and Menaldo. The model is agnostic as to the origin of this insider minority. It could be racial as in the South-African case or social and political as in the case of Spain under Franco.

An essential outcome of our modelling is that a second *official* source of inequality and discrimination takes place in comparison to Acemoglu and Robinson's benchmark: in addition to the population split, the majority is suffering from a second discrimination with respect to the insider minority. Society has a three-class structure, the members of the autocrat's clan being the wealthiest.[4] In this context grievance is double for the

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[1] A model of institutional change with outsider minorities has been recently proposed by Boucekkine et al. (2019).

[2] Other country cases of elite-biased democracies are enumerated by Albertus and Menaldo: among others, South-Africa, Myanmar, Turkey or Bolivia.

[3] To be comprehensive and fair, Albertus and Menaldo also sketch a formal setting to characterize in a way how elite-biased democracies may emerge. The use of Acemoglu and Robinson's formalism allows a more accurate micro-founded characterisation in a stylised dynamic framework.

[4] A three-class structure is also analysed in Acemoglu et al. (2015) to study the redistributive role of the middle class in democracy and the relationship between democracy, redistribution, and inequality.

majority members, resulting in a strong demand for redistribution. In other words, the preferred tax rate of the majority member is likely to be significantly higher than in a situation, as in the Acemoglu and Robinson's benchmark, where there is only one source of income discrimination. Elite-biased democracies may then arise if one source of discrimination, economic favouritism, is *officially* removed, and replaced by a more good-looking coalition, even though the involved redistribution to the majority members is lower than the counterpart under pure democracy. We show in this paper that this is indeed a possible outcome under certain conditions, depending notably on the inherent cost of revolutions.

The paper is organised as follows. Section 2 provides stylised facts on the emergence and presence of elite-biased democracies in the world. Section 3 presents the general specifications of our extension of Acemoglu and Robinson's model. Sections 4 and 5 give the main characteristics of the transitions from autocracy to pure versus elite biased-democracy respectively in our model. Section 6 concludes.

2   Documenting elite-biased democracies

In this Section, we provide some stylised facts on the different shapes that a democracy can take, based on data compiled by Albertus and Menaldo (2018). In addition to the usual distinction between autocracy and democracy, broadly based on the presence of free and fair elections, they distinguish between popular (Pop.) democracies and elite-biased (EB) democracies. The first key difference between these two types of democracy is that the latter still operates with the constitution inherited from the previous autocratic regime whereas the former creates a new constitution or operates according to a prior democratic constitution. The rationale is that, on the eve of transition, authoritarian

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In a model with political elite, rich ethnic minority and poor majority, Bramoullé and Morault (2017) analyse violence against minorities showing that the local elite can maintain its hold on power by sacrificing the rich minority to popular discontent.

regimes in which political incumbents and their economic allies can coordinate to impose the institutional rules that were devised under the autocracy and presumably biased in their favour in the new democratic regime. The second main difference between the two political systems is that elite-biased democracies are far less inclusive and have more regressive tax structures than their popular counterparts.

Figure 1 highlights that the share of autocracies in all political regimes has fallen over time, after reaching a peak in late seventies. Afterwards, as shown by Figure 2, three successive waves of democratic transitions took place between 1980 and 2006. About two-thirds of them initially led to the establishment of elite-biased democracies. Of course, a few years later after transition, some 'autocratic' constitutions have been annulled and replaced by 'democratic' constitutions. Nevertheless, Figure 3 reports that about 40% of democracies which have emerged at some point since 1960 still operated under autocratic constitutions in 2006.[5]

The V-Dem (Varieties of Democracy) database provides a series of indicators which highlight that popular and elite-biased democracies are two distinct types of political regimes.[6] Figure 4 confirms the insights of Albertus and Menaldo (2018). The range of consultation on policy changes is higher in democracies than in autocracies but lower in elite-biased democracies than in popular democracies. Figure 5 underlines that democracies are much more egalitarian than autocracies, giving better civil rights protection, greater access to the political process, and a more equal distribution of essential resources. However, the performance of elite-biased autocracies is much worse and more variable than that of popular democracies.

Overall, these stylised facts confirm the relevance of not treating democracies as a monolithic regime. Transitions from autocracy to elite-biased democracies have been

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[5]This share is 25% if the denominator is all democracies, whatever their starting date.
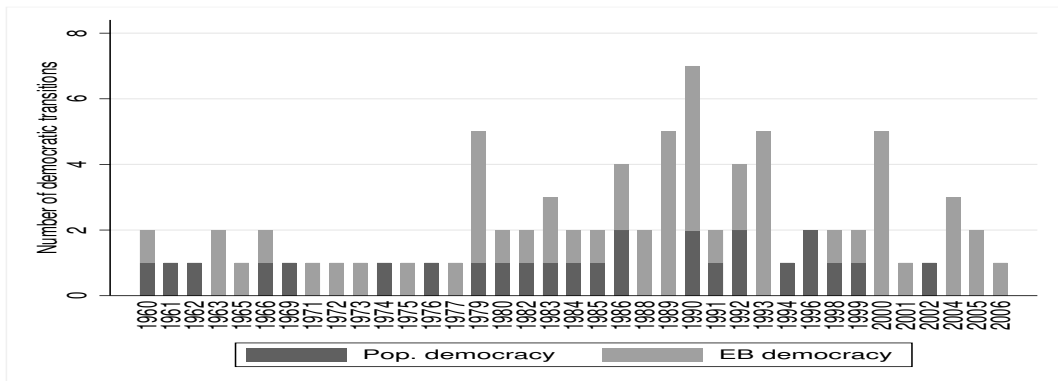[6]https://www.V-Dem.net

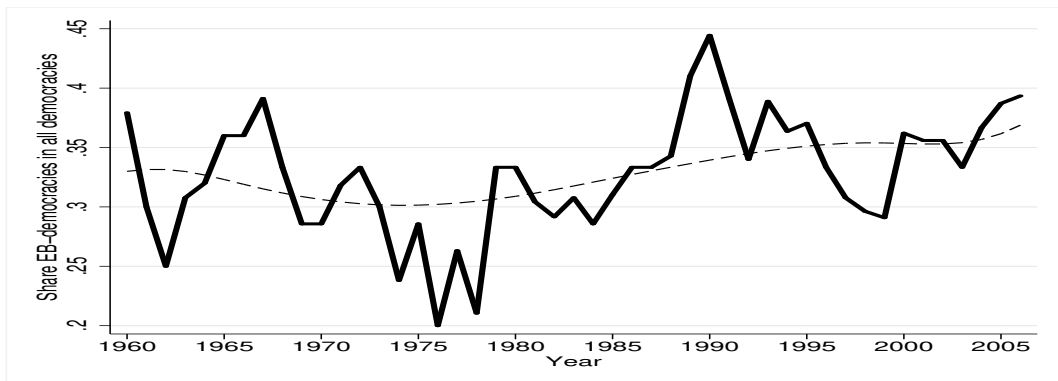Figure 1: Share of autocracies in all regimes over time
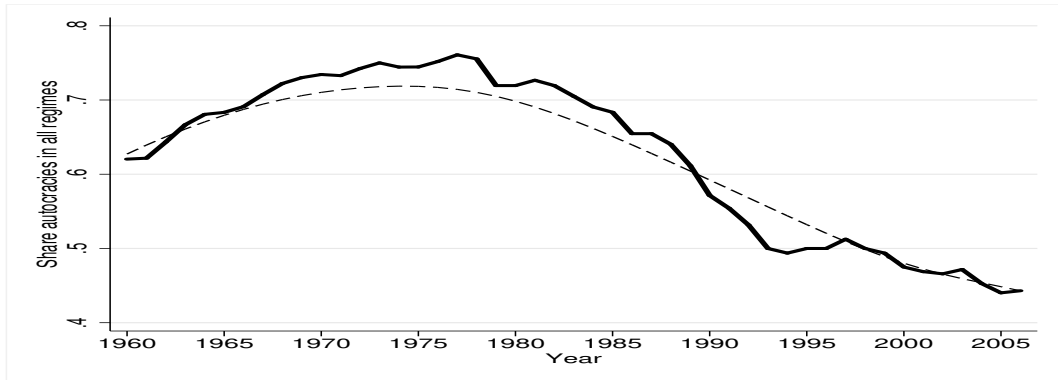
Notes: Data from Albertus and Menaldo (2018). Solid line: observed values. Dashed line: smoothed trend.

Figure 2: Types of democratic transitions
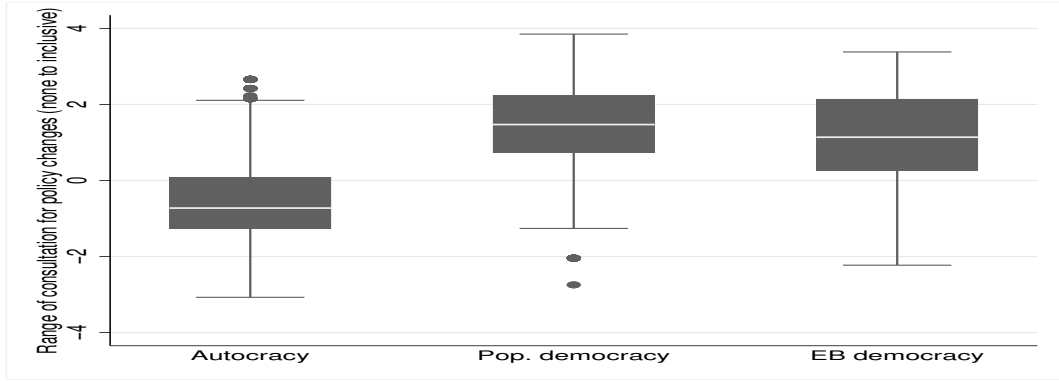

Notes: Data from Albertus and Menaldo (2018). Pop: popular; EB: elite-biased.

Figure 3: Share of elite-biased democracies in all new democratic countries

Notes: Data from Albertus and Menaldo (2018). Solid line: observed values. Dashed line: smoothed trend. A new democratic country is a country which experienced at least one democratic transition over the period 1960-2006.

Figure 4: Inclusiveness of consultation on policy changes

common, this type of democracy still represents a large share of existing democracies, and outcomes are much less favourable to the majority under elite-biased democracies than under popular democracies.[7]

3   The Model: General Specifications

We consider an economy populated by a unit of individuals and composed of two main groups: an autocratic elite (E) of size δ and a group of citizens of size $1-\delta$, with $0 < \delta < 1/2$. Citizens belong to two different subgroups: a majority (M) of size $(1-x)(1-\delta)$ and a minority (m) of size $x(1-\delta)$, with $\delta < x < 1/2$.[8] As in Boucekkine et al. (2019), heterogeneity is generic, in the sense that it only reflects the subgroup size or the degree of polarisation within citizens. The initial state of the world is a non-democratic regime in which all the political and economic decisions, such as redistribution and taxation, are in the hands of the autocratic authority. Citizens are therefore excluded from the

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[7]The econometric analysis of Albertus and Menaldo (2018) confirms these stylised facts.

[8]Note that if $\delta > x$ then the size of the elite would be always larger than the minority. We exclude this scenario by imposing $\delta < x$.

Figure 5: Extent to which the ideal of egalitarian democracy is achieved

the jure political power. However, they might use their *de facto* power to undertake collective actions and revolt against the autocracy. If the revolutionary threat of the citizens is credible, in a sense to be defined later, a first instrument that autocrats may use to prevent a popular uprising is to redistribute more resources to citizens. The autocrats may also resort to repression or engage in political reforms as exemplified in Acemoglu and Robinson (2006). Another possibility, unexplored in the political economy literature so far, is for the autocrat to set up an *elite-biased* democracy where political elites are able to impose a process of democratisation that over-represents their interests, as pointed out by Albertus and Menaldo (2018).

This paper proposes a theory of elite-biased democracies, which can be viewed as an extension of the seminal model of Acemoglu and Robinson (2006). In this Section, we first give the main modelling principles, followed by a special emphasis on population heterogeneity (minority vs majority) and its behavioural and strategic implications.

3.1 Social Classes, Tax and Transfers

We depart from the standard framework on institutional change developed by Acemoglu and Robinson (2006) in two ways. First, we assume the co-existence of different social groups within the population of citizens, namely the majority and minority groups. Second, we introduce economic favouritism under autocracy. More precisely, we assume the existence of three (pre-determined) social classes: a non-benevolent autocratic clan with income y^E, the majority group of citizens with income y^M and the minority with income y^m.

In autocracy, of course, the wealthiest group is the autocratic elite. We define with θ the exogenous share of income accruing to this elite, and $1 - \theta$ the share redistributed to citizens in every period. Following Boucekkine et al., (2019), we additionally assume that the minority benefits from economic favouritism. However, our model differs critically from Boucekkine et al. (2019). In the latter, inter-group redistribution occurs after revolutions ultimately leading to a dominant minority-based regime, mimicking the case for outsider elites also highlighted by Albertus and Menaldo (2018). In this paper, economic favouritism takes place during dictatorship in favour of an insider elite. We shall show how elite-biased democracies might emerge when the autocrats find political support from these insiders minorities. Accordingly, we set the pre-tax income levels of the representative member of each group equal to the following:

$$y^E = \frac{\theta \bar{y}}{\delta}, \qquad y^M = \frac{(1-\theta)(1-\alpha)\bar{y}}{(1-\delta)(1-x)}, \qquad y^m = \frac{(1-\theta)\alpha \bar{y}}{(1-\delta)x}, \qquad (1)$$

with $0 < \alpha < 1$, representing economic favouritism across citizens. To guarantee that this form of *pre-tax* redistribution favours the minority group, we assume that $\alpha > x$. In other words, the share of income redistributed to the minority is bigger than its demographic weight, which is in line with the formalisation of particularism in Boucekkine

et al. (2019).[9] Since total population is normalised to one, $\bar{y}$ represents the average income in the economy, that is $\bar{y} = \delta y^E + (1-\delta)(1-x)y^M + (1-\delta)xy^m$, at any time $t \geq 0$.

Income sorting in autocracy requires that the dominant group in terms of both political power and income is represented by the autocratic elite. We impose the following constraint:

Constraint 1. *Income redistribution is such that $\theta > \tilde{\theta}$, with $\tilde{\theta} = \frac{\delta\alpha}{x(1-\delta)+\alpha\delta}$.*

Constraint 1 ensures that the autocratic elite is the wealthiest group. In addition, as a consequence of the fiscal system in place under autocracy in favour of the insider elite, one gets the complete income sorting: $y^E > y^m > y^M$. This type of income sorting seems a good reflection of reality with the citizens' population frequently composed of insider elites and masses.

The autocrats might decide to tax and redistribute (with lump-sum transfers) resources to citizens, considering that taxes and transfers can be renegotiated in every period t. Of course, zero taxation and transfers is an option in the hands of the dictator when the risk of revolt is nil. The government budget constraint at time t is given by the following equation equalising total transfers and total tax revenues:

$$Tr[\tau_t^i] = \bar{y}(\tau_t^i - c[\tau_t^i]), \tag{2}$$

with $\tau_t^i \in [0,1]$ the chosen tax rate by the elite and $c[\tau_t^i] > 0$ the unit cost of taxation, where c is increasing and is a strictly convex function of τ_t^i. For the sake of analytical tractability, we consider throughout the paper the following quadratic functional form: $c[\tau_t^i] = (\tau_t^i)^2/2$. The after-tax revenue of each member of group $i \in \{E; M; m\}$ is then

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[9] However, for specific reasons, Boucekkine et al. (2019) consider the extreme case where the income share is inversely proportional to demographic weight.

given by:

$$\hat{y}_t^i[\tau_t^i] = y_t^i(1 - \tau_t^i) + Tr[\tau_t^i] \tag{3}$$

Maximising (3) under constraint (2), allows us to determine the preferred (interior) tax rate of each social group at time t, respectively:

$$\tau^E = 1 - \frac{\theta}{\delta}, \qquad \tau^M = 1 - \frac{(1-\theta)(1-\alpha)}{(1-\delta)(1-x)}, \qquad \tau^m = 1 - \frac{\alpha(1-\theta)}{(1-\delta)x}. \tag{4}$$

Under Constraint 1, one can readily show that $\theta > \delta$, that is the income share accruing to the autocratic elite is larger than its demographic weight.[10] As a consequence, the optimal tax rate for the autocrat is the corner solution: $\tau^E = 0$. Similarly, one can also show that under Constraint 1, $\tau^M \in (0,1)$ and $\tau^m \in [0,1)$.

Indeed, we can state the following broader lemma highlighting the behavioural differences between majority and minority members, which are indeed key in the emergence of minority-biased regimes.

Lemma 1. *Set $\bar{\theta} \equiv 1 - \frac{x(1-\delta)}{\alpha}$, and $\theta^o \equiv 1 - \frac{(1-x)(1-\delta)}{1-\alpha}$. Provided $\alpha > x$, the following properties hold.*

1. *If $\theta > \bar{\theta}$ then $\tau^m \in (0,1)$, while if $\theta \leq \bar{\theta}$, $\tau^m = 0$.*

2. *If $\theta > \theta^o$ then $\tau^M \in (0,1)$, while if $\theta \leq \theta^o$, $\tau^M = 0$.*

3. *$\theta^o < \tilde{\theta} < \bar{\theta}$. Moreover, the difference $\bar{\theta} - \tilde{\theta}$ is a strictly increasing function in α.*

The proof goes through easy algebra. The preferred tax rate of the minority $\tau^m = 1 - \frac{\alpha(1-\theta)}{(1-\delta)x}$ is always smaller than one but is positive if and only if $\theta > \bar{\theta}$, with $\bar{\theta} \equiv 1 - \frac{x(1-\delta)}{\alpha} > \tilde{\theta} > 0$. This a quite intriguing result. When Constraint 1 holds (that is $\theta > \tilde{\theta}$) , the autocratic elite is the wealthiest group, and therefore one could expect that

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[10]The same condition is posed in Acemoglu and Robinson (2006) in the homogeneous citizenship counterpart.

both the minority and the majority would prefer strictly positive taxation. However, as it is shown in Lemma 1, this is true for the majority but not for the minority. Indeed by Lemma 1, there exist a θ-non-zero measure interval, $(\tilde{\theta} \ \bar{\theta}]$, such that $\tau^m = 0$ while the autocrats are the wealthiest group. Property 3 of Lemma 1 shows that the measure of the latter interval is increasing in the level of favouritism α, which captures the political strength of the minority position. Clearly, favourable treatment makes the minority refrains from asking for inter-group revenue redistribution (up to a certain point) even if it is not the wealthiest group. In contrast, the majority will prefer a non-zero tax rate above a significantly lower level of θ because it is systematically injured by the income redistribution at work.[11] This clearly shows why there may be a room for a coalition between the minority and the autocrat, such an arrangement can hardly involve the majority.

Broadly speaking, Lemma 1 underlines that the preferred level of taxation of the minority crucially depends on inequality. In our model, inequality is twofold. In contrast to Acemoglu and Robinson (2006), inequality does not only show up between the autocrat and the rest of population (parameter θ) but also within the population (parameter α). The two inequality parameters have different implications. Consider the case where Constraint 1 holds so that the autocratic elite is the richest group. Then, while both tax rates, τ^m and τ^M, are increasing in θ, the tax rate preferred by the majority is increasing in α, the one preferred by the minority is decreasing in α. This reflects the fact that while the two groups suffer from, say, the θ-inequality, the income redistribution is a further discrimination against the majority and in favour of the minority. Moreover, the preferred tax rate of the minority is always smaller than the rate preferred by the majority, $\tau^m < \tau^M$, which again goes along with the principle at work that richer agents prefer lower taxation than poor. The outcomes of the political game between autocratic

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[11]A quick look at the expression of θ^0 is enough to grasp that under realistic parameterisations, for example assuming the demographic weight of the autocrats' clan is small enough (δ small enough), one gets $\theta^o < 0$ since $\alpha > x$. The majority will always seek for inter-group redistribution in such a case.

elite and the population will be of course enriched by this internal conflict within the population, as highlighted above and as we will show later.

3.2 The heterogeneity of revolution threats

We now give a first flavour of the strategic implications of the behavioural differences identified in the previous Section. Relying on the simple dynamic game setting built up by Acemoglu and Robinson (2006), we show in first place how these differences shape the (heterogenous) incentives for the population to revolt. To limit (trivial) algebra and focus on mechanisms, we operate two simplifications with respect to the original setting of Acemoglu and Robinson (2006), one has to do with revolution cost specification and the second being purely computational.

The utility function for individual i at time $t = 0$ is defined over the discounted sum of post-tax incomes with discount factor defined by $\beta \in (0, 1)$:

$$U^i = E_0 \sum_{t=0}^{\infty} \beta^t \hat{y}_t^i, \tag{5}$$

with E_0 the expectation at time $t = 0$.[12] Considering that taxes and transfers can be renegotiated every period, we define the utility function of an individual i under autocracy as follows:

$$U^i = E_0 \sum_{t=0}^{\infty} \beta^t \left((1 - \rho_t) \left((1 - \tau_t) y^i + (\tau_t - c[\tau_t]) \bar{y} \right) + \rho_t y_R^i \right), \tag{6}$$

where ρ_t is a step function taking the value of $\rho_t = 1$ if a revolution is attempted before t and $\rho_t = 0$ if not.

When a revolution takes place at time $t \geq 0$, an exogenous fraction μ of the output is

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[12]Here we assume that despite revenue differences the individuals have the same impatience rate, β. This is of course a simplification, we could have assumed that the richer the individual, the less impatient she is. See Becker (1980) and Ryder (1985) for seminal treatments.

destroyed.[13] Differently from Acemoglu and Robinson (2006), we assume that the cost of revolution is known with certainty. This is more than an expositional simplification, it allows to simplify a lot the algebra and to extract more neatly the implications of population heterogeneity and favouritism. If the revolution is successful, citizens receive all the remaining production of the economy. We assume that a revolution is successful and cannot be repressed if all citizens join the collective action. Therefore, if a popular uprising emerges, it will be successful with probability 1 and citizens will obtain the remaining output produced by the economy. We consider the pure democracy case according to which after revolution, all the remaining resources are equally redistributed across citizens, while the autocrats flee the country.

A first key novelty of our model is that different forms of collective actions may take place in our setting. One is, as in the benchmark theory of Acemoglu and Robinson, that all the citizens, minority and majority members, have incentives to revolt, and do so. The other form of collective action allowed is popular uprising by the majority only, the poorer group in the autocratic country. In a model like ours, the latter form of revolution is probably more likely that the former. The minority is insider and benefits economically from the initial regime. It seems therefore reasonable that the majority will be the main, if not the sole, revolutionary player of the game. Our setting allows for both forms of collective action. This involves a few technical issues, for example regarding the probability of a successful popular uprising depending on the collective action form. As explained above, this probability is one in the benchmark theory with homogeneous population. We might think that the probability of success is higher when all population revolt (relative to the case where only the majority revolts). We do not settle this technical issue here and assume that the probability of success is one for both

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[13]Boucekkine et al. (2019) assume that the revolution cost depends on the polarisation degree of the population, a larger polarisation increasing the coordination costs of collective actions such as a revolution. We have a different focus in this paper and prefer to keep the benchmark revolution cost of Acemoglu and Robinson (2006) to allow for comparison with this initial study.

forms of collective action. Technically, this is equivalent to assume, like in Boucekkine et al (2019), that a successful revolution should involve at least the majority of population.

We now get to explore the revolutionary incentives for each population group. In the simplest version of this political game, the timing works as follows. First, the strategic leader of the game, the autocratic elite, sets the tax rate, τ^E. Then, the follower, the citizens, decide if they undertake or not a revolt against the policy proposed by the leader. Since the game supposes an infinite horizon, the present value of the after-revolution pay-off obtained by the representative citizen i, with $i \in \{M, m\}$, when the revolution is successful, writes as:[14]

$$V^i(R) = \frac{(1-\mu)\bar{y}}{(1-\delta)(1-\beta)}. \tag{7}$$

As previously mentioned, in this pure democratic regime, the economic favouritism typical of the autocracy with insider elites is neutralised by equal redistribution of the remaining output produced in the economy (median voter and universal public good scenario). The same mathematical argument applies if all citizens decide not to revolt against the autocrat or if the popular uprising fails. They will obtain the level of income redistribution unilaterally decided by the autocratic elite discounted to the present at the discount factor β:

$$V^i(N) = \frac{y^i}{1-\beta}, \tag{8}$$

with y^i defined by (1). Of course, given the state μ, agent i will prefer revolution to autocracy if and only if $V^i(R) > V^i(N)$.

Lemma 2. *The citizens' revolution constraint binds if $\theta > \theta^m > \theta^M$, with $\theta^m \equiv 1 - \frac{(1-\mu)x}{\alpha} > 1 - \frac{(1-\mu)(1-x)}{1-\alpha} \equiv \theta^M$.*

Proof. The majority group revolts when $V^M(R) > V^M(N)$, that is $\theta > 1 - \frac{(1-\mu)(1-x)}{1-\alpha} \equiv$

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[14]We denote by $V^p(P)$ the value function of player p in the political state $P \in \{R, N\}$ where R stands for revolution and the resulting pure democracy, and N stands for non-democracy or autocracy.

θ^M, while the minority group revolts when $V^m(R) > V^m(N)$, that is $\theta > 1 - \frac{(1-\mu)x}{\alpha} \equiv \theta^m$. Since $\theta^m > \theta^M$, the citizens' revolution constraint binds for all $\theta > \theta^m > \theta^M$. Notice that $\theta^m > \tilde{\theta}$. $\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ $\square$

When the citizens' revolution constraint binds, both groups do not accept the preferred policy of the autocrat, $\tau^E = 0$, so that they simultaneously revolt against the regime. In our setting with heterogeneous groups of citizens, when the revolution constraint does not bind, two main different scenarios for collective action might emerge as mentioned earlier. In the first, $\theta \in [\theta^M, \theta^m)$, the majority revolts against the autocratic elite, while the minority does not. It follows that the risk of revolt persists even though in this case only the majority participates in the popular uprising. In the second, $\theta < \theta^M$, both groups prefer the redistribution platform proposed by the autocratic elite than revolting. In this latter scenario there is no risk of revolt and social transfers to citizens will not be established.

Notice also that when the cost of the revolution is sufficiently high, i.e. $\mu > \delta$, the preferred tax rate of the minority is always positive if the revolution constraint binds. Indeed, when $\mu > \delta$, then $\theta^m > \bar{\theta} > \tilde{\theta}$. It follows that $\tau^m \in (0,1) \ \forall \ \theta > \theta^m$. However, when $\mu \le \delta$ the preferred tax rate of the minority can also be zero, depending on parameter values, that is $\tau^m \in [0,1)$. This outcome confirms our preliminary and partial analysis following Lemma 1: citizens belonging to different social groups may have completely different views about policies under autocracy, and in particular, minority members can prefer the policy proposed by the autocratic elite and collude with them. This outcome opens the possibility of different political institutional changes rather than transition to democracies where the median voter has the *de jure* power, as we will discuss Section 5. The next section is devoted to shed light on some aspects of the transition to pure democracy in our model with insider minority.

4 From Autocracy to pure Democracy

This section is intended to extend the Acemoglu-Robinson benchmark analysis of the transition to pure democracy to the case of heterogeneous population with an insider minority. First, let us consider the case where the revolution constraint binds for both population groups, which happens when inequality is sufficiently high: $\theta > \theta^m$. In this scenario, the rational autocratic elite tries to stay in office by redistributing extra resources to citizens. Concretely, the autocrat sets a redistribution rate $\tau^E = \hat{\tau} > 0$ and a lump-sum transfer $Tr[\hat{\tau}] = \bar{y}(\hat{\tau} - c[\hat{\tau}])$. Notice here that because the parameters of the model do not change over time (in particular, neither θ nor α move), optimal policies are stationary: they do not depend on time. We therefore omit the time index from now on. We define the corresponding present value function over the infinite horizons as follows:

$$V^i(N, \hat{\tau}) = \frac{y^i + (\hat{\tau}(\bar{y} - y^i) - c[\hat{\tau}]\bar{y})}{1 - \beta}. \tag{9}$$

If the autocrat proposes a policy platform $\hat{\tau}$, citizens still revolt if they get a higher return from revolting, $V^i(R)$, relative to the payoff, $V^i(N, \hat{\tau})$, associated with the proposed redistribution plan. Therefore, if the autocrats want to prevent revolutions, they would better set the maximum value of taxation compatible with the requests of the largest part of the population, that is in our specific case: $\hat{\tau} = \tau^M$, namely the tax rate preferred by the poorest social group, which happens to be the majority group. If with this specific tax rate the autocrat is unable to curb the revolutionary threats of the majority group, then redistribution cannot be efficient to avert revolutions driven by the majority group, joined or not by the minority.[15] Revolution will occur and we assume here, that it will be successful with probability 1, provided that at least the

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[15]In this sense, the pivotal group of the problem is the majority group. This would justify to restrict the analysis of revolutionary threats to the sole majority as in Boucekkine et al. (2019). Here we consider the case where the revolutionary constraint binds for all population groups for comparison with the benchmark case with homogeneous population.

majority group revolts. In the following, we characterise some aspects of the Markov Perfect Equilibria, precisely those which convey major differences with the benchmark homogeneous population case.[16]

Proposition 1. *When the revolution constraint binds for all citizens ($\theta > \theta^m$) and the autocratic elite sets a tax rate $\hat{\tau} = \tau^M$, there exists a $\mu^{*,M}$ and a $\mu^{*,m}$ such that:*

- *if $\mu < \mu^{*,m}$ all citizens revolt against the elite;*

- *if $\mu \in [\mu^{*,m}, \mu^{*,M}]$ the majority revolts alone against the elite;*

- *if $\mu > \mu^{*,M}$ citizens do not revolt against the elite.*

Proof. Assume $\hat{\tau} = \tau^M$ as defined by (4). Comparing $V^M(R) > V^M(N, \tau^M)$ we observe that the inequality holds if and only if $\mu^M[\tau^M] < 1 - (1 - \tau^M)(1 - \theta)(1 - \alpha)/(1 - x) - (1 - \delta)(\tau^M - c[\tau^M]) \equiv \mu^{*,M}$. For the minority group, $V^m(R) > V^m(N, \tau^M)$ holds when $\mu^M[\tau^M] < 1 - (1 - \tau^M)(1 - \theta)\alpha/x - (1 - \delta)(\tau^M - c[\tau^M]) \equiv \mu^{*,m}$. Given $x < 1/2$, using (4) we observe that $\mu^{*,M} > \mu^{*,m}$, $\forall t \geq 0$. Therefore, both groups revolt if and only if $\mu < \mu^{*,m}$, nobody revolts if $\mu > \mu^{*,M}$, the majority revolts alone if $\mu \in [\mu^{*,m}, \mu^{*,M}]$. Note also that, given $\alpha > x$, we always observe $\mu^{*,i} \in (0, 1)$, with $i \in \{M, m\}$. $\square$

Proposition 1 characterises citizens' optimal responses to the redistribution plan announced by the autocratic elite. As in the benchmark model of Acemoglu and Robinson (2006), the outcome of the political game crucially depends on the cost of the revolution. Of course, when the revolution constraint does not bind for any citizen ($\theta \leq \theta^M$), the autocrat never redistributes to citizens simply because the revolution of the majority can never take place.

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[16]Full characterisation trivially follow the solution method developed in Acemoglu and Robinson (2006), though definitely more algebra consuming.

Differently from the benchmark and as already alluded to, two different types of revolts might emerge in our setting though the revolution constraint binds for all individuals irrespective of their group membership. First, the collective action is undertaken by all citizens. If the cost in terms of destroyed output is sufficiently low, i.e. $\mu < \mu^{*,m}$ there will be a popular uprising against the autocratic elite. When both groups demand positive redistribution and transfers, the minority will join the majority group in the collective action against the autocrat. Second, the revolution can be launched only by the majority, i.e. $\mu \in [\mu^{*,m}, \mu^{*,M}]$. Although the insider minority does not join the rebellion, this may still be enough to take down the autocratic regime, and that is what we assume here.

A key outcome of the former standard analysis is that the minority group may prefer not to join the uprising of the majority, which opens the door for the emergence of elite-biased democracies, as we will see in the next section. Indeed, because of economic favouritism, minority members never revolt alone against the autocratic elite. Of course, they might join the majority against the elite under certain conditions as shown in the proposition above, but they never go alone for the revolution. Second, and even more importantly, the insider minority may cease to be neutral and get allied with the autocrats. Consider the case where the revolution cost $\mu \in [\mu^{*,m}, \mu^{*,M}]$: in such a case, only the majority group revolts, and the minority may well be sensitive to an alternative fiscal package, a kind of government pact involving lower levels of taxation and redistribution compared to the requests of the majority. This is the elite-biased democracy case made by Albertus and Menaldo (2018), and documented in Section 2.

Before going into the details of the transition to an elite-biased democracies, it is worthwhile to understand the role of population polarisation and favouritism in autocracies' breakdowns and transitions to pure democracy. These are the two novel ingredients brought into the standard Acemoglu-Robinson theory, and it makes sense to explore their respective contributions.

Corollary 1. *An increase in the size of the minority group increases the probability of popular uprisings of all citizens but decreases the probability of the revolution of the majority.*

Proof. Using (1), (2), (3), (4) and the thresholds $\mu^{*,i}$ defined in the proof of Proposition 1, it is straightforward to show that partial derivatives: $\partial\mu^{*,M}/\partial x = -(1-\theta)^2(1-\alpha)^2/((1-\delta)(1-x)^3) < 0$ and $\partial\mu^{*,m}/\partial x = (1-\theta)^2\alpha^2/((1-\delta)x^3) > 0$. $\qquad\square$

Comparative statics show that an increase in x (the size of the minority group) reduces $\mu^{*,M}$, meaning that averting the revolution of the majority with redistribution is more likely. However, an increase in x positively affects $\mu^{*,m}$. In this case, the minority will join more probably the revolution against the elite. The intuition behind these theoretical outcomes comes from the fact that income redistribution impacts differently the decision of both the majority and minority to participate in the collective action. It is key to understand that when x increases for given α, *ex-ante* economic favouritism decreases since it measures to which extent per group redistribution is inversely proportional to the group demographic weight. Accordingly, the larger the level of polarisation into the population, the lower the favouritism in favour of the minority group. In such a case, the incentives of the majority group to revolt alone decreases.

The same exercise on the income redistribution parameter, α, for given minority size x, delivers equally involved but consistent outcomes.

Corollary 2. *An increase in economic favouritism towards the minority group increases the probability of the revolution of the majority but has an ambiguous effect on popular uprisings of all citizens.*

Proof. The partial derivatives: $\partial\mu^{*,M}/\partial\alpha = (1-\theta)^2(1-\alpha)/(1-x)^2(1-\delta)$ and $\partial\mu^{*,m}/\partial\alpha = (1-\theta)^2(1-\alpha)/((1-x)^2(1-\delta))$. The former partial derivative is strictly positive, while the latter is positive if and only if $x < (2\alpha-1)/\alpha$ and negative otherwise. $\qquad\square$

When parameter α increases, then clearly the majority group is the most directly affected: inter-group redistribution becomes more favourable to the insider minority. Therefore the probability for the majority to revolt rises whatever the size of the minority group, x. However, the latter may not join the majority in the rebellion for obvious reasons.

5 From Autocracy to Elite-biased Democracy

In line with Albertus and Menaldo (2018), we define an elite-biased democracy as a political regime in which the political incumbent (here the autocratic elite) may try to maintain its position by seeking a coalition with their economic allies (here the minority) while keeping under control the masses (here the majority), that is without leading the population to revolt. As underlined in Section 2, one of the main characteristic of the elite-biased democracies is that they are far less inclusive and redistribute less than their popular counterparts.

One simple way to model an elite-biased democracy in our setting is to assume a kind of merger between the minority group, that is the insider elite, and the autocratic elite into a new elite group (Em) of size $\delta + (1 - \delta)x$, while the size of majority stay $(1 - \delta)(1 - x)$.[17]

Since in this situation the minority group becomes member of the ruling elite, the economic favouritism parameter becomes $\alpha = 0$. The pre-tax income levels to the representative member of the new ruling elite and of the majority group, are therefore respectively given by:

$$y^{Em} = \frac{\theta \bar{y}}{\delta + (1 - \delta)x}, \qquad y^{M} = \frac{(1 - \theta)\bar{y}}{(1 - \delta)(1 - x)}. \tag{10}$$

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[17]It should be noticed that if the size of the autocrats' clan, δ, is small enough, $(1 - \delta)(1 - x)$ is unambiguously bigger than $\delta + (1 - \delta)x$.

To be coherent with the benchmark model developed above, we have to impose income sorting across social classes such that $y^{Em} > y^M$.

Constraint 2. *Income redistribution is such that $\theta > \tilde{\tilde{\theta}}$, with $\tilde{\tilde{\theta}} = x(1 - \delta) + \delta$.*

Proceeding as in the previous section and using (10), we define the preferred tax rate of both groups, considering that $\bar{y} = (\delta + (1-\delta)x)y^{Em} + (1-\delta)(1-x)y^M$. Maximising (3) under constraint (2), allows us to determine the preferred tax rate of the two groups at time $t \geq 0$ when $\alpha = 0$ and minority members join the ruling elite. We get, respectively:

$$\tau^{Em} = 1 - \frac{\theta}{\delta + (1 - \delta)x}; \qquad \tau'^M = 1 - \frac{(1 - \theta)}{(1 - \delta)(1 - x)}. \qquad (11)$$

Under constraint 2, we observe that $\tau^{Em} = 0$ and $\tau'^M \in (0, 1)$. Considering (10) instead of (1) in equation (8), the majority of citizens will prefer revolution to a regime with no redistribution, $\tau^{Em} = 0$, if and only if $V^i(R) > V^i(EB)$, with $V^i(EB) = y^i/(1 - \beta)$.

Lemma 3. *The citizens' revolution constraint binds if $\theta > \theta'^M \equiv 1 - (1 - \mu)(1 - x)$.*

Proof. The proof is trivial. The majority group revolts when $V^M(R)$ defined by (7) is larger than $V^M(N, EB)$, that is (8) with y^i defined by (10). The inequality holds when $\theta > 1 - (1 - \mu)(1 - x) \equiv \theta^M$. $\qquad\qquad \square$

When the revolution constraint for the majority binds, the new ruling group composed by the autocrat and the minority group tries to avert the revolution of the masses by setting the maximum value of taxation compatible with the requests of the majority, that is $\hat{\tau} = \tau'^M$. If the tax rate τ'^M enables to curb the revolutionary threats of the majority group, then an elite-biased democracy in which the new ruling elite sets the preferred policy of the masses is the outcome of the political game. First of all, the new institutional arrangement is a formal democracy since the policy chosen is the one

preferred by the majority, it would therefore result from free elections. Second, it is worth pointing out that the following important property holds: $\tau^{'M} < \tau^{M}$. Indeed, the preferred tax rate of the majority decreases when the autocratic elite and the minority merge in a single group leading to a formal elimination of favouritism within population, and therefore to alleviate grievance on the majority side.

Again, we define the generic present value function over the infinite horizons as follows:

$$V^i(EB, \tau^{'M}) = \frac{\hat{y}^i + (\tau^{'M}(\bar{y} - \hat{y}^i) - c[\tau^{'M}]\bar{y})}{1 - \beta}. \tag{12}$$

Proposition 2. *Assume that at $t = 0$ the autocratic elite and the minority join together and set a tax rate $\hat{\tau} = \tau^{'M}$. When the revolution constraint binds ($\theta > \theta^{'M}$) for the majority, there exists a threshold $\mu^{',M}$ such that:*

- *if $\mu < \mu^{',M}$ the majority revolts against an elite-biased democracy;*

- *if $\mu \geq \mu^{',M}$ the majority does not revolt against an elite-biased democracy.*

Proof. Assume $\hat{\tau} = \tau^{'M}$. Comparing $V^M(R) > V^M(EB, \tau^{'M})$ we observe that the inequality holds if and only if $\mu^M[\tau^{'M}] < 1 - (1 - \theta)/(1 - x)(1 - \tau^{'M}) - (1 - \delta)(\tau^{'M} - c[\tau^{'M}]) \equiv \mu^{',M}$. $\qquad\square$

Using Propositions 1 and 2, we can then derive readily the following final result.

Proposition 3. *The optimal strategy of the autocratic elite is to implement an elite-biased democracy when $\mu \in [\mu^{'M}, \mu^{*M})$, to maintain an autocratic regime when $\mu \geq \mu^{*M}$ and to flee the country when $\mu < \mu^{'M}$.*

Proof. First of all, note that using (4) and (11) we derive: $\mu^{'M} - \mu^{*M} = (1 - \theta)^2(\alpha - 1)/(2(1 - x^2)(1 - \delta)) < 0$. Therefore, $\mu^{'M} < \mu^{*M}, \forall t \geq 0$. It follows from Proposition 2 that when revolution constraint binds for the majority group, that is when

$\mu \in [\mu^{\prime M}, \mu^{*M})$, the revolution of the masses is averted by setting an elite biased democracy with $\hat{\tau} = \tau^{\prime M}$. When $\mu \geq \mu^{*M}$, the majority does not revolt against an autocracy setting $\hat{\tau} = \tau^{*M}$. Therefore, given θ, the revolution is averted, and an elite-biased democracy would never emerge. Finally, when $\mu < \mu^{\prime M}$, an elite-biased democracy cannot avert the revolution of the masses. $\qquad\square$

The proposition above is quite informative on the optimality/feasibility of a democracy-biased exit for the autocrat. Clearly, such an arrangement cannot be always optimal from the point of view of the incumbent nor can it be always feasible. In our simple model, conditions on the cost of revolution are needed: it should belong to a (non-zero measure) set of intermediate values. If the incumbent is so weak that the revolution cost faced by the majority is outside the interval, then there is no other exit solution than leaving the country. Symmetrically, it is unclear that a very strong incumbent has to resort to the elite-biased democracy arrangement if her unique objective is to remain in office. These are sensible points that are also acknowledged by Albertus and Menaldo, who stress *"the importance of state capacity in allowing incumbent elites to exit a dictatorship on favorable terms"*. In the case of South Africa, it's difficult to understand the outcome of our model if we do not account for the cost of revolution, which also measures the vulnerability of the incumbents, the impact of international pressures and embargoes. On the contrary, our model applies to the Spanish transition with a tight definition of regime vulnerability.

6   Conclusion

In this paper, we have extended the Acemoglu and Robinson's benchmark frame to study the emergence of an important institutional arrangement, highlighted by Albertus and Menaldo (2018): the elite-biased democracies. We have shown how the merger of the

former political incumbents with the associated (insider) minorities can be an efficient constitutional arrangement for the latter to keep some advantage in a formal democracy set-up. Of course, some conditions are needed: in our model, these conditions concern the cost of revolutions which should be in a set of intermediate values. That is to say, the former autocrat should not be too vulnerable and should not be invulnerable neither, otherwise elite-biased democracies cannot be optimal for the incumbent or even feasible.

Our exposition is meant to be non-technical, and some (deliberately) missing ingredients are worth exploring. One has to do with our restriction to stationary decisions given stationary environments. In order to bring such a class of models to the data, it is necessary to consider for example the exogenous changes in the vulnerability of the regimes (that is parameter μ). Otherwise, it is impossible to understand the emergence and the demise of elite-biased democracies in Spain, South Africa or Algeria.

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