Cashing In: Democracy As Insurance For Elite Wealth

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Abstract

Recent evidence suggests that transitions to democracy are more likely at high levels of inequality. To explain this pattern, we develop a theory of democratization in which elites transition to democracy to secure their accumulated wealth through the rule of law. When inequality is high, the threat of expropriation by a rival elite or revolution is greater. The rule of law in democracy works as an insurance mechanism, providing security for elite wealth in exchange for redistribution. Thus, elites see democracy as insurance and decide to 'cash in' their wealth to secure it by extending the franchise. We illustrate the theory through a formal model and evaluate it using data from 112 countries from 1966 to 2008. We find that transitions are more likely at high inequality conditional on high levels of accumulated elite wealth. We add a new dimension to the debate on inequality and democratic transitions by exploring the role of wealth in the decision making of elites in the process of democratization.

Introduction

In the 1980s and 90s, countries such as Brazil and Chile in Latin America and Thailand and the Philippines in Asia expunged dictatorial rule in favor of democracy after decades of industrialization. Especially striking about these transitions is that they occurred in countries with high levels of inequality, a fact that runs counter to prominent theories in the political development literature (Acemoglu and Robinson (AR), 2006; Boix, 2003). Indeed, recent cross-national empirical studies have shown that high levels of inequality are linked to democratization (Ansell and Samuels, 2014), but our understanding of this phenomenon remains limited. Why is high inequality associated with transitions to democracy?

We address this puzzle by identifying a mechanism that explains why transitions occur more often at high inequality (Ansell and Samuels, 2014). Since high inequality increases the threat of expropriation by a competing autocrat or revolution, risk-averse elites prefer to transition to democracy and secure their wealth through the rule of law. Thus, elites 'cash in' their accumulated wealth and use democracy as insurance. They prefer to pay a premium in terms of redistribution in exchange for guarantees on property rights. The Latin American democratization experience during the third wave informs our logic. Before the 1982 debt crisis, the region had experienced decades of economic growth through state-led industrialization and commodity booms. With high levels of economic inequality, profits accumulated to a small set of elites who grew exceedingly rich by the 1980s and 90s after benefiting directly from authoritarian rule. Instead of risking their wealth to a competing autocrat or to revolution, elites preferred to democratize and safeguard their wealth through the rule of law in democracy.

Our research addresses two key questions in the field of political development: (1) why greater

levels of wealth lead to stable democracy (Acemoglu et al., 2008; Geddes, 1999; Kennedy, 2010; Lipset, 1959; Przeworski et al., 2000; Rueschemeyer, Stephens and Stephens, 1992) and (2) how economic inequality affects democratic transitions (AR, 2006; Ansell and Samuels, 2010, 2014; Boix, 2003; Houle, 2009; Haggard and Kaufman, 2012, 2016). Key questions remain in these debates. In particular, even though we consider it a stylized fact (Geddes, 1999), no consensus exists around a mechanism that explains why countries tend to democratize as they grow wealthier. Neither have we achieved clarity regarding the precise role of economic inequality in democratic transitions (Haggard and Kaufman, 2016).

In this article, we answer these questions by introducing a theory that connects the roles of wealth and economic inequality in the process of democratization. We argue that as wealth levels increase, economic elites become more risk averse to expropriation by an autocrat or by revolution and see democracy as insurance to protect their stock of capital through the rule of law. They prefer to pay a risk premium in democracy through higher taxes in exchange for securing their wealth. Economic inequality, for its part, acts as a destabilization trigger (AR, 2000): the higher the inequality, the higher the threat of authoritarian replacement or revolution. Since established elites risk losing nearly everything after a successful revolution or autocratic takeover (Albertus and Menaldo, 2012), they prefer democracy when both their levels of wealth and economic inequality are high.

An important contribution of our argument is to conceptualize democracy as insurance for elite wealth. When wealth is high, democracy is *less costly* for elites than previously theorized. What democracy does, in essence, is provide a complex formal standard for expropriation via taxation and security through the rule of law. Since the level of risk aversion for elites is increasing in wealth, they will be more willing to accept democracy when they have a higher level of accumulated wealth

stock than when they do not. The novel intuition here is that the value of democracy for economic elites changes as their preferences move from a narrow focus on generating income toward protecting the wealth they have accumulated.

A parallel contribution of this article is to problematize the costs of transitioning to democracy for elites. Elites are assumed to pay a high price of redistribution when they accept democracy (AR, 2006; Boix, 2003). Yet, the influence they maintain over the political process allows elites to reduce their total tax outlays by gaming democracy (Albertus and Menaldo, 2014) or by transitioning from a position of strength (Slater and Wong, 2013). They pay more than in dictatorship and thus satisfy the redistributive demands of the democratic society, but they still manage to preserve a majority of their wealth. We introduce a term in our formal model to define precisely this capacity to 'capture' democracy once a transition has occurred. This term allows us to analyze how a lower expectation of future taxation creates additional incentives for elites to democratize through our insurance mechanism.

Democracy as insurance

The core idea of our theory is that elites transition to democracy in order to secure their wealth and pay a cost of redistribution as insurance. The assumption is that democracy provides greater security for elite wealth through the rule of law than dictatorship. We identify two reasons for this: a lack of long-run credible commitments to property rights by autocrats (Albertus and Menaldo, 2014; Olson, 1991) and the benefits of the rule of law *for elites* in democracy.

The first problem that elites face is the inability to reach a credible commitment on property rights with the political elite in dictatorship, who have different incentives (Albertus and Menaldo, 2014). Economic elites might have a certain preferred policy agenda, but the dictator may favor a

subset of the elite that launched him into power at the expense of others (Albertus and Menaldo, 2012). He can also keep his preferences secret, which exacerbates the informational asymmetries among elite groups. Both the favoring of a subset of the elite as well as information asymmetries create incentives for conflict over power and uncertainty over the future of the regime. This argument is related to Olson's (1991) classic claim that autocratic leaders cannot be forced to keep their promises, and that uncertainty over succession implies that commitments cannot last more than one generation (Olson, 1993). Elites currently benefiting from the favor of the autocrat are not guaranteed the same position of power under a new dictator. In line with these arguments, we contend that long-term credible commitments for elites in dictatorship are unattainable, and thus when faced with a potential for an insurrection from below, democratization solves both sides of the commitment issue: the commitment to redistribute resources to the poor (AR, 2006) and the commitment among elites to secure property rights.

The literature has shown that institutions can solve commitment problems in dictatorships. Autocracies that rely on domestic investment over natural resources protect property rights through binding legislatures (Wright, 2008) and those with strong political parties tend to offer more credible commitments to investors (Gehlbach and Keefer, 2011). Yet, these mechanisms tend to be limited in scope and cannot fix the long-run credibility problem that autocrats face (Albertus and Menaldo, 2014). We also have relatively little idea of how they apply after an exogenous shock and in contexts of high inequality. Our argument is that democratic institutions, primarily when transitioning from a position of strength (Slater and Wong, 2013), can be designed to protect the wealthy elite in a way that ensures a long-term credible commitment to a set of established rules protected by the rule of law.[1]

[1]The literature has tended to identify the poor as the main beneficiaries of the rule of law in democracy, but we

The second argument is that democracy provides a long-term credible commitment to property rights through the rule of law. As argued by Przeworski (2005), certain issues are agreed upon and specified in formal constitutions, which lay down the rules that everyone will follow. Electoral competition offers different political factions the possibility to alternate in power, and with this, a random probability of holding control over residual issues. Randomness over holding office represents a repeated game in which actors accept the outcome of an election with the expectation of triumphing some time in the future. Thus, democracy reduces conflict through alternation in power. In Przeworski's terms, democracy allows for conflict "to be regulated, processed according to rules, and thus limited" (2005, p. 270). This argument ties together the idea that elites transition from a position of strength and the use of the rule of law in democracy to protect property rights, which is the overarching interest of elites and a central part of the specified rules of the game.[2]

Moreover, recent literature has identified key mechanisms that reduce the cost of democracy for elites; or, within our theory, the cost of insurance for elite wealth in democracy. Following Albertus and Menaldo (2014), elites can game democracy by setting roadblocks to redistribution *ex ante*, which makes democracy less expensive. Similarly, Slater and Wong (2013) have claimed that elites transition from positions of strength and continue to thrive in democracy. This idea echoes other claims that conservative elites gradually accept and promote democracy (Ziblatt, 2017; see Cox, 2016). Indeed, an important contribution of our argument is the idea that at high levels of inequality elites will be more adept at gaming democracy and thriving in it. Inequality allows a compact and

argue that elites benefit as well.

[2]Democracies can certainly expropriate through land reform, nationalization and high estate or corporate taxes (Albertus and Menaldo, 2014; AR, 2006; Boix, 2003). However, such actions are a product of the political context and can be reverted in the future through the alternation of power. These forms of expropriation test the limits of property rights, but their essence is respected. This is not the same in autocracy, where property rights can be fully violated without a formal procedure and there is no expectation that the actions can be reverted by contesting power through elections.

small elite that owns vast amounts of resources to dominate democracy and ensure that the poor do not exceed themselves in their redistributive demands. In purely rational terms, the poor should accept any offer which improves their situation in autocracy, and thus the likelihood that wealthy elites dictate the terms of the transition in high inequality is high. Moreover, high inequality gives an advantage to elites in the democratic process through greater resources and impedes the poor's ability to compete on an even playing field. This new finding from the literature is incorporated into our formal model through a 'capture' term that reduces the effective tax rate that elites pay in democracy.

Lastly, an important insight from the democratization literature is the role of external shocks in the early stages of democratic transitions. O'Donnell and Schmitter (1986) contend that transitions to democracy usually begin with an exogenous shock to the authoritarian regime, which splits the elite between Hardliners, who seek to preserve the status quo or increase repression, and Softliners, who prefer to liberalize. External shocks, in their view, create the opportunity for a transition to democracy. Without directly addressing inter-elite competition in our model, we do incorporate the importance of exogenous shocks. We model these shocks as a stochastic term that changes the cost of opportunity of transitioning for the elite (AR, 2001).

Inequality, Repression and Democratization

Why would elites adopt democracy as insurance for their wealth? We argue that high levels of inequality threaten elite wealth in autocracy through two channels. First, high inequality increases mobilization by the poor and, consequently, the risk of revolution from below. Second, it allows for the rise of a populist or caesarian leader that capitalizes on popular discontent and challenges established elites. These threats prompt the elite to extend the franchise and secure their wealth.

Inequality increases the demand for redistribution and thus rises the incentives for the poor to mobilize. Venieris and Gupta (1986), as well as Alesina and Perotti (1996), have empirically shown that there is a positive correlation between inequality and political instability and civil unrest. AR (2000; 2005) also argue that inequality is a mobilizing factor for the poor, which may lead to revolution if they collectively organize. In response to unrest, elites may choose to increase repression (AR, 2006; Boix, 2003). However, elites must also take into account the risk that repression may fail, leading to democracy or, potentially, to revolution —as AR (2005) suggest. A failure to repress effectively sends a strong signal that the ruling elite and their supporters are weak. If democracy ensues, authoritarian elites may be shut out of the transition process and lose the capacity to impose, or at least negotiate, their terms (see Albertus and Menaldo, 2014; Slater and Wong, 2013). This is related to an argument by Houle (2009), namely, that repression costs need not increase monotonically with inequality. Repression has a high probability of success at low and medium levels of inequality, but may be riskier and more costly at high levels.

Elites are also threatened by the rise of a new autocrat that capitalizes on popular discontent and expropriates their wealth once in power. Albertus and Menaldo (2012) have shown that new dictators obtain political stability by relying exclusively on their supporters. A strong signal of this reliance is to expropriate the established elite. New autocrats emerge by capitalizing on the discontent that economic inequality creates. Repression may increase discontent, providing further support for a rising autocrat rather than stabilizing the regime. Thus, wealthy elites in contexts of high inequality prefer a transition to democracy from a position of power over a costly challenge to a rising populist autocrat.

Chile illustrates well how elites process the risks and rewards of repression versus transitioning from a position of strength. When Pinochet lost his 1988 referendum, the military junta was faced

with a conundrum: repress or democratize. Inequality was high[3] and the referendum had mobilized the disaffected, making repression uncertain and costly. The solution was simple: transition from a position of strength and ensure that elements within Pinochet's regime could continue to thrive in democracy (see Munck and Leff, 1997).

The Model

We introduce a formal model to capture the central dynamic of our argument: Elites transition to democracy to secure their wealth through the rule of law when inequality is high. We define inequality as the differences in the distribution of resources across classes within a given economy (AR, 2006; Houle, 2009). Inequality is low when wealth is evenly distributed between capital holders and labor. In this conceptualization, we fall in line with recent literature (AR, 2006; Boix, 2003; Houle, 2009; Haggard and Kaufman, 2012). Elite wealth, on the other hand, refers to the total amount of resources held by the elite.

Our model consists of one agent, the economic elite (E), who decides whether to transition to democracy or remain in autocracy. The initial state is always an authoritarian regime. The elite decide the tax rate in autocracy and have an expectation regarding the tax rate in democracy based on the demands of the median voter if they extend the franchise. To reflect their capacity to capture democracy, we allow the elite to have a discount on their expected tax rate in democracy.[4] Since we are only interested in democratic transitions, we assume that democracy is a terminal or absorbing state. The levels of income and wealth in the economy are stochastic, capturing the importance of exogenous shocks in democratization processes (O'Donnell and Schmitter, 1986; Przeworski, 1991).

[3]The wage share in Chile in 1990 was only .17, placing it well with the lowest 10 percent of values in our dataset. That is, it was more unequal than 90 percent of the country-years in our data.

[4]The results of the model hold without this discount parameter, but transitions require higher levels of wealth. We discuss this in Appendix A.

These exogenous shocks act as triggers to possible revolutions, changing the opportunity cost for the elite to remain in autocracy.

The tax rate τ in democracy is increasing in inequality. There is a final good y and a unique asset with total stock α. We begin our analysis of the economy at time $t = 0$, where the elite's assets are derived through income from capital and the capital stock:[5] $\alpha = i(w) + w$. The final good y of the elite will be affected by exogenous shocks to the economy, which we denote with the term ϵ_t, and thus $y_t = \epsilon_t \alpha$. We assume ϵ_t to be a stochastic term that can take two values

$$\epsilon_t = \begin{cases} \epsilon^g = 1 \text{ with probability } 1 - s \\ \\ \epsilon^b = a \text{ with probability } s \end{cases}$$

where $\epsilon^b = a < 1$ is a period of recession after an exogenous shock, superscripted b for 'bad'. When no exogenous shock occurs, the economy is not in recession and everyone knows times are 'good', or g. Periods of recession change the opportunity cost of a revolution by the poor (see AR, 2001). We capture this logic in our model by assuming that the risk of revolution will only exist after an external shock, following the classic democratization literature of O'Donnell and Schmitter (1986) and Przeworski (1991). We also assume that $s < 1/2$, so that shocks can be considered rare occurrences.

Post-tax income for the elite is given by $\hat{y}_t \equiv (1 - \phi\tau_t)[i(w_t) + w_t]$, where ϕ is a discount factor on taxes to wealth, a term that reflects the capacity of the elite to 'game' democracy. For simplicity, we assume that the tax rate, τ_t, is set to zero by the elite in dictatorship. The expected tax rate in democracy for the elite is the median voter's preferred rate. The post-tax income

[5] For wealthy elites, labor income is low in comparison to the rest of their assets. For simplicity, we assume it to be zero in our model.

of the elite can be re-written as a function of wealth, w, changing the income from wealth to the rate of return of wealth, r. We also add a term, c, to the income of the elite that captures consumption. After rearranging the terms, the final equation for post-tax income for the elite is: $\hat{y}_t \equiv w_t((1-\phi\tau_t) * (1+r_t) - c)$.

At any point in time, the expected utility for the elite is represented by $E_t \Sigma_{j=0}^{\infty} \delta^j U(\alpha_{t+j})$, where δ is the discount factor, and E_t is the expectations operator conditional on all information available. Furthermore, $U(\alpha) = ln(\alpha)$ such that elites are risk averse, and are willing to pay a higher risk premium (in the form of taxes), as wealth increases. The society starts in an authoritarian regime (A), where the probability of revolution $\gamma(\theta)$ in any period $t \geq 1$ is conditional on the level of inequality, θ, and differentiable with $\gamma(0) = 0$ and $\gamma'(\theta) > 0$ for all $\theta > 0$.

The timing of events within a period can be summarized as follows: 1) The state ϵ_t is revealed; 2) the elite decide whether to transition to democracy or stay in dictatorship as a function of the probability that a revolution succeeds; 3) consumption takes place and the period ends.

The state S is one of (ϵ, A) or (ϵ, D), where ϵ is the stochastic term mentioned above and can take the values of $\epsilon = \epsilon^g$ or $\epsilon = \epsilon^b$. For each period, the elite decide whether to stay in dictatorship, $\pi = 0$, or transition to democracy, $\pi = 1$. The state variables that condition this decision are wealth, w, and inequality, θ. Following AR (2000), there is no threat of revolution in $S = (\epsilon^g, A)$. In period t, ϵ_t is revealed and the elite decide whether to extend the franchise $\pi = 1$, or not, $\pi = 0$. We start the analysis by introducing an external shock. Thus, in bad times, the value function for the elite is defined by

$$V(\epsilon^b, A, w, \theta) = \max_{\pi \in \{1,0\}} \{(1-\pi)\tilde{\mathrm{V}}(\epsilon^b, A|w, \theta) + (\pi)\ \tilde{\mathrm{v}}(\epsilon^{\prime} A, w, \theta)\}. \quad (1)$$

Here, $\tilde{\mathrm{V}}(\epsilon^b, A, w, \theta)$ is the continuation value to the elite of remaining in autocracy, and $\tilde{\mathrm{v}}(\epsilon, A, w, \theta)$ is the continuation value of extending the franchise. If the latter term is greater than the former, elites decide to democratize, so $\pi = 1$. The Bellman equations are defined as follows:

$$\tilde{\mathrm{V}}\left(\epsilon^b, A, w, \theta\right) = (1-\gamma(\theta))\left[\ln\left(\epsilon^b w_t(1+r_t-c)\right)\right] + \delta\, W\left(A,\, w, \theta\right) \tag{2}$$

$$\tilde{\mathrm{v}}\left(\epsilon^b, D, w, \theta\right) = \ln\left[\epsilon^b\, w_t\,(1-\phi\tau_t)(1+\,r_t-c)\right] + \delta\, W\left(D,\, w, \theta\right), \tag{3}$$

In dictatorship, elites maintain their current level of wealth with probability $1-\gamma(\theta)$, and take into account the discounted value of future periods in authoritarianism if they decide to remain in the current state. For simplicity, we assume that elites lose everything after a successful revolution. The expected continuation function of remaining in an authoritarian regime is

$$W\left(A\,, w, \theta\right) = (1-s)\,(1-\gamma(\theta))\left[\ln\left(\epsilon^b\, w_t\,(1+\,r_t-\,c)\right)\right] \,+\, s\left[\ln(w_t\,(1+\,r_t\,-c))\right]. \tag{4}$$

In good times we assume that no revolution occurs. Also, as before, the value for the elite of a successful revolution is simplified to zero. Note that in authoritarian regimes, the elite set the tax rate to zero.

$$W\,(D\,,\,w,\theta)\;=\;(1-s)\,[\,\ln(\,\epsilon^{b}\,w_t\,(1-\phi\tau_t)\,(1+r_t-\,c)]\;+\;s\,[\ln(\,w_t\,(1-\phi\tau_t)\,(1+\,r_t-\,c)]. \qquad (5)$$

Equation (5) is the continuation function of remaining in democracy. The probability of good and bad times is defined by s and $(1-s)$, respectively. In bad times, $\epsilon^b = a$, and in good times, $\epsilon^g = 1$.

The elite will prefer to transition to democracy in state (ϵ^b, A), maximizing π to 1, if $\tilde{\mathrm{V}}(\epsilon^b, A, w, \theta) < \tilde{\mathrm{v}}(\epsilon^b, D, w, \theta)$. Solving this, elites in bad times will transition to democracy when

$$(\gamma(\theta))\ln(\epsilon\,w(1\,+\,r\,-c)) \geq -\left[1\,+\,\frac{\delta\,s}{1\,+\,\delta(1\,-\,s)}\right]\ln(1\,-\,\phi\,\tau), \qquad (6)$$

that is, when the cost of remaining in an authoritarian regime is greater than the cost of transitioning to democracy. On the one hand, as the risk of revolution $\gamma(\theta)$ increases, greater wealth w makes the status quo more costly for elites. On the other hand, a higher capture term ϕ reduces the cost of democracy by lowering the effective tax rate τ.[6] Note that when there is no threat of revolution, i.e. $\gamma(\theta) = 0$, the cost of staying in autocracy is zero and the cost of democracy is always positive,[7] so a transition never occurs.

Proposition 1: After an external shock, elites opt for democracy when wealth and the

[6]The right hand of the inequality will always be positive. The $\ln(1\,-\,\phi\,\tau)$ is negative, as $0 < (1\,-\,\phi\,\tau) < 1$, and the term $\frac{\delta\,s}{1+\delta(1-s)}$ is positive.

[7]Even if the cost of revolution were zero, inequality can never be zero and thus the taxation cost is assumes to always take a positive value.

risk from inequality $\gamma(\theta)$ in autocracy are greater than the cost of discounted taxation in democracy $\phi\tau$.

We now solve the formal model when no external shock occurs. In this case, the value function is given by

$$V\left(\epsilon^g, A, w, \theta\right) = \max_{\pi \in \{1,0\}} \{(1-\pi)\,\mathrm{V'}\left(\epsilon^g, A|w, \theta\right) + (\pi)\,\mathrm{v'}\left(D|w, \theta\right)\}, \tag{7}$$

where $\tilde{\mathrm{V}}^e(\epsilon^g, A, w, \theta)$ is the continuation value to the elite after remaining in autocracy and $\mathrm{v'}^e\left(\epsilon^g, D, w, \theta\right)$ the continuation value of democracy. These are given by

$$\mathrm{V'}\left(\epsilon^g, A, w, \theta\right) = \ln\left[w_t\left(1 + r_t - c\right)\right] + \delta W\left(A, w, \theta\right), \tag{8}$$

$$\mathrm{v'}\left(\epsilon^g, D, w, \theta\right) = \ln\left[\,w_t\left(1 - \phi\tau_t\right)(1 + r_t - c)\right] + \delta W\left(D, w, \theta\right). \tag{9}$$

The expected continuation functions of remaining in authoritarian regime or transitioning to democracy are the same as in bad times: $W\left(D, w, \theta\right)$ and $W\left(A, w, \theta\right)$. Elites in good times will transition to democracy when

$$\delta\left(1 - s\right)\left(\gamma(\theta)\right)\ln(\epsilon\, w\left(1 + r - c\right)) \geq -\left(1 + \delta\right)\ln(1 - \phi\,\tau). \tag{10}$$

In (10), as was the case in bad times, a higher probability of revolution increases the costs of staying

in autocracy as wealth rises. However, as the threat of revolution only emerges in future periods of bad times, the term $\delta(1-s)$ reduces the overall cost of autocratic rule in good times.[8] As with bad times, taxation costs in democracy are reduced by the capture term ϕ, but the term $1+\delta$ makes the overall cost of democracy higher.[9] Thus, transitions in good times are less likely.

Proposition 2: If no external shock occurs, elites opt for democracy when wealth and the future risk from inequality $\delta(1-s)\gamma(\theta)$ in autocracy are greater than the cost of discounted taxation in democracy $\phi\tau$.

Comparative Statics

To solve this Markov decision process, we assign values to the parameters, as informed by the literature (AR, 2001; Przworski and Limongi, 1993). We set the future discount parameter to $\delta = 0.9$; a consumption parameter to $c = 0.02$; the net rate of return to $r = 0.05$;[10] the penalization term after an external shock $\epsilon^b = 0.7$; the probability s of remaining or transitioning to good times to 0.707;[11] and the discount factor to taxes in democracy to $\phi = 0.75$, which means that elites manage to avoid paying 25 percent of their fair share.[12] We have a total of four states, and all states except for regime type can take multiple values. That is, the economy can be in good or bad times, inequality can be low, medium, or high,[13] and wealth is a continuous set of positive values. We produce value functions for each combination of states, and a decision rule for elites in

[8] δ is the future discount and $(1-s)$ is the probability that there will be bad times in the future.

[9] This is because $\delta > \frac{\delta\, s}{1+\delta(1-s)}$.

[10] Both terms, c and r are net of depreciation. In the model, we adjust these terms to account for a depreciation of around 10 percent (Piketty, 2014).

[11] We estimate the probability of having a recession from the data.

[12] Changing the values given to each parameter, within reasonable theoretical expectations, does not alter the results of the model.

[13] For the probability of revolution, we set $\gamma(\theta)$ at 0.025, 0.075, 0.2, for low, medium, and high inequality, respectively. For the tax rate in democracy, we set *tau* at 0.4, 0.2, and 0.1 for high, medium, and low inequality, respectively.

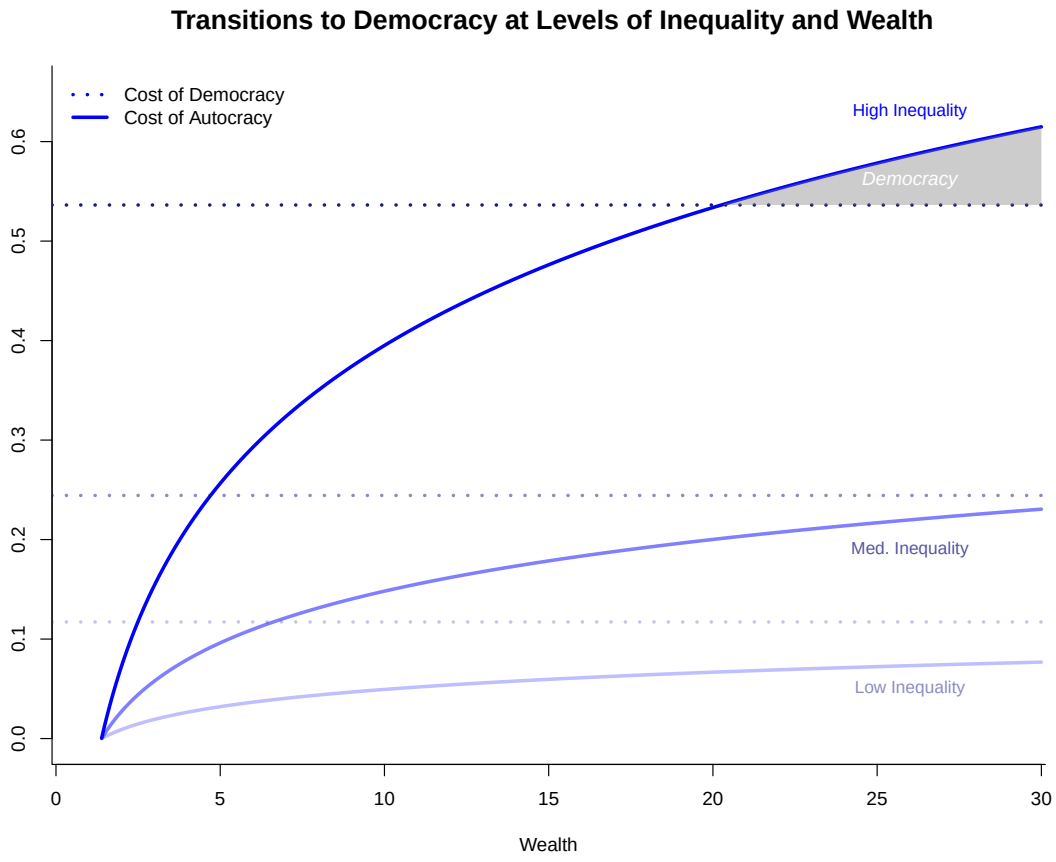

Figure 1: Democratization as a function of wealth and inequality

all possible states.

Figure 1 reports the decision rules for the elite after an external shock. The wealth parameter w in the model is on the x-axis and the expected cost in each state on the y-axis. The straight lines report the cost of remaining in authoritarianism at different levels of inequality and wealth (left side of equation 6.) The dashed lines represent the cost of transitioning to democracy, which is not a function of wealth (right side of equation 6.) When the cost of remaining in autocracy surpasses the cost of democracy, elites choose to transition to democracy. We represent this with a shaded gray area.

The curves show that, provided an external shock, elites are more likely to choose to transition to

democracy at high levels of inequality as wealth increases. The elite decide to extend the franchise when the risk to their wealth is high, but only after they have already accumulated a certain amount of wealth. The cost of remaining in dictatorship is lower than the cost of democracy in both medium and low inequality, and elites do not transition.

These results mirror the democratization processes we have observed, for example, in Ecuador and Brazil. In Ecuador, the commodity booms during the military dictatorship led to urbanization and the "deepening of social and regional inequalities" (Larrea, 1994). Elites accumulated large amounts of wealth, leaving the social and economic conditions of the poor mostly unchanged and giving rise to opposition from unions and indigenous organizations (Acosta, 1995). The strengthened unions and the growing indigenous movement made elites more than willing to avoid turmoil by supporting a democratic transition, an elegant way to preserve their wealth and establish a democracy on which they would attempt to exert control.

In Brazil, economic growth averaged 7 percent a year from 1960 until 1980 during ISI and under military dictatorship. The development model stimulated demand through a "deliberate effort to skew income distribution in favor of upper income groups" (Kohli, 2004), which led to a fragmented multi-class state, supported by the economic elite (and by international actors). The economic crisis of 1982-85 provided the necessary destabilization to the military regime, and labor strikes led by Lula da Silva sent a clear signal that the working class demanded profound political and institutional change. This spurred Figueiredo's administration to try to "carefully control Brazil's transition from dictatorship to democracy and, in the process, distribute political capital among the sectors of society that it deemed fit to govern" (Skidmore and Silva, 1988). At that point there were few downsides to democracy: it would appease worker demands, lessen conflict and, more importantly for elites, protect the huge wealth they had accumulated under ISI and

military rule at a modest redistribution cost.

Two additional results from the model merit mention. First, democratization is unlikely without an external shock, which confirms the hypotheses of O'Donnell and Schmitter (1986) and Przeworski (1991). Second, the model lends credence to the intuition that capturing democracy is relevant to democratization processes (Albertus and Menaldo, 2014). Increasing the 'capture' term ϕ in our model makes democracy more attractive to elites, as it reduces the cost of democracy (it shifts the dashed lines downward.) However, the effect is more pronounced at high levels of inequality, where transitions become more likely with less accumulated wealth, especially when $1 - \phi$ is high.

Empirical Analysis

Data

Our primary hypothesis is that high levels of inequality and rapidly increasing elite wealth foster democratization. To test it, we require valid measures of economic inequality, elite wealth, and democracy. For the latter, we follow the literature and use a dichotomous measure of democracy for each country-year observation in our dataset (Boix, Miller and Rosato, 2012).[14]

We measure economic inequality as the share of capital that accrues to labor (wage share - WS), which captures cross-class differences between capital-holders and labor. This variable is more fitting to theories that focus on inter-group inequality and class cleavages (Boix, 2003; AR, 2006; Houle, 2009). The higher the share of output that accrues to wages, the more *equal* the society. The measure is taken from the INDSTAT2 dataset produced by the United Nations International

[14]We use Boix, Miller and Rosato's (2012) expanded measure to 2015, which can be found at https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/FJLMKT. The results hold using alternative datasets such as Democracy and Dictatorship (Cheibub, Gandhi and Vreeland, 2010).

Development Organization (see Knutsen, 2015).[15] For our results to be intuitive, we have inverted the WS variable. Now the greater the variable's values, the higher the level of inequality. It captures the share of output that accrues to capital holders, a concept similar to the one used by Houle (2009, 2016). The data are available for 163 countries from 1963 to 2008. The advantages of our measure are the large number of observed data points and its sensitivity.

Another widely used measure of inequality is the Gini coefficient, which captures the distance between the largest and smallest individual incomes in society. However, the Gini coefficient does not measure differences across groups or classes. Houle (2009) provides a good account of this distinction.[16] In Appendix A1, we include alternative models using (1) Houle's (2009; 2016) capital share variable and (2) Solt's (2016) disposable income GINI index. More information regarding these measures is provided there.

No yearly cross-national variable exists, to the authors' knowledge, that measures elite wealth accumulation. Ideally, our measure should capture the total amount of asset stock owned by the economic elite.[17] One option is to obtain the total amount of wealth in an economy and multiply it by the share that belongs to the top centile. The closest approximation to this variable can be obtained from Piketty's data (WID from Alvaredo et al., 2018). We can multiply his measure of total private wealth by the share of wealth owned by the top decile or centile (Alvaredo et al., 2018). Unfortunately, the sample of countries in the WID data is small and dominated by countries that have not experienced any recent transitions to democracy.

We construct a new measure using widely available data from the World Bank and contrasting a subsample with the WID data. First, we take yearly cross-national Gross Fixed Capital Formation

[15] The dataset can be found at https://stat.unido.org.

[16] In Appendix A1, we provide an an alternative test using Solt's (2016) variable of inequality, constructed using an adjusted Gini index and multiple imputation. More detail on this variable is provided there.

[17] We broadly define the economic elite as top centile of an economy.

(GFCF) in current dollars from the World Bank to estimate the total new wealth generated by capital each year.[18] This variable captures a country's yearly total domestic investment in fixed assets. It includes land improvements, machinery purchases, private infrastructure construction (i.e. residential, commercial and industrial buildings), and the net acquisition of valuables.[19]

For each country, we obtain the cumulative sum of new wealth for all years in the sample. This gives us the amount of wealth generated in a given country-year from the time the country is first observed. It does not capture total wealth accumulation, as we cannot estimate an initial value for wealth. We could add GDP or some similar proxy of national wealth as the initial value, but that would introduce noise and generate its own set of issues, such as lumping in population. To avoid these identification issues, we simply capture the pattern of elite wealth accumulation within countries since the moment they are observed, rather than estimating some initial value of wealth. If elite wealth grows rapidly, elites are more likely to cash in and transition to democracy. If it does not, elites have an incentive to remain in the status quo.

We make three substantive improvements to the cumulative sum of wealth described above. First, countries generate increasing yet similar amounts of wealth year-to-year. The cumulative sum of GFCF, therefore, experiences rapid growth the first few years and linear growth thereafter.[20] To make wealth increase linearly across time, as in the WID data, we replace each country's first value of accumulated wealth with its fifth.[21]

Second, rather than dealing with gross numbers of wealth that are abstract and do not truly

[18] Data accessed on April 2018. It can be found at: https://data.worldbank.org/indicator/NE.GDI.FTOT.CD

[19] An in-depth description of the variable is included in Appendix A1, including the World Bank's own detailed definition.

[20] Consider a country that creates 100, 110, 120, and 130 units of wealth in four years. The sum will be: 100, 210, 330, and 460 units. Growth from the first period to the second is 110 percent; from the second to the third, 55%; and from the third to the fourth, 35%. After a few years, growth is linear on average both in our data and in the WID measure. We refer to the WID measure sometimes as Piketty's variable for reference.

[21] We chose the fifth value as growth becomes linear in the data on average after the fifth value of wealth.

represent the total amount of wealth available, we create a ratio: We divide each year's cumulative wealth by the amount of wealth the country produced the first year. Generating a ratio of wealth allows us to capture precisely within-country elite wealth accumulation and minimize the effects that cross-national variation may have in generating the variable. The reason for this is simple: we consider that elites in one country are unlikely to compare themselves with elites in other countries when deciding whether to transition to democracy. Wealth is not the same in every country, given differences in prices and different pressures on consumption, savings and so on. It is more useful to net out these differences for the logic we advance in our paper.

Lastly, we adjust the cumulative sum of wealth for depreciation and state investment. We subtract 10 percent from each year's wealth to account for depreciation (Piketty, 2014) and another 15 percent to account for the share of total investment by the government. We cannot remove the share of wealth that belongs to the non-elites, but we contend that this is a small part of the measure. New wealth is largely generated by capital holding elites. To make sure these assumptions are substantiated, we run a series of stress tests on our final variable. We compare WID's data on total private wealth and elite wealth with a subsample from our dataset.[22] A high correlation with these known measures should provide some external validity for our proxy.

The WID's *net private wealth* variable captures the total level of wealth owned by private citizens in a country-year. The correlation between this measure and our proxy is $r = 0.949$ on a subsample of 770 observations from 21 countries.[23] We then multiply the WID's net private wealth

[22]Our variable cannot capture all forms of wealth that elites may have, such as financial assets, stocks and savings. Neither does it account for foreign ownership of assets. However, we contend that these omissions do not harm the validity of our measure. The level and growth of these assets tend to be highly correlated with the ones we use in our measure, and foreign ownership, while important, appears to have a small impact on our measure overall. We provide as evidence of our logic the correlations with Piketty's private wealth data for a subsample of countries. These are all above 0.9 and are detailed below.

[23]These are the US, Canada, China, Russia, the United Kingdom, Australia, Czech Republic, Japan, Mexico, South Africa, Netherlands, South Korea, Denmark, Germany, France, Greece, Italy, Spain, Norway, Finland and Sweden. Within-correlation scores are stable across groups, with the exception of South Africa and, to a lesser

variable by the share of wealth owned by the top 5, 1 and 0.1 percent. These measures directly capture the wealth owned by different sets of elites. The correlation is high for all three measures. We obtain $r = 0.913$ for the total wealth of the top 5 percent, $r = 0.925$ for the 1 percent, and $r = 0.946$ for the 0.1 percent. These correlations include 389 observations for 11 countries.[24] These high r values are indicative of the strength of our variable in measuring our theoretical concept of elite wealth accumulation. We provide further information about the variable and a detailed country-by-country comparison between these variables in Appendix B. A description of the control variables is also included in Appendix B.

Methods

We test our theory by interacting economic inequality and wealth accumulation and estimating their joint effect on democratization. The expectation is that the interaction will be positive and the marginal effect of wealth accumulation will be statistically significant at high levels of economic inequality. These tests are reported in the results section.

Two modeling techniques are employed. First is the dynamic probit (Przeworski et al., 2000), which is commonly used to explore the relationship between inequality and democratization (Boix, 2003; Houle, 2009). We interact each explanatory variable with the lag of the response variable and produce two coefficients, one for democracies and one for nondemocracies, for each independent variable. We are not interested in democratic breakdowns, and therefore we only report the coefficients for transitions to democracy in the tables. We use the dynamic probit over other logistic regression specifications for two reasons: including both types of transitions in the model reduces

extent, Greece. The correlation stays high if each or both countries are excluded from the test.

[24]The US, Canada, Australia, Japan, Netherlands, South Korea, France, Germany, Italy, Spain and Sweden. Within-correlation scores are stable across all groups.

bias (see Metzger and Jones, 2016), and including the lag of the dependent variable accounts for state dependence. The second model we use is the linear probability model with country fixed effects (LPMFE). Even though the dynamic probit's autoregressive nature does away with much unobservable heterogeneity, it still exploits between-variation. The LPMFE uses within-variation and helps us be certain that time-invariant unobservables are not affecting the relationship of interest. We present models with year fixed effects to net out any heterogeneity related to specific years. We also include a time trend to account for the fact that wealth and events of democratization increase naturally with time.

We use six models in each test. The first four are dynamic probit specifications and the last two are LPMFE models. First, we provide a naïve model, which describes the basic relationship between the main variables of interest. It also discards the option that the relationship is spuriously created by adding controls, which inevitably remove variation. Second is a full dynamic probit model with the relevant controls. The third model adds year dummies and the fourth model includes both year and region dummies (Houle, 2009; Miller, 2012). The fifth model is the fully specified LPMFE. The sixth adds year fixed effects to the LPMFE.

Results

We begin by showing the relationship between the two main variables of interest and democratization descriptively. Figure 2 plots the observed probability of a transition to democracy at different levels of wealth and inequality. This is obtained by dividing the number of observed instances of democratization by the total number of observations that fall within 5 different quantiles of both independent variables. Democratization seems more likely at high levels of inequality, although the probability begins to increase at medium levels. This suggests a complex nonlinear effect. The

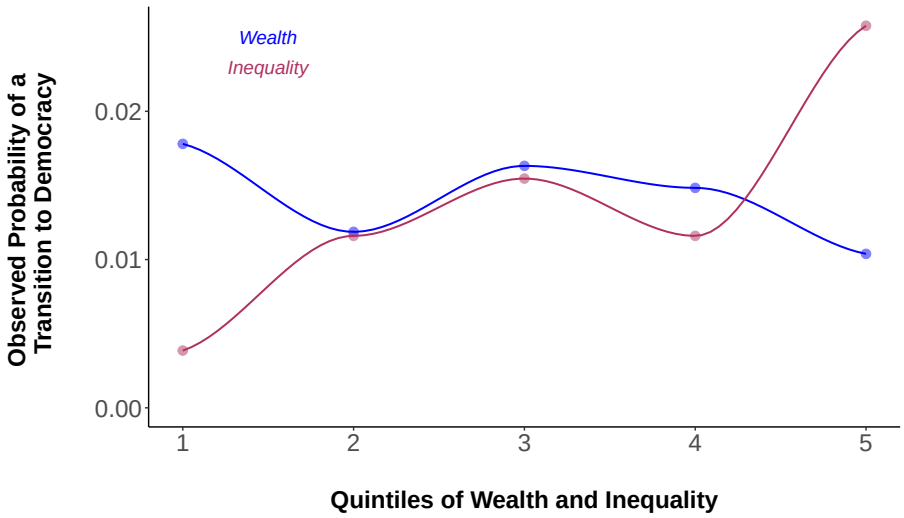

Figure 2: Frequency of Transitions to Democracy at Different Quintiles of Wealth and Inequality.

effect of wealth accumulation is less conclusive on its own, which matches our theory well. The relationship is nonlinear but differences are inconclusive throughout. The difficulty in assessing the potential effect of both variables on democratization suggests an interactive effect could be at play.

Our central hypothesis is that high inequality leads to democratization conditional on rapid wealth accumulation among the elite, who seek to secure their wealth against expropriation through the rule of law. We test it by interacting wealth accumulation with economic inequality, using the models described above. Table 3 shows the results. All variables have been centered at the minimum for easier interpretation. The two constitutive terms of the interaction represent the effect of the variable on democracy when the other is at the lowest observed value in our sample.[25]

The first two coefficients represent the effect of wealth and economic inequality on democracy when the other variables are at their minimum values. The statistical and substantive significance of the two terms is trivial. The test of our theory lies in the interaction terms, which are positive and

[25] Whether these terms are significant is not relevant for our theory, as we are not interest solely on the effect of each variable at the lowest value of the other. The interaction term, coupled with the marginal effects plot that follows the table, strongly support our theory.

	DV: Democracy					
	Dynamic Probit				*LPMFE*	
	1	2	3	4	5	6
Elite Wealth	-0.829**	-0.967***	-1.239***	-1.148***	-0.018	-0.037
	(0.414)	(0.355)	(0.376)	(0.423)	(0.030)	(0.032)
Inequality	-0.194	-0.327***	-0.413***	-0.437***	-0.022*	-0.027**
	(0.122)	(0.110)	(0.110)	(0.119)	(0.012)	(0.012)
Elite Wealth × Inequality	0.112**	0.128***	0.165***	0.156***	0.008**	0.009**
	(0.055)	(0.047)	(0.050)	(0.055)	(0.004)	(0.004)
GDPpc		-0.082	-0.091	-0.128	-0.049***	-0.054***
		(0.082)	(0.091)	(0.095)	(0.012)	(0.014)
Growth		-0.026*	-0.022	-0.021	0.000	0.000
		(0.013)	(0.014)	(0.015)	(0.001)	(0.001)
Oil		-0.102***	-0.113***	-0.095**	-0.007*	-0.007*
		(0.037)	(0.042)	(0.038)	(0.004)	(0.004)
Previous Trans.		0.276**	0.240	0.203	0.031**	0.034**
		(0.140)	(0.146)	(0.161)	(0.014)	(0.014)
Time Trend		0.019**	0.008	0.013	0.001	0.002
		(0.009)	(0.014)	(0.014)	(0.001)	(0.004)
Ethnic fract.		0.042	-0.014	-0.039		
		(0.369)	(0.381)	(0.340)		
Religious fract.		0.207	0.074	-0.163		
		(0.414)	(0.443)	(0.450)		
British Colony		-0.109	-0.066	0.149		
		(0.206)	(0.219)	(0.217)		
New Country		-0.656***	-0.727***	-0.484**		
		(0.179)	(0.188)	(0.211)		
Constant	-0.363	1.080	2.005*	1.941*	0.518***	0.572***
	(0.901)	(0.983)	(1.086)	(1.041)	(0.114)	(0.216)
Country FE	-	-	-	-	*Yes*	*Yes*
Year FE	-	-	*Yes*	*Yes*	-	*Yes*
Region FE	-	-	-	*Yes*	-	-
Observations	3336	3037	3037	3037	3050	3050
Pseudo R^2	0.853	0.869	0.880	0.884		
Overall R^2					0.874	0.873
Log-Lik.	-329.472	-266.877	-243.458	-236.403		

* p < 0.1, ** p < 0.05, ***p < 0.01. Standard errors in parentheses.
All time-varying IVs have been lagged. GDP, elite wealth, and oil are logged.

Table 1: Effect of Wealth Accumulation and Income Inequality on Democratization

statistically significant in all models, as our theory predicts. The coefficient shows that a marginal increase in wealth has a statistically significant and positive effect on democratization conditional on higher levels of inequality, and viceversa. The coefficients are consistent across dynamic probit specifications (Models 1-4), which means that the interaction is robust to the addition of controls and year and region dummies. They are also consistent in the LPMFE (5 and 6).

The coefficients for the control variables also display interesting findings and lend credence to the model specification. Growth is negative and close to statistical significance in all dynamic probit models, and oil is negative and significant in all models.[26] Both variables are known to affect democratization negatively (Wright, 2008; Houle, 2009; Ross, 2001). GDP per capita has a weak negative effect in the dynamic probit models, as shown in Houle (2009; 2016), and a stronger negative effect in the LPMFE.[27] Previous transitions, as expected, have a positive effect on democratization, as countries that have democratized in the past are more likely to experience democratization again. New countries that attained independence after de-colonization are also less likely to democratize, which is consistent with previous research (Houle, 2009). We now assess the substantive significance of these findings.

Figure 3 shows the marginal effects using Models 3 and 6 from Table 1. In Model 3, the marginal effect of increases in income inequality on the probability of democratization is significant at high levels of wealth accumulation. More specifically, a one unit increase in inequality will generate a statistically significant change on the probability of democracy when wealth accumulation surpasses

[26]The effect of growth is not significant in the fixed effects models because the controls are not interacted with the lag of the dependent variable, only the interaction terms are. The effect cancels out for growth in democratic survival (positive) and democratization (negative). The variable plays the same role as a control.

[27]This is explained by the strong negative effect for nondemocracies after adding the wealth variable, which has never been done in a previous analyses. Indeed, we are extending our work to understand whether the endogenous effect of greater development is associated to democratization only insofar as elites become wealthier and seek to democratize for safety. GDP may be best described as having an exogenous effect (Przeworski et al., 2000), but further research on this issue is needed.

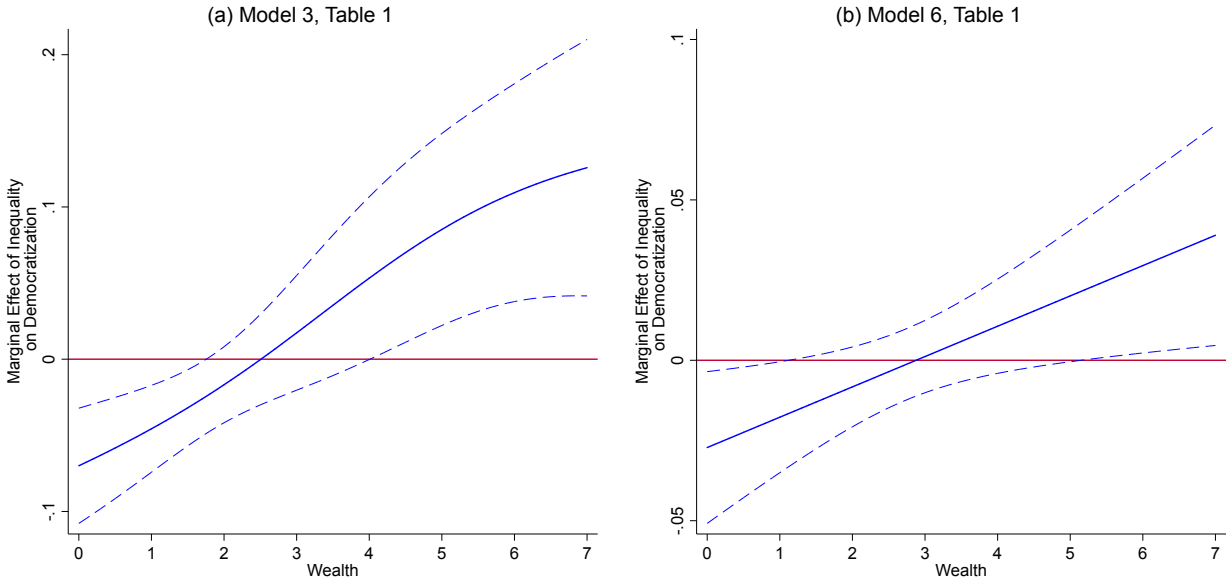

Figure 3: Marginal effects of inequality on democratization at different levels of wealth accumulation.

a value of 4.1 in our data, which corresponds to the 83rd percentile. For a country with a value of wealth accumulation of 4.5, such as South Korea in the mid-1980s, any one-unit increase in income inequality will lead to a seven percent jump in the probability of democracy. If a country were to go from medium (50th percentile) to high inequality (80th percentile), its probability of democratizing would increase by 10 percent, a remarkably high probability for a rare event such as democratization. The prediction in Model 6 is also substantively significant: for countries that reach exceedingly high levels of wealth, such as 5 in our scale, the probability of democratizing climbs 20 percent with every one unit increase in inequality. These results serve as strong confirmation of our theory. At higher levels of wealth accumulation, increases in the level of income inequality have a significant positive effect on the probability of democracy.[28]

[28] We show the marginal effects of inequality on democratization at different levels of wealth to model precisely what the formal model shows: as the risk of expropriation increases, elites decide to transition as a function of their accumulated wealth. We could also show the marginal effects of increases in wealth at different levels of inequality, and we do so in Appendix B.

Alternative Hypotheses and Robustness Checks

Perhaps the empirical relationship we identify in this article is driven by a particular form of inter-elite conflict, namely, a new bourgeoisie that pushes for democracy against an established elite that dominates political power. The politically disenfranchised elite obtain a credible commitment against expropriation through democracy. This is in line with a theory proposed by Ansell and Samuels (2014). However, this theory only partially explains the empirical findings in this article. It cannot fully explain the strong association between wealth accumulation and democracy at high levels of inequality. This alternative explanation would hold only if we assume that wealth accumulates primarily in the new rich, which is unlikely. Rather, all elites continue to accumulate, and autocracy cannot be arranged in such a way that it secures everyone's riches from expropriation. The existence of multiple wealthy elite groups creates uncertainty over who may take power. Once in power, new dictators rely on their own coalition and expropriate the rest (Albertus and Menaldo, 2012). If the established elite does not transition to democracy, they risk losing everything to a new autocrat or revolution. Indeed, many transitions are led by conservative elites in power (Loxton, 2015; Ziblatt, 2017). The risk of expropriation and high wealth lead these elites to democratize and safeguard their wealth.

Our relationship could also be a function of time. The argument could be made that accumulated wealth increases over time and, eventually, international pressures force countries with greater wealth to democratize. We would still observe the effect of high wealth, but it would in fact be trivial. Theoretically, this is difficult to justify given that, first, countries do not naturally democratize as their wealth increases. As we saw in Figure 1, there is no apparent linear relationship between wealth and democracy. A threat to expropriation needs to exist to persuade elites to

cash in and democratize. We argue that inequality provides that threat after an external shock. Empirically, we include a time trend in our model to rule out this hypothesis. As expected, the time trend is positive in all models and statistically significant in the fully specified model without time dummies.

Third, good institutions help elites accumulate wealth faster and also make it easier for countries to transition to democracy, as they establish democratic qualities to a country ex ante. While this argument makes intuitive sense, it does not appear to hold empirically. British colonies would be expected to have better democratization outcomes, as the British Empire generally replicated its institutional structure in their colonies. However, in our models the association between British colonies and democratization is generally negative or weakly positive in some models (AR, 2013). It never reaches statistical significance. The same occurs in Houle (2009) and Miller (2012). To lend greater credence to the idea that institutions do not drive democratization on their own and could explain the relationship we observe in this paper, we replicate Acemoglu, Johnson and Robinson's (2001) seminal piece on the effect of institutions on development, but using democracy in 2015 as the dependent variable. The sign is positive but not significant in any of the models except for the model with no controls. We show this in Tables B4 and B5 in Appendix B.

A final argument is that our relationship is driven by GDP per capita and the underlying correlation between GDP and our wealth variable. It is true that countries with greater GDP will generate more wealth, and that countries with greater GDP are more often than not democracies. We control for GDP to rule out this hypothesis, but a high correlation between GDP and elite wealth could lead to multicollinearity. Here, the correlation is quite low at $r = 0.207$. This low r value rules out multicollinearity and makes it unlikely that the relationship is driven by the similarity between these two variables. In the regression, the variance inflation factor for the GDP

control is 3.2, below any value that would be cause for concern.

Conclusion

In this article, we propose a theory of democratization based on the role of democracy as insurance for elite wealth. We argue that transitions to democracy occur when economic elites seek to secure their wealth against expropriation in authoritarianism, and pay a premium in terms of higher taxes in exchange for the security of the rule of law. Democracy is more likely at high levels of economic inequality because there exists an increased threat to property. These threats are revolution from below and expropriation by a competing autocrat who capitalizes on popular discontent.

The implications of our theory are substantial. First, this is the first paper in the field to address the interrelated role of wealth accumulation and economic inequality. Empirically, we provide an alternative approach to testing these relationships, modeling the effect of time more precisely and incorporating fixed effects specifications into the debate. We also provide a novel proxy measurement for wealth accumulation.

Democracy is often understood as an equilibrium between competing forces that limits conflict. Distinguishing the impact of modernization as a function of the benefit it brings to the elite better elucidates the motivations of the actors vying to reach that equilibrium. In doing so, we not only connect the bourgeoisie's role in the process of democratization that we find in Moore (1966), but also explain why these groups remain powerful in new democracies. In his letter to the Hungarian workers from 1919, Lenin wrote that the "bourgeois democracy is just a specific form of bourgeois dictatorship," in which groups with greater resources impose their will on those who own less. We contend that elites are interested in democracy insofar as it guarantees their economic interests better than any alternative system. Understanding how democracy may benefit all elites rather

than harm them helps us see democratization in a new light.