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A Theory of Civil Conflict and Democracy in Rentier States*

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Abstract

The effects of resource rents on the political equilibrium have been studied in two main types of models. The first tradition uses models of conflict, and studies how resource rents affect the intensity and duration of civil conflict. The second tradition uses political economy models, where resource rents affect the political equilibrium due to changes in the costs and benefits of buying votes. Although they provide considerable insight, these traditions have little to say about when democracy emerges, and about when conflict emerges. In this paper, by integrating the earlier model traditions, we suggest the simplest possible framework we can think of to study the choice between conflict and democracy. We show how factors such as resource rents, the extent of electoral competition, and productivity affect economic and political equilibria.

Keywords: Political economy; resource curse; endogenous democratic institutions
JEL classification: $H1$; $D72$; $D74$; $Q32$

I. Introduction

One of the empirical questions studied the most in the conflict and democracy literature over the last decade has been the connection between resource abundance and civil conflict. According to Collier and Hoeffler (2000), "the extent of primary commodity exports is the largest single influence on the risk of conflict" (p. 26). Damania and Bulte (2003) show that resource-abundant countries are on average less democratic than resource-scarce countries. Several empirical studies—for instance, Elbadawi and Sambanis (2002) and Fearon and Laitin (2003)—challenge the findings of the large literature initiated by Collier and Hoeffler, and conclude that

a broad resource measure that includes all primary commodities does not have a robust association with civil conflict. Many studies have therefore examined which particular natural resources may contribute to conflict, and which do not.

Ross (2001) finds that, after controlling for other factors, countries rich in oil have a higher probability of dictatorship than other countries. Auty and Gelb (2001) likewise conclude that "point resources" such as minerals have a particularly strong association with destabilizing social tension, while Murshed (2004) suggests that "point resources" retard democratic and institutional development. Similarly, de Soysa (2002) and Fearon and Laitin (2003) find that a dummy variable for oil exporters makes civil conflict more likely. Lujala (2005) concludes that onshore oil production increases the probability of civil conflict, but that offshore production does not, and Lujala, Gleditsch and Gilmore (2005) suggest that secondary diamonds increase the likelihood of conflict. In general, it seems fair to say that the results from the abundant empirical literature indicate that oil, gemstones, minerals and other "lootable" resources are associated with civil conflict, but that less lootable (and less valuable) resources such as agricultural land do not appear to have a similar effect. An overview of this empirical literature is provided by Ross (2004).

Theoretical studies of the effects of resource abundance on the political equilibrium can be divided into two main groups. The first group consists of conflict models where resource rents affect the intensity and duration of civil conflict. Collier and Hoeffler (2000) explain their empirical findings of resource abundance as a cause of conflict in a model assuming that more resource rents make fighting more possible due to available financing, as well as more profitable since the prize for the "winner" is larger. Mehlum and Moene (2002) and Skaperdas (2002) show that fighting efforts and the social waste of fighting increase with the size of natural resource rents. Torvik (2002) studies a rent-seeking game where more natural resources make rent seeking relatively more attractive when compared with production. He shows that, as a consequence, more natural resources in such a setting decrease overall welfare. Olsson (2006) sets up a predator–prey model where rebels choose between peaceful production and predation on natural resources. More natural resources may then depress public investment in favor of military spending used to fight off rebels.

The second group of studies where resource abundance affects the political equilibrium consists of models where voters are explicitly modeled. Tornell and Lane (1999) show how resource rents may yield a political equilibrium whereby each group attempts to acquire a greater share of production by demanding more transfers. In turn, more transfers increase the tax rate and reduce the net return on capital. This redistributive effect may then outweigh the direct effect of increased productivity. Alternatively,

Robinson, Torvik and Verdier (2006) explicitly model politicians, and show that the costs and benefits of buying votes through inefficient redistribution, for instance by bribing voters with well-paid but unproductive public sector jobs, increase with public sector resource income. Acemoglu and Robinson (2006a) model underdevelopment which results when political elites block technological and institutional development because such development may erode their incumbency advantage. Such blocking is more likely to arise when the rents from maintaining power are high, such as where public income is derived from natural resources. In addition, and as discussed in Acemoglu, Robinson and Verdier's (2004) personal rule model, greater resource rents make it easier for dictators to buy off political challengers. Damania and Bulte (2003) show that when politicians maximize the surplus from a lobbying game, resource abundance may increase the income from lobbying, but divert the economy from its optimal path. Ades and Di Tella (1999) discuss how natural resource rents may stimulate corruption. Robinson and Torvik (2005) show that increased resource rents may make it politically efficient to win votes by building "white elephants", rather than efficient investment projects, even when voters are fully rational.

Surprisingly, however, while there are many well-articulated models of conflict and resource rents on the one hand, and models of politics and resource rents on the other, a basic theory of how the choice between democracy and conflict endogenously depends on resource rents has not yet been developed. This paper attempts to address this theoretical deficiency by suggesting a simple framework that integrates these established model traditions, and allows politicians to choose endogenously the type of regime that is in their own interest.

A crucial real-world motivation for our model is that the agents who may run in an election are those who may alternatively engage in civil conflict. Examples include UNITA and MPLA in Angola, FRELIMO and RENAMO in Mozambique, and ZANU and ZAPU after independence in Zimbabwe in 1980, *La Violencia* between the Liberal and Conservative parties in Colombia 1946–1963, and many more. Even ETA in Spain and the IRA in Ireland have been closely associated with (or part of) political parties.

It may be the case that the attractiveness of fighting increases with resource rents. But from this, it cannot be concluded that resource rents make conflict more likely. A sizable literature points to the fact that resource rents also make the expected payoff from electoral competition higher, as resources are to a large degree publicly owned or taxable. The question is not whether resource rents make the absolute payoff from conflict higher, but rather whether resource rents make the payoff from conflict *relative* to democracy higher. To study this, it is necessary to integrate

the conflict models and political economy models.[1] Thus, we concur with Ross (2004), who discusses the mechanisms pointed out in the previous literature and argues that (p. 344), "Many of these arguments are, at a minimum, underspecified".

Violent competition is costly. An army has to be set up, soldiers need to be paid, and property may be destroyed. However, competing through conflict also provides politicians with autonomy in case they win: that is, they are not accountable to voters. Competing in a democracy, on the other hand, is arguably less costly than competition through conflict. (In our case, we assume that the direct cost of running in an election is zero.) However, politicians are accountable to voters, and for opportunistic politicians this amounts to a cost. They get away with less rents than if they were not constrained by voters. Thus, it is not clear *a priori* that politicians would always prefer one regime to the other. In our model, the politicians' optimal regime choice will be seen to depend on political and economic characteristics of the economy at hand.

Although a main focus of our model is to study the economic causes of the choice between conflict and democracy, the model may also shed some light on the economic consequences. Under conflict, income for the "electorate" is lower than under democracy. As politicians are opportunistic in our setting, there are no income transfers under conflict—politicians simply try to retain power by paying soldiers for their fighting services. Under democracy, however, the "fight" for power is different—policy platforms are designed to attract voters. In such a regime political rents are to some extent transferred to voters, which implies that their income is higher under democracy than under conflict. Furthermore, aggregate income is lower under conflict than under democracy. Fighting is unproductive (or destructive) from the point of view of society. When resources used for fighting have an alternative use with positive productivity, conflict reduces aggregate income even if destruction does not take place.

Other than the literature discussed so far, our model is inspired by and most closely related to the innovative studies of Acemoglu and Robinson (2000, 2001, 2006b). As in their models, the key mechanisms result from politicians choosing the political system which is in their own interest. One primary difference is that in the Acemoglu–Robinson tradition, the game occurs between a political elite and the majority of the population. In our model, the game takes place between politicians (who in turn take into account the behavior of voters).

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[1] Of course, if the groups that engage in civil conflict are not the same as those that may alternatively run in an election, a standard conflict model might suffice to study the question. In that case, conflict is simply initiated if the expected payoff is positive; see footnote 3 below.

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In Section II we formulate the model, discuss how payoffs under democracy and conflict are determined, and derive the conditions for the different political outcomes. Section III provides some concluding remarks.

II. The Model

Assume there are two politicians or political groups that compete for political power in society. The politician who secures power gains access to the resource rents of society and has the right to decide policy. The form of political competition—electoral competition or conflict—is endogenous. Politicians are assumed to choose the form of political competition that is in their own interest.

There are infinitely many periods, $t = 0, \ldots, \infty$. In each period the timing of events in the game is as follows:

(i)   Groups announce political platforms and/or initiate conflict.
(ii) If (at least) one group initiates conflict, conflict becomes the institutional equilibrium in that period. Conflict takes place and the winner gains access to the rents of power which he consumes before the period ends. If no group initiates conflict, an election is held.
(iii) If an election is held, the losing party decides whether to accept the electoral result or to initiate conflict. If conflict is initiated, the winner gains access to the rents of power which he consumes before the period ends.
(iv) If conflict is not initiated, the announced political platform is implemented and the winning party consumes the remaining rent.
(v)   A new period starts.

We focus on the conditions under which democracy is a possible self-enforcing equilibrium (a subgame-perfect equilibrium). Obviously, in order for democracy to be a (self-enforcing) equilibrium of this game, the loser of an election must be willing to accept an electoral loss.

We focus on a trigger-strategy equilibrium where, in each period, each group does not initiate conflict, but runs for election and tries to maximize its expected rent. We consider the best symmetric trigger-strategy equilibrium and ask under which conditions democracy is viable and what distributional consequences this may have.

As is well known from the theory of repeated games, better equilibria may be achieved if very hard punishments are inflicted. It is also well known that the viability of such hard punishments is questionable. In line with a large literature, we focus on the simple trigger-strategy equilibrium with Nash punishments.

In the case of conflict, each group tries to maximize its expected gross revenue from the conflict. The expected gross revenue which an organized group, $I = A, B$, can generate per period depends on the resource rents R and the fighting efforts of the two groups G^I. The military contest success function follows Tullock's (1975) standard specification; see Skaperdas (1996) for an axiomatic derivation. Accordingly, the probability of winning equals the fighting effort of one's own group relative to the total fighting effort. As our agents are assumed to be risk neutral, this probability function can alternatively be regarded as the share of rents from predation on natural resources accruing to each group. Hence the gross revenue function in case of conflict, Ω^I, is given by:

$$\Omega^I = \frac{G^I}{G^J + G^I} R, \quad I, J = A, B; I \neq J. \tag{1}$$

Conflict is (more) costly to initiate (than elections)—in our setting the initiation of conflict requires the fixed cost of F soldiers. Each additional soldier produces one unit of fighting effort. Wages are equal to the marginal productivity of labor in regular production, assumed to be constant at w. The cost of conflict for group $I = A, B$ is then given by:

$$C^I = wF + wG^I. \tag{2}$$

Both groups choose the size of their labor force so as to maximize expected net revenue. Using equations (1) and (2) and taking the opposing group's fighting effort as given, this results in each group's reaction function:

$$G^I = \sqrt{\frac{G^J R}{w}} - G^J, \quad I, J = A, B; I \neq J. \tag{3}$$

Under conflict, the allocation of fighting efforts is given by the Nash equilibrium:

$$G^I = \frac{R}{4w}. \tag{4}$$

Thus the higher the resource rents relative to labor productivity in regular production, the more intense a fight will be. The per-period expected utility that each group receives from a conflict, U_C^I, is found by inserting the Nash equilibrium allocations of soldiering into the net revenue function:

$$U_C^I = \frac{R}{4} - wF. \tag{5}$$

The expected utility of a fight is higher, the higher the resource rent, the lower the marginal productivity of labor, and the lower the fixed cost of initiating conflict. Moreover, with a marginal increase in resource rents, half of this increase will be wasted due to more fighting, and the other half

will accrue to the winner of the conflict. Thus, on the margin, the extent of rent dissipation in this simple setup is $\frac{1}{2}$.

If a conflict is not initiated, there is an election to determine who wins power. Our specification of the electoral outcome is based on a simple version of probabilistic voting. The two parties or opposing groups compete in an election with an objective of maximizing their expected rent. The expected rent consists of the probability of winning the election P^I, multiplied by the rents of power under democracy, X^I. The per-period expected utility under democracy, U_D^I, is given by:

$$U_D^I = P^I X^I, \quad I = A, B. \tag{6}$$

The number of voters is normalized to unity. The public spending or transfer to each voter i from politician $I = A$, B is denoted g_I^i, and consists of the resource rents remaining after the incumbent politician has extracted his rent:

$$g_I^i = R - X^I, \quad I = A, B. \tag{7}$$

Voters have identical preferences over economic policy, but different preferences over ideological attributes of the political candidates. Per-period income Y_I^i for voter i when politician $I = A$, B holds power is given by the sum of the wage income and net transfers:

$$Y_I^i = w^i + g_I^i. \tag{8}$$

The per-period utility of income for voter i is:

$$W_I^i = \ln(w^i + g_I^i), \tag{9}$$

and the full preferences for individual i are given by:

$$\omega_I^i = W_I^i + (\sigma^i + \delta)D_B, \tag{10}$$

where σ^i is an individual-specific ideology parameter, δ is the average, relative popularity of candidate B, and D_B is a dummy variable that takes the value of unity if party B wins the election and zero otherwise. We assume that the individual-specific ideology parameter, σ^i, is uniformly distributed on the interval $[-1/2\phi, 1/2\phi]$ with density $\phi > 0$, whereas the relative popularity parameter, δ, is uniformly distributed on the interval $[-1/2\psi, 1/2\psi]$ with density $\psi > 0$. The realized value of δ is not revealed until after the election, but the politicians are assumed to know the distribution of δ. Voter i supports candidate A in period t if $\sigma^i < W_A^i - W_B^i - \delta$. The number of voters who vote for politician A, N^A, is then given by:

$$N^A = \int_{-\frac{1}{2\phi}}^{\ln(w + R - X^A) - \ln(w + R - X^B) - \delta} \phi di$$

$$= \tfrac{1}{2} + \phi[\ln(w + R - X^A) - \ln(w + R - X^B) - \delta]. \tag{11}$$

The election probability for politician A, P^A, is given by:

$$P^A = \Pr\left\{N^A \geq \tfrac{1}{2}\right\} = \Pr\{\delta \leq \ln(w + R - X^A) - \ln(w + R - X^B)\}, \tag{12}$$

which can be simplified to:

$$P^A = \int_{-\frac{1}{2\psi}}^{\ln(w + R - X^A) - \ln(w + R - X^B)} \psi \, di$$

$$= \tfrac{1}{2} + \psi[\ln(w + R - X^A) - \ln(w + R - X^B)]. \tag{13}$$

Clearly, candidate B wins with probability $1 - P^A$. Faced with this election probability, the candidates set policy in each period so as to maximize expected rents. The policy platform of politician A will be the solution of the following objective function:

$$\max_{X^A} P^A X^A = \left\{\tfrac{1}{2} + \psi[\ln(w + R - X^A) - \ln(w + R - X^B)]\right\} X^A. \tag{14}$$

Similarly, politician B chooses X^B to maximize $(1 - P^A)X^B$. By symmetry we have full policy convergence—both candidates face the same problem and choose the same policy platform. The convergence in political platforms implies that the identity of the swing voter is given by $\sigma^S(X^A, X^B, \delta) = -\delta$. All voters with σ^i to the right of σ^S vote for B, whereas all voters with σ^i to the left of σ^S vote for A. The expected value of δ is zero, and hence both parties expect to win the election with probability $\tfrac{1}{2}$.

From (14) and the symmetry properties, we find the equilibrium rent for an incumbent under democracy as:

$$\tilde{X}^I(R, w, \psi) = \min\left(R, \frac{w + R}{(2\psi + 1)}\right), \tag{15}$$

which is constrained by the fact that rents cannot exceed the per-period resource rents. We note that the more voters care about the economic outcome relative to other factors, i.e., the higher is ψ, the lower are the equilibrium rents for politicians under democracy:

$$\frac{\partial \tilde{X}^I}{\partial \psi} = -\frac{2(w + R)}{(2\psi + 1)^2} < 0. \tag{16}$$

The intuition for this is that when voters care about the economy, politicians lose many votes by transferring rents from voters to themselves. This creates stiff electoral competition which competes away considerable political rents from having power.

We also note that the higher the resource rents, and the higher the productivity in production, the larger the rents left for politicians:

$$\frac{\partial \tilde{X}^I}{\partial R} = \frac{\partial \tilde{X}^I}{\partial w} = \frac{1}{2\psi + 1} > 0. \tag{17}$$

The higher the resource rents, and the higher the productivity in production, the higher the rents for politicians under democracy. As the marginal utility of income decreases with income, a higher income in the first instance implies that politicians find it less costly in terms of votes to take more of the resource rents themselves, and leave less for the voters. Since both candidates gain less electoral support by promising a higher level of public transfers, the equilibrium rent is higher.

For both candidates, the expected utility of running in the election becomes:

$$U_D^I = \min \left\{ \tfrac{1}{2} R, \frac{w + R}{2(2\psi + 1)} \right\}. \tag{18}$$

If the parties could commit to accepting the electoral result prior to the election, candidates would agree to run for election (at stage 1) if the expected utility from an electoral "battle" exceeds the expected utility from a military battle. Hence, in this case, the following condition must be satisfied in order for an election to take place:

$$\frac{w + R}{2(2\psi + 1)} > \tfrac{1}{4} R - w F. \tag{19}$$

Clearly, if the parties can commit to not initiating conflict should they lose an election, this would be attractive for both provided equation (19) is satisfied, as the expected utility for both will be higher with such commitment. Thus, in this case, it might be in the parties' own interest to design institutions which make it difficult to avoid respecting election results.

In reality, however, a commitment to respect election results can be hard to implement, in particular in countries with a weak democratic and institutional infrastructure. Hence, without such commitment, the parameters that satisfy condition (19) are not sufficient for electoral competition to provide a viable alternative to civil conflict. Democracy cannot be a viable alternative to civil conflict unless the loser of the election is *ex post* better off accepting the electoral result than initiating conflict. We assume that if either party were to abort the election result by initiating conflict, then the parties would be left to settle future disputes over power by civil conflict.[2] Stated differently, we assume that both players use a "trigger

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[2] If the consequences of aborting the election result were less drastic, then the configuration of exogenous parameters under which a self-enforcing democracy would be possible is more restricted.

strategy": any violation of the electoral outcome causes both to engage in a punitive action that lasts forever, where in this case the punitive action is conflict. Although we adhere to this assumption in the remainder of the paper, note that except for the role of the politicians' discount factor, all our qualitative results also hold under an alternative assumption that commitment to respect an election result is possible. (This can be verified by using equation (19) as an alternative to our proofs.) Denoting the politicians' discount factor of future income $\beta \leq 1$, we now obtain:

Proposition 1. *A self-enforcing democracy is possible regardless of the natural resource endowment when $\psi + \frac{1}{2} < \beta$.*

Proof: When an election takes place, the relative popularity parameter, and thus the identity of the swing voter, is revealed, and party $I = A, B$, either loses or wins the election. The loser of the electoral contest has to decide to accept the election result, or to initiate conflict.

Consider first the case where a loser accepts the electoral outcome. The loser will receive zero utility in this electoral period, but will have a chance to run for election again in the future. The expected discounted value of this, V_D^I, is:

$$V_D^I = 0 + \sum_{t=1}^{\infty} \beta^t \left(\frac{w + R}{2(2\psi + 1)} \right) = \frac{\beta}{1 - \beta} \left(\frac{w + R}{2(2\psi + 1)} \right). \quad (20)$$

Next, consider the case where a loser does not accept the electoral outcome and a conflict is initiated. Following the assumed punishing rule, he receives per-period utility as given by equation (5). The expected discounted value of this, V_C^I, is:[3]

$$V_C^I = \sum_{t=0}^{\infty} \beta^t \left(\tfrac{1}{4} R - wF \right) = \frac{1}{1 - \beta} \left(\tfrac{1}{4} R - wF \right). \quad (21)$$

A necessary condition for democracy to be a viable alternative to conflict is that $V_D^I > V_C^I$, which can be restated as:

$$\beta + F(4\psi + 2) > \left(\psi + \tfrac{1}{2} - \beta \right) \frac{R}{w}. \quad (22)$$

When $\psi + \frac{1}{2} < \beta$ the RHS is negative. Since the LHS is always positive, the proposition follows. ∎

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[3] Under an alternative assumption to ours—that groups that may initiate conflict are different from those that may run in an election—conflict results if the RHS of equation (21) is positive, i.e., conflict is more likely the higher the resource rents, the lower the labor productivity and the lower the fixed cost F of conflict. In the absence of a fixed cost F of conflict, conflict always results in this case.

When ψ is small, economic factors are not very important for voters relative to other characteristics of the candidates. This makes electoral competition weak, thereby increasing the political rents of democracy, and making democracy relatively more attractive for politicians. When β is large, politicians value future income more, or the electoral period is short. The prospect of future rents by competing in elections in the future is then encouraging and, for the loser of the election, it is less tempting to try to grab resource rents by initiating a conflict today. In the remainder of the paper we study the case where $\psi + \frac{1}{2} > \beta$. We then have:

Proposition 2. *Democracy is less likely, the higher the resource rents relative to labor productivity.*

Proof: From (22) we note that the RHS is increasing in R/w, while the LHS is independent of R/w. Hence, higher R/w makes it less likely that condition (22) is satisfied. ∎

Thus, poor resource-abundant countries are more likely to end up with conflict, while rich resource-scarce countries are more likely to end up as democracies.

As seen from equations (20) and (21), when R increases, the expected return from participating in conflicts, as well as from participating in elections, increases. From equations (20) and (21) we get:

$$\frac{\partial V_D^I}{\partial R} = \frac{\beta}{2(2\psi + 1)(1 - \beta)}. \tag{23}$$

$$\frac{\partial V_C^I}{\partial R} = \frac{1}{4}\left(\frac{1}{1 - \beta}\right). \tag{24}$$

When $\psi + \frac{1}{2} > \beta$, the expected payoff from conflict increases more with higher resource rents than the expected payoff from election.

For values of the resource rents lower than the critical value:

$$R^* = \frac{\beta + F(4\psi + 2)}{\psi + \frac{1}{2} - \beta}w, \tag{25}$$

the expected return from democracy is higher than the expected return from initiating conflict and hence, in this region, a self-enforcing democracy is a possible outcome (given our punishing rule). If resource rents are higher than the critical value R^*, the expected return from competing in elections, given that the last election is lost, is lower than the expected return from initiating conflict. Accordingly, in this region, the state of the game is conflict. At the margin, conflict allows politicians to seize a larger fraction of increased resource rents than when competing in elections. For

sufficiently resource-abundant countries, it is then in the politicians' interest to initiate conflict, rather than promote democracy.

On the other hand, a higher level of economy-wide productivity, w, contributes to preventing conflict. It can be seen from equations (20) and (21) that a higher w increases the expected return from elections and reduces the expected return from conflict. For both reasons the critical value R^* increases, so that a higher level of the resource rent is tolerated without the economy ending up in conflict.

The intuition is that there are four effects on the choice of political equilibrium from higher labor productivity. First, high labor productivity makes it more attractive to be an elected politician. When agents are relatively well-off, at the margin they value increased income less than if they are relatively poor. This makes electoral competition less stiff, thereby allowing higher equilibrium rents for politicians. Second, with higher labor productivity, a higher wage has to be paid to build an army, whereby this strategy will be more costly. Third, a higher wage implies that each unit of fighting effort becomes more costly. Fourth, with a higher wage, the opponent allocates fewer resources to fighting. The latter two effects cancel each other out under the standard probabilistic fighting function, and the two remaining effects explain why higher labor productivity makes democracy more attractive relative to conflict for politicians.

Note that in our model the source of a country's wealth affects the institutional outcome; countries which are rich because of high natural-resource rents end up in conflict, while countries which are rich because of high economy-wide productivity are more likely to end up as democracies.

Although very simple, our model challenges conventional wisdom received from the standard political economy models. We address this in the following two propositions.

Proposition 3. *Stiff electoral competition (high ψ) may result in lower transfers to voters.*

Proof: From equations (20) and (21) we note that ψ decreases the payoff of democracy while leaving the payoff from conflict unchanged. Therefore, a higher ψ may change the political equilibrium from democracy to conflict. Under conflict, politicians have no reason to give direct transfers and the proposition follows. ■

A standard result in models of political economy is that when electoral competition is stiff, the income of voters will be higher (as they get more transfers) and equilibrium rents for politicians will be lower. The reason this need not be the case in our model is that we do not exogenously assume that the institutional outcome is democracy. As a consequence,

when electoral competition is sufficiently stiff, democracy does not emerge and—as a consequence—politicians grab all the resource rents, and transfers to voters are zero.

Proposition 4. *Stiff electoral competition (high ψ) may produce an inefficient economic outcome.*

Proof: Under democracy, aggregate income is given by $w + R$. Under conflict, aggregate income is given by:

$$w + R - \sum_{I = A,B} (wF^I + wG^I) = w + \tfrac{1}{2}R - 2wF. \qquad (26)$$

As a higher ψ may change the state from democracy to conflict, the proposition follows. ∎

Accordingly, we may obtain the paradoxical result that the more voters care about the economic outcome of elections relative to other characteristics of the candidates (i.e., the higher is ψ), the worse is the economic outcome. When voters care more about income, democracy is less likely, and income is lower.

The claim that stronger electoral competition creates economic efficiency has been attacked in an influential paper by Coate and Morris (1995). Criticizing what they term the Chicago view of political competition—that stronger political competition creates economic efficiency—they show that when voters are uncertain about the effects of economic policy, inefficient policies need not be competed away. Bardhan and Yang (2004) provide additional mechanisms. In our model, by contrast, voters have full information and stiff electoral competition may still produce an inefficient economic outcome. In this respect our result is related to Robinson and Torvik (2005), where stronger electoral competition makes inefficient transfers to voters more tempting in order to secure political power. Again, the principal contrast between our mechanism and those found earlier is that ours is driven by the endogenous choice of democracy or conflict, so that with sufficiently strong electoral competition, democracy is not a possible equilibrium outcome.

III. Concluding Remarks

In this paper, we have developed a new—and we believe simplest possible—setup to study the effects of resource rents on the political choice between conflict and democracy. In line with empirical results, resource wealth makes conflict more likely, while high income due to high productivity makes democracy more likely.

Higher resource wealth increases the expected payoff from both elections and conflict. However, the choice between the two depends on the relative payoffs. We show that the possibility of achieving a self-sustaining democracy is decreasing in the size of the resource rents. Increased resource wealth thus puts democratic institutions to a survival test. Countries will not pass this test if their resource wealth is sufficiently high, labor productivity sufficiently low, political competition sufficiently strong, or politicians sufficiently short-sighted.

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