Autocracy, Democracy and Trade Policy

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Abstract

We study democratization, coups and trade policy determination in an environment marked by intra-elite conflict over trade policy by taking a simple general equilibrium model of an open economy and combining it with the Acemoglu-Robinson model of democratization. Unlike the approaches taken in the previous literature, we study the simultaneous determination of trade policy and the political regime. Introducing a politically determined trade policy not only affects the equilibrium trade policy but also influences the nature of the political regime. The critical point is that trade policy opens the door to a type of political cleavage that differs from the rich-poor/elite-populace division. Indeed, though we stress the role of trade policy in this paper, our model is more general and applies to any policy variable that could potentially divide the elites. In particular, we show that, in the absence of intra-elite conflict, coups will open up the economy if the elite is pro-free-trade and will close the economy if the elite is protectionist, whereas, in the presence of intra-elite conflict, coups may either open up the economy or close it. Moreover, we show that, in the presence of intra-elite conflict, the elite may respond to popular revolts by reallocating political power within the elite rather than offering democratization. Finally, we use the model to briefly discuss the political and trade policy experience of Argentina in the twentieth century and the repeal of the Corn Laws in Great Britain.

JEL Classification: D72, D78.

Keywords: trade policy, democratization, coups, intra-elite conflict

1 Introduction

The question as to what factors determine the institutional framework of collective decision-making is central to political science and political economy and has received considerable attention in the literature (see, in addition to more modern works, the classic contributions of Lipset, 1959; Moore, 1966; Luebbert, 1991; Rustow, 1970; Linz and Stepan, 1978; O'Donnell, 1973; O'Donnell and Schmitter, 1986; Dahl, 1971; and Olson, 1993). In a very important recent work, Acemoglu and Robinson (2000, 2006) make a significant contribution to this literature by developing an economic model of autocracy and democracy in which the income-distribution conflict, mediated by different political institutions, emerges as the main determinant of the political regime.

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The kinds of elite-controlled political transitions from autocracy to democracy and from democracy to military regimes studied by Acemoglu and Robinson (2006) are central to our understanding of the process of development. In fact, many of those transitions occur in conjunction with radical changes in economic policies dealing with such issues as trade barriers. This should not, after all, be surprising, since trade policy is a key determinant of income distribution (see, for example, Stolper and Samuelson, 1941).[1]

An illustrative example is found in the history of Argentina in the twentieth century (see Galiani and Somaini, 2010). At the beginning of that century, Argentina's factor endowment resembled that of a specialized, natural-resource-rich economy. Both the elite and the general populace supported free trade. However, during the inter-war period, trade opportunities were scarce and the terms of trade worsened, which triggered an industrialization process that then gathered momentum during the Great Depression of the 1930s and the Second World War. As a result, Argentina embarked on the second half of the twentieth century with a very different economic configuration. In addition, after workers had voted on a large scale for the first time in 1946, an urban-rural cleavage developed under the leadership of Perón which lasted until the advent of the dictatorship in 1976. This new political equilibrium brought the economy to the verge of autarky. Democracy did not take hold, and a series of transitions to autocracy and back to a constrained form of democracy took place during this period. However, none of the autocratic governments that ruled the country until the coup of 1976, which deposed a highly populist Peronist government, was controlled by the agricultural free-trade elite, nor did any of them open up the economy significantly. By contrast, the military government that took power in 1976 was mainly controlled by the agricultural elite and brought the economy back from the edge of autarky (see Brambilla, Galiani and Porto, 2010).[2]

Another more subtle, but very telling, example is that of the repeal of the Corn Laws in England. Britain's bold move to free trade in 1846 was both unprecedented and unilateral; moreover, it ran counter to the core protectionist ideology of the Conservative Party while simultaneously undercutting the economic interests of the ruling landed aristocracy. After the repeal of the Corn Laws, Prime Minister Peel himself said that he had sought repeal in order to satisfy the wishes of the industrialists. He indicated that a "narrow representation of Parliament" –control of Parliament by the landed aristocracy– required that concessions be made to satisfy interest groups that were clamoring for reform. Otherwise, he implied, pressures for reform might have become overwhelming, as they had at the time of the French Revolution (see Schonhard-Bailey, 2006). Thus, the repeal of the Corn Laws was an attempt to moderate the mounting pressures for parliamentary reform: if the industrialists were satisfied by this move, then the drive to gain control of parliamentary seats would ebb and, even more importantly, the working-class Chartist movement (which was seeking a more radical reform of Parliament) would lose momentum (see Searle, 1993; and Schonhard-Bailey, 2006).[3]

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[1] Trade policy has been portrayed as an important determinant of political cleavages throughout history (see, among others, Rogowski, 1987 and 1989; Gourevitch, 1986; Findlay and O'Rourke, 2007; Galiani, Schofield and Torrens (2010); and Acemoglu and Yared, 2010).

[2] As explained by O'Donnell (1977), at least until 1976, the alliance of the industrialists and landlords in Argentina lasted only for short periods; "dissolving rapidly in situations which repeatedly put these two dominants fractions of the Argentine bourgeoisie in different political camps" (see, also, Mallon and Sourrouille, 1975).

[3] Other more recent notable examples are the move made in the 1990s to embrace both democracy and free trade by the countries of Eastern Europe and the descent into dictatorship and autarchy of much of Africa following independence in the 1950s and 1960s. Using systematic panel data on tariffs, democracy and factor endowments for the period 1870-1914,

These two examples suggest that endogenizing the choice of trade policy, with the consequent possibility of intra-elite conflict that this ushers in, makes a valuable contribution to a broader understanding of political transitions. This is what we will do in this paper.

The model we have developed in this paper provides a good explanation for the experiences of Great Britain in the nineteenth century and Argentina in the twentieth century. The key components of that explanation are a politically determined trade policy and intra-elite conflict over trade policy. The intuition is relatively simple. When there is intra-elite conflict over trade policy, one of the elite factions has the same trade policy preference as the populace, while the other elite faction has the opposite trade policy preference. In other words, when there is intra-elite conflict over trade policy, the political cleavages that exist in relation to trade policy do not match those that exist in connection with income taxation. This lack of alignment in political cleavages has two important political implications. First, an autocracy controlled by the elite faction that has the same trade policy preference as the populace can placate the supporters of a popular revolt more easily than one that is controlled by the elite faction that has the opposite trade policy preference. This is because an elite faction that has the same trade policy preference as the people can credibly commit to implementing the people's preferred trade policy even after the threat of a revolt has died down. Second, the elite faction that has the same trade policy preference as the populace will have ambiguous feelings about autocratic governments controlled by the other faction of the elite, since such governments will, on the one hand, reduce income taxation and redistribution but, on the other hand, may implement a detrimental trade policy.

The first political implication outlined above accounts for the first Reform Act as well as the repeal of the Corn Laws in nineteenth-century Great Britain. The protectionist, landed aristocracy, fearing a revolution, conceded a significant portion of its political power to the pro-free-trade commercial and industrial elite. This political reform averted democratization and paved the way for a switch in trade policy. The second political implication accounts for the coups that resulted in the continuance of import-substitution policies and for the coup that was followed by the opening of the economy in Argentina in the second half of the twentieth century. While democracy was not extremely populist, industrialists supported only those dictatorships that advocated industrial protection, but when radical tendencies threatened to dominate democratic institutions, they tacitly accepted the opening of the economy (see O'Donnell, 1977).

It is easy to see that the introduction of a politically determined trade policy will necessarily affect the equilibrium trade policy. The crucial issue, however, is that this also has a powerful impact on the political regime. In fact, as we will show in this paper, even in the absence of intra-elite conflict, if the elite is protectionist (pro-free-trade) and the populace is pro-free-trade (protectionist), democratization is more likely when trade policy is endogenous than when there is an exogenous free-trade (protectionist) policy, but democratization is less likely when trade policy is endogenous than when there is an exogenous protectionist (free-trade) policy. The consolidation of democracy is always less likely when trade policy is endogenous than when it is exogenous, regardless of the nature of the exogenous trade policy. More importantly, if trade policy is exogenous, then none of our key results under intra-elite conflict will hold, and we will have to revert to the one-dimensional Acemoglu and Robinson (2006) model, which does not allow us to explain certain features of the experiences of Great Britain in the nineteenth century and

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O'Rourke and Taylor (2006) show that an increase in democratization raises tariffs in countries with high land-labor ratios and lowers tariffs in countries with high capital-labor ratios, though this latter effect is smaller and not always significant (see Table 2 in O'Rourke and Taylor, 2002).

Argentina in the twentieth century. The critical point is that trade policy opens the door to a type of political cleavage that differs from the rich-poor/elite-populace cleavage. Indeed, though we stress the role of trade policy in this paper, our model is more general and applies to any policy variable that could potentially divide the elite.[4]

There are several other papers that relate to our work on this subject. First, there are other papers that draw attention to the significance of intra-elite conflict in different contexts. Caselli and Gennaioli (2008) develop a model with heterogeneity in managerial talent in which the existence of a market for control rights over incumbent firms facilitates some reforms (particularly financial reform) by dividing the preferences of the elite (talented groups oppose the reform, but untalented incumbents might favor it). Therefore, albeit in a difference context, they point out to the import role of intra-elite divisions in shaping economic and political outcomes. Lizzeri and Persico (2004) have developed a model of democratization in which "the elites willingly extend the franchise because elections with a broader franchise can give better incentives to politicians ... [and cause] a shift away from special-interest politicking toward ... more public-oriented legislative activity." Moreover, in their model, only the majority of the elite needs to support the extension of the franchise, while there can be a minority of the elite that loses ground with the reform. Acemoglu (2010) develops a model of State capacity in which the effectiveness of intra-elite conflict in controlling the State intensifies as the State's capacity grows and as more efficient forms of taxation and redistribution therefore become available. The key finding is that the destructive effect of more intra-elite conflict can offset the beneficial effect of increased State capacity. Ghosal and Proto (2008) build a model of democratization in which intra-elite conflict plays a crucial role. They develop a coalition formation game with two elite groups that are uncertain about their relative future level of political power and a non-elite group that cannot act collectively. Under dictatorship, the stronger elite obtains all the surplus, while, under democracy, the weaker elite group forms a coalition with the non-elite group, which induces a more balanced division between the elites. Democratization occurs when the elites are sufficiently risk-averse. Our model shares the same general idea as put forward by Ghosal and Proto (2008), i.e., that an elite group may be willing to form a coalition with the non-elite group in order to improve its bargaining power with the other elite group. Beyond this, however, there are several differences. Our model is a non-cooperative one with no explicit coalition formation. In Ghosal and Proto (2008), there is only one policy variable –the division of a unit of surplus– while, in our model, there are two: income taxation and trade policy. Thus, in our model, there can be two different political cleavages: one based on income taxation and the other based on trade policy. In other words, in our model there is one elite group that can be tempted by the other elite group with low taxation and also by the non-elite group with a favorable trade policy. Another important difference is that we use the Acemoglu and Robinson (2006) framework, in which democratization has nothing to do with risk aversion; rather, it is the institutional change that the elites accept as a credible means of transferring political power in order to avoid a revolt. The novel aspects of our model are: that democracy may now be more costly for one elite group (the one with opposite trade policy preferences to those of the non-elite group) than for the other; that the elite groups must somehow bargain to reach a decision as to which one will control the dictatorship and, hence, which trade policy the dictatorship will implement; and, finally, that the non-elite group is not indifferent as to which group controls the dictatorship and that it may be able to influence this decision.

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[4] Another obvious example is the development of a no-fee school system, which might be opposed by landlord elites but supported by industrialist elites (see Galor, Moav, and Vollrath, 2009).

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Second, there is an extensive body of literature that studies how international trade affects domestic political alignments (see, among others, Rogowski, 1987 and 1989). In most cases, this literature informally assumes a political economy model. We, on the other hand, use a formal model of policy determination. More importantly, this literature often considers only the political cleavages that result from the effects of international trade on different social groups and pays little attention to other potential political cleavages that might interact with the ones induced by the effects of international trade. Thus, the underlying model of policy determination is one-dimensional. In contrast, we consider a two-dimensional policy space in which political cleavages in respect of trade policy may or may not coincide with political cleavages in other areas, such as income redistribution through taxation. In other words, protectionist and pro-free-trade coalitions may differ from poor and rich coalitions. The main message of this paper is that this situation may have important implications for both the political regime and trade policy.

The rest of the paper is organized as follows. In section 2, we introduce a model of a society integrated by two elite groups and one non-elite group that must make two collective decisions. In section 3, we incorporate this model into a simple static coup game, while in section 4 we do the same with a simple static democratization game. In both sections we illustrate the results with historical examples of intra-elite conflict: Argentina during the twentieth century and Great Britain during the nineteenth century, respectively. In section 5 we develop a fully dynamic model that integrates the coup and the democratization game. In Section 6, we present our conclusions.

2 The model

In this section we build a model of a society composed of two elite groups and one non-elite group that must make two collective decisions: one about income taxation and one about trade policy. We first describe the economic environment. Then we explain the political institutions involved.

2.1 The economy

Consider a society formed by three groups: two elite factions, denoted by L and K (for example, landlords and industrialists), and a non-elite group called "the people" or "the populace" and denoted P (for example, workers). Let n_i be the proportion of the population that belongs to group $i = L, K, P$; and let y_i be the gross income (before the redistribution scheme) of a member of group i. The government runs a balanced budget redistribution scheme that taxes the income of all citizens at a rate $\tau \in [0, 1]$ and redistributes the proceeds through a lump-sum transfer. Income taxation is costly, as the government must incur a cost of $C(\tau)$ units of output in order to collect τ units of output in taxes, where the cost function C is strictly increasing and strictly convex, and $C(0) = 0$ and $C'(0) < 1 - \frac{y_P}{\bar{y}} < C'(1)$ (for example, $C(\tau) = \frac{\tau^{1+\eta}}{1+\eta}$, with $\eta \geq 0$). The government also selects a trade policy $\lambda \in \{A, F\}$, where A denotes autarky and F free trade. Thus, the utility of a member of group i is given by:

$$v_i(\tau, \lambda) = (1 - \tau) y_i(\lambda) + [\tau - C(\tau)] \bar{y}(\lambda),$$

where $y_i(\lambda)$ denotes the real income of a member of group i when trade policy is λ and $\bar{y}(\lambda) = \sum_i n_i y_i(\lambda)$ is the average income of society.[5]

Several trade models are compatible with this specification. For example, consider an economy with one final and non-tradeable good, denoted Y_T, which is produced employing three perfectly tradeable intermediate goods, each intensive in one factor of production and denoted Y_L, Y_K and Y_N. The production of the final good is $Y_T = F(Y_L, Y_K, Y_N)$, where F is a quasi-concave constant return to scale production function (for example $Y_T = [(Y_K)^\rho + \sigma(Y_L)^\rho]^{\frac{1-\alpha_N}{\rho}}(Y_N)^{\alpha_N}$), while each of the intermediate inputs uses a simple linear technology, i.e., $Y_K = K$, $Y_L = L$, $Y_N = N$, where $E = (K, L, N)$ is the endowment of capital, land and labor, respectively. Under autarky, aggregate output is $\bar{y}(A) = F(K, L, N)$ and the income of a member of group i is $y_i(A) = F_i(K, L, N)\frac{E_i}{n_i}$, where $F_i(K, L, N)$ is the marginal product of input i evaluated at the endowment vector E. Under free trade, aggregate output is $\bar{y}(\lambda) = \sum_i p_i E_i$, and the income of a member of group i is $y_i(F) = \frac{p_i E_i}{n_i}$, where p_i is the price of input Y_i in the international markets. Another alternative model of international trade, which emphasizes the role of the terms of trade, is an economy with one final and non-tradeable good which is produced employing two perfectly tradeable intermediate goods, one land-intensive and the other capital- and labor-intensive, i.e., $Y_T = F(Y_L, Y_{KN})$, $Y_L = L$, and $Y_{KN} = K^\alpha N^{1-\alpha}$. Then, under autarky, $y_L(A) = \frac{F_1(L, K^\alpha N^{1-\alpha})L}{n_L}$, $y_K(A) = \frac{\alpha F_2(L, K^\alpha N^{1-\alpha})K^\alpha N^{1-\alpha}}{n_K}$, $y_N(A) = \frac{(1-\alpha)F_2(L, K^\alpha N^{1-\alpha})K^\alpha N^{1-\alpha}}{n_N}$, and $\bar{y}(A) = F(L, K^\alpha N^{1-\alpha})$. Under free trade, $y_L(F) = \frac{p_L L}{n_L}$, $y_K(F) = \frac{\alpha K^\alpha N^{1-\alpha}}{n_K}$, $y_N(F) = \frac{(1-\alpha)K^\alpha N^{1-\alpha}}{n_N}$, and $\bar{y}(\lambda) = p_L L + K^\alpha N^{1-\alpha}$, where p_L denotes the terms of trade (the relative price of the land-intensive input in terms of the capital- and labor-intensive input). Note that, in this model, $y_K(F) = \frac{(1-\alpha)n_K}{\alpha n_N}y_N(F)$ and, hence, capitalists and workers want the same trade policy. Further variations of this model include the well-known Ricardo-Viner factor-specific model (for example if $Y_T = F(Y_L, Y_K)$, $Y_K = K^{\alpha_K}N_K^{1-\alpha_K}$, $Y_L = L^{\alpha_L}N_L^{1-\alpha_L}$) or, in general, a Heckscher Ohlin model with three goods and three factors of production.

Each group in society can either lose or win with different trade policies, depending on the particular trade model that we have in mind. We say that group i is *protectionist* (*pro-free-trade*) if and only if $y_i(A) > y_i(F)$ ($y_i(A) < y_i(F)$). We can even conceive of cases in which all groups win or all groups lose with the opening of the economy, but the political economy of trade policy in such cases is not very interesting; we can simple ignore trade policy as a relevant policy variable. Hence, we focus on economies for which protectionism is costly in the sense that $\bar{y}(F) > \bar{y}(A)$ and in which at least one group loses with a change in trade policy. This does not mean that we completely ignore these other cases. In fact, some of them have played an important role in the historical examples we discuss in sections 3 and 4.

We impose some structure on income distribution and the effect that international trade has on it.

Assumption 1: The elite groups have above-average incomes, while the non-elite populace has below-average incomes, regardless of the type of trade policy that is in effect, i.e., $\min_{i \in \{K,L\}} y_i(\lambda) > \bar{y}(\lambda) > y_P(\lambda)$.

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[5]It is possible to replace the redistribution scheme with a public good financed with income taxation. In order to see this, suppose that the utility of a member of group i is $v_i = (1-\tau)y_i(\lambda) + H(g)$, where g is the level of the public good. Assume that H is strictly increasing and strictly concave, $H(0) = 0$ and $H'(\bar{y}) < \frac{y_P}{\bar{y}} < 1 < H'(0) < \min_i \frac{y_i}{\bar{y}}$. Since, the government budget constraint is $\tau\bar{y} = g$, then the utility of a member of group i is given by $v_i(\tau, \lambda) = (1-\tau)y_i(\lambda) + H(\tau\bar{y}(\lambda))$, which can be easily obtained in our model if we set $C(\tau) = \tau - \frac{H(\tau\bar{y})}{\bar{y}}$. Moreover, it is not difficult to prove that this cost function satisfies all the proper assumptions. For example, $C(0) = 0 - \frac{H(0)}{\bar{y}} = 0$.

Note that assumption 1 not only says that the elite groups are richer than the general population, but also means that international trade does not change this situation.

Trade policy and income taxation may seem to be two independent mechanisms of income redistribution, but this is actually not the case, since trade policy influences income distribution and, hence, affects the trade-off between redistribution and the cost of income taxation. In order to see this interaction and the structure that we impose on it, we can deduce what the policy implemented by group i would be if the government were wholly controlled by group i. In such a context, group i would choose:

$$(\tau_i, \lambda_i) = \arg \max_{(\tau, \lambda)} \left\{ (1 - \tau) y_i (\lambda) + [\tau - C(\tau)] \bar{y}(\lambda) \right\}$$

Due to assumption 1, for an elite group it is always the case that $y_i(\lambda) > \bar{y}(\lambda)$. Therefore, for $i = K, L$, $\tau_i = 0$ and $\lambda_i = \arg \max_\lambda y_i(\lambda)$. That is, an elite group prefers no income taxation and a trade policy that maximizes its gross income. Also due to assumption 1, it is the case that, for the populace, $y_i(\lambda) < \bar{y}(\lambda)$. Then, the populace's decision reduces to the comparison of a pair of policies. Specifically, let $\tau_P(\lambda)$ be the income tax rate that maximizes people's utility when trade policy is λ; in other words, $\tau_P(\lambda)$ is the unique solution of the following equation:

$$C'(\tau_P(\lambda)) = 1 - \frac{y_P(\lambda)}{\bar{y}(\lambda)}.^6$$

Then, $\lambda_P = \arg \max_\lambda v_P(\tau_P(\lambda), \lambda)$ and $\tau_P = \tau_P(\lambda_P)$. Note that τ_P clearly depends on how trade policy affects income distribution and particularly on how it affects the income share of the populace $(n_P y_P(\lambda) / \bar{y}(\lambda))$. Due to this interdependence, it is possible that, even if the populace is protectionist, it could prefer the combination of a free-trade policy and the tax rate $\tau_P(F)$ to a protectionist trade policy and $\tau_P(A)$. The following assumption rules out such a situation, however.

Assumption 2: If the people are *pro-free-trade*, they prefer $(\tau_P(F), F)$ to $(\tau_P(A), A)$, while if they are *protectionist*, they prefer $(\tau_P(A), A)$ to $(\tau_P(F), F)$. Formally, $y_P(F) > y_P(A) \implies v_P(\tau_P(F), F) > v_P(\tau_P(A), A)$ and $y_P(A) > y_P(F) \implies v_P(\tau_P(A), A) > v_P(\tau_P(F), F)$.

Assumption 2 simply says that income taxation is not enough to change people's stance on trade policy. The key question is, of course, how strong this assumption is. On the one hand, when the populace is pro-free-trade, assumption 2 is, in fact, very mild. In order to see this more clearly, we must distinguish between two possible situations. First, it may be the case that, although the populace's gross income is higher under free trade, people's income share is in fact lower under free trade, i.e., $y_P(F) > y_P(A)$, but $(n_P y_P(F) / \bar{y}(F)) < (n_P y_P(A) / \bar{y}(A))$. Then, $\tau_P(F) > \tau_P(A)$, which implies that, under free trade, the populace does not only have a higher gross income, but it also receives higher transfers (net of taxes). Thus, it is always the case that $v_P(\tau_P(F), F) > v_P(\tau_P(A), A)$. Second, it may be the case that the populace's gross income and income share are both higher under free trade, i.e., $y_P(F) > y_P(A)$ and $(n_P y_P(F) / \bar{y}(F)) > (n_P y_P(A) / \bar{y}(A))$. Then $\tau_P(F) < \tau_P(A)$ and, therefore, $(1 - \tau_P(F)) y_P(F) > (1 - \tau_P(A)) y_P(A)$, which implies that the only situation in which the populace prefers $(\tau_P(A), A)$ to $(\tau_P(F), F)$ is if $\tau_P(A)$ is sufficiently higher than $\tau_P(F)$ so that transfers under protectionism are much higher than under free trade. This is very unlikely and, in fact, is impossible for some specifications of the cost function C. On the other hand, when the populace is protectionist,

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[6] The solution is unique because $C'(0) < 1 - \frac{y_P}{\bar{y}} < C'(1)$ and the second order condition always hold since C is strictly convex.

it must be the case that $(n_P y_P(A) / \bar{y}(A)) > (n_P y_P(F) / \bar{y}(F))$, which implies that $\tau_P(F) > \tau_P(A)$. Then, assumption 2 is somewhat more robust, since it is always possible to conceive of a cost function C that induces low enough costs of income taxation so that the populace would rather prefer to have a higher tax rate levied on a bigger tax base under free trade than to have a lower tax rate levied on a smaller tax base under protectionism. Conversely, if the costs of income taxation are relatively high, then the opposite is true, and the populace prefers $(\tau_P(A), A)$ to $(\tau_P(F), F)$. In the rest of this paper, we assume that assumptions 1 and 2 hold.

The above discussion also explains what types of redistributions can be induced by trade policy that are not possible under a redistribution scheme only based on income tax. If there is no intra-elite conflict over trade policy (say, for instance, that both elite factions are protectionists and the populace is pro-free-trade), then trade policy allows the elite to "transfer" income from the people to the elite (by closing the economy). It also gives the people an extra opportunity to "transfer" income from the elite (by opening the economy). If there is intra-elite conflict -the setting we emphasizes through the paper, then trade policy becomes a more interesting instrument, since it allows redistributions from one elite faction to the other elite faction and to the people, and vice versa. This is something that cannot be accomplished through income taxation and is a key feature that opens the door to a number of very interesting political interactions. We hope that this discussion will also give the reader a clearer perspective on the claim made in the introduction of this paper to the effect that, although trade policy is relevant in and of itself, all that is needed is a second policy dimension that can potentially divide the elites.

2.2 The polity

The choice as to who makes these collective decisions and under what restrictions depends on the distribution of political power in society. We assume that there are two sources of political power: *de jure* power, which emanates from legal institutions, and *de facto* power, which emanates from the ability to change legal institutions. Political regimes allocate *de jure* political power to different groups in society. We consider two alternative political regimes: dictatorship or autocracy and democracy. In a dictatorship, the elites have *de jure* political power and, hence, the government maximizes the elites' utility. However, dictatorships face a threat of revolution, which gives *de facto* political power to the people. In a democracy, the populace has the *de jure* political power and, hence, the government maximizes people's utility. However, democracies face the threat of a coup, which gives *de facto* political power to the elites. Revolutions and coups are costly events. A simple way of modeling this is to assume that a fraction μ (φ) of the gross income of every group is destroyed in a revolution (coup).

In general, it is very difficult to maintain a revolt or a coup threat for a long time. Perhaps this is because collective-action problems can be solved only in very special circumstances; or it might be the case that, with enough time, the legal authorities can always mobilize the required resources to repress the insurgents. Thus, for whatever reason, the de facto political power conferred by the threat of a revolution or a coup tends to be short-lived. A simple way of modeling this is to assume that any concession obtained under a revolt or a coup threat will be honored only to the extent of some positive probability. Equivalently, we can say that political promises between the elite and the populace are only partially credible. This probability can then be interpreted in several ways: for example, as the likelihood that the revolt or the coup threat can be sustained in the future or as the duration of the threat.[7]

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[7]In the dynamic model that we present in section 5, concessions under the threat of a revolt or a coup are only partially

In the following section, we begin studying a simple static coup game, while in section 4, we present a simple static model of democratization.[8] In section 5 we build a fully dynamic model of democratization and consolidation of democracy that integrates both static models into the same framework.

3   A static model of a coup

In this section we assume that the status quo is democracy, but that the elite has the possibility of organizing a coup. The timing of events is as follows:

1. **People's proposal**: The people propose a trade policy $\lambda \in \{F, A\}$ and an income tax rate $\tau \in [0, 1]$.

2. **Elite Bargaining**: Landlords and industrialists assess the people's proposal and then choose to mount a coup or not. The coup costs a fraction $\varphi \in (0, 1)$ of the income of every group. If the elite decides to mount a coup, its members must also bargaining over which elite faction will control the new dictatorship. In case of disagreement the coup fails.

3. **Implementation**: If the there is a coup, the new dictatorship sets a policy. If there is no coup, two things can happen. First, it may be the case that the populace is forced to hold to what it originally promised (an event that occur with probability r). Second, it may be the case that the populace has the opportunity to reset policy (an event that occur with probability $1 - r$). In the latter situation, people can implement a new trade policy $\lambda \in \{F, A\}$ and a new income tax rate $\tau \in [0, 1]$.

The intuition behind this timing is the following. As in Acemoglu and Robinson (2006), we model a coup as a game between the elites and the people and we assume that promises are only partially credible. This is a simple way of capturing a more complex dynamic game in which the coup threat is only temporary (perhaps due to the collective action problem) and the people do not have any incentive to keep their promises in the future once the threat of a coup has passed. The new issue that we introduce is a second dimension of potential conflict: trade policy. In particular, although all members of the elite (both landlords and industrialists) prefer the lowest income tax, they may disagree about trade policy. In addition, the people may be more or less inclined to implement protectionist policies, which means that democracy may be more costly for one elite group and more attractive for another. A direct consequence of introducing a second policy dimension and two elite factions is that the coup must be the outcome of a bargaining between the elite factions. Moreover, we just assume that in case of disagreement the coup fails.

We use backward induction to deduce the subgame perfect equilibrium of the coup game.

The implementation stage

In the implementation stage, the distribution of political power is completely determined, and therefore all that we need to do is to solve a single decision problem. If there was no coup, then the people control government. Thus, when the government has the opportunity to set a new policy, it implements

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credible because there are shocks to the cost of changing the political regime, and it may be the case that these costs become prohibitive.

[8] These models are static, although there are sequential moves, and we use a game perfect equilibrium as the solution concept, in the sense that they are played only once.

the people's preferred policy, i.e., (τ_P, λ_P), while, when the government does not have this option, it simply implements the original promise, which we denote as (λ_D, τ_D). If the coup ushers in a dictatorship that is controlled by the elite faction j, then the policy that will be implemented is j's preferred policy, i.e., $(0, \lambda_j)$.

The elite bargaining stage

In principle, the two elite factions bargain over three issues: they must decide if they are going to mount a coup or not and, if so, they must decide what trade policy and what tax rate the new elite government will implement. The elite factions do not, however, have conflicting interests in terms of the tax rate. If they agree to mount a coup, then landlords and industrialists prefer to set $\tau = 0$. Hence, the only two potential sources of conflict are the coup itself and the trade policy that the new dictatorship will implement. Thus, the elite has three options: no coup, a coup and free trade, and a coup and protectionism. Alternatively we can say that the elite factions bargain over three alternatives: no coup, a coup that gives rise to a dictatorship controlled by L, which implements $(0, \lambda_L)$, and a coup that gives rise to a dictatorship controlled by K, which implements $(0, \lambda_K)$.

Suppose the people have promised (λ_D, τ_D) at the beginning of the game. If the elite does not mount a coup, then the expected payoff for a member of group i is $rv_i(\tau_D, \lambda_D) + (1-r) v_i(\tau_P, \lambda_P)$ (with probability r the people must keep their promise, while with probability $(1-r)$ they can reset policy and they choose (λ_P, τ_P)). If the elite mounts a coup that gives rise to a dictatorship controlled by the elite faction j, the expected payoff for a member of group i is $(1-\varphi) v_i(0, \lambda_j)$. Thus, we can identify four possible regions:

1. Both dictatorships are acceptable for both elite factions. Formally:

$$(1-\varphi) v_L(0, \lambda_K) > rv_L(\tau_D, \lambda_D) + (1-r) v_L(\tau_P, \lambda_P), \tag{1}$$

and

$$(1-\varphi) v_K(0, \lambda_L) > rv_K(\tau_D, \lambda_D) + (1-r) v_K(\tau_P, \lambda_P). \tag{2}$$

Expression (1) simply says that landlords prefer a coup that gives rise to a dictatorship controlled by industrialists rather than having a democracy, while expression (2) means that industrialists prefer a coup that gives rise to a dictatorship controlled by landlords rather than a democracy. In other words, for both elite factions, democracy is so bad that they are willing to accept the worst possible dictatorship, i.e., a dictatorship controlled by the other elite faction.

2. Only a dictatorship controlled by L is acceptable for both elite factions. Formally:

$$(1-\varphi) v_L(0, \lambda_L) > rv_L(\tau_D, \lambda_D) + (1-r) v_L(\tau_P, \lambda_P) \geq (1-\varphi) v_L(0, \lambda_K), \tag{3}$$

and

$$(1-\varphi) v_K(0, \lambda_L) > rv_K(\tau_D, \lambda_D) + (1-r) v_K(\tau_P, \lambda_P). \tag{4}$$

Expression (3) says that landlords prefer a coup that gives rise to a dictatorship controlled by the landlords rather than having a democracy, but they prefer a democracy to a coup that gives rise to a dictatorship controlled by the industrialists. Expression (4) means that industrialists prefer a coup that gives rise to a dictatorship controlled by the landlords rather than having a democracy. Thus, landlords are willing to support a coup only if they get complete control of the dictatorship.

3. Only a dictatorship controlled by K is acceptable for both elite factions. Formally:

$$(1 - \varphi) \, v_K \, (0, \lambda_K) > r v_K \, (\tau_D, \lambda_D) + (1 - r) \, v_K \, (\tau_P, \lambda_P) \geq (1 - \varphi) \, v_K \, (0, \lambda_L) \, , \tag{5}$$

and

$$(1 - \varphi) \, v_L \, (0, \lambda_K) > r v_L \, (\tau_D, \lambda_D) + (1 - r) \, v_L \, (\tau_P, \lambda_P) \, . \tag{6}$$

This is just the mirror-image of the situation in region 2. Now, industrialists are willing to mount a coup only if they get complete control of the dictatorship.

4. No dictatorship is acceptable to both elite faction at the same time. Formally:

$$(1 - \varphi) \, v_L \, (0, \lambda_L) \leq r v_L \, (\tau_D, \lambda_D) + (1 - r) \, v_L \, (\tau_P, \lambda_P) \, , \tag{7}$$

or

$$(1 - \varphi) \, v_K \, (0, \lambda_L) \leq r v_K \, (\tau_D, \lambda_D) + (1 - r) \, v_K \, (\tau_P, \lambda_P) \, , \tag{8}$$

and

$$(1 - \varphi) \, v_L \, (0, \lambda_K) \leq r v_L \, (\tau_D, \lambda_D) + (1 - r) \, v_L \, (\tau_P, \lambda_P) \, , \tag{9}$$

or

$$(1 - \varphi) \, v_K \, (0, \lambda_K) \leq r v_K \, (\tau_D, \lambda_D) + (1 - r) \, v_K \, (\tau_P, \lambda_P) \, . \tag{10}$$

Expressions (7) and (8) say that at least one of the elite factions prefers democracy to a coup that would give rise to a dictatorship controlled by the landlords, while expressions (9) and (10) say that at least one of the elite factions prefers democracy to a coup that would give rise to a dictatorship controlled by the industrialists.

The previous analysis covers the cases in which there is no intra-elite conflict (i.e., $\lambda_L = \lambda_K$), as well as the cases in which there is intra-elite conflict (i.e., $\lambda_L \neq \lambda_K$), although, in the case of no intra-elite conflict, regions 2 and 3 disappear and the analysis is much more simple.

Regions 1 to 4 describe the options open to the elite given the people's proposal, but the elite factions still need to select one of the options. It is easy to see that, in region 2, the elite mounts a coup that gives rise to a dictatorship controlled by L, while, in region 3, the elite mounts a coup that gives rise to dictatorship controlled by K. After all, in each of these regions there is only one dictatorship that is preferred to democracy by both elite factions. The elite's decision in region 4 is also simple: the elite does not mount a coup. The reason is that there is no possible agreement between the elite factions, since at least one of the factions always prefer democracy to a coup. The real action occurs in region 1, since both dictatorships are acceptable for both elite factions.[9] A simple solution is to assume that the bargaining power of the elite faction L is $\chi_L \in [0, 1]$ and the outcome of the bargaining process is:

$$\max_j \left\{ \chi_L v_L \, (0, \lambda_j) + (1 - \chi_L) \, v_K \, (0, \lambda_j) \right\} .$$

Under this assumption, we can easily solve the bargaining problem in region 1. If there is no intra-elite conflict, regardless of the value of χ_L, the elite mounts a coup that gives rise to a dictatorship that implements $(0, \lambda_E)$, where $\lambda_E = \lambda_L = \lambda_K$. On the other hand, if there is intra-elite conflict, then the

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[9] This is not a real issue under no intra-elite conflict because both elite factions prefer the same trade policy.

dictatorship is controlled by L and implements $(0, \lambda_L)$, when $\chi_L \geq \bar{\chi}_L$, and it is controlled by K and implements $(0, \lambda_K)$, when $\chi_L < \bar{\chi}_L$, where $\bar{\chi}_L = \frac{v_K(0,\lambda_K) - v_K(0,\lambda_L)}{v_K(0,\lambda_K) - v_K(0,\lambda_L) + v_L(0,\lambda_L) - v_L(0,\lambda_K)}$.

The people's proposal stage

The last step in the backward induction procedure is to determine the people's decision at the beginning of the coup game. To do so, it helps to define $\bar{\varphi}_i(\tau, \lambda, \lambda_j)$, i.e., the fraction of its income that the elite faction i is willing to sacrifice in order to switch policy from (τ, λ) to $(0, \lambda_j)$. Formally:

$$\bar{\varphi}_i(\tau, \lambda, \lambda_j) = 1 - \frac{v_i(\tau, \lambda)}{v_i(0, \lambda_j)}.$$

It is also easier to distinguish between a case with no intra-elite conflict and one with intra-elite conflict and study each case separately.

3.1 Coups and trade policy in the absence of intra-elite conflict

As we have already seen, when there is no intra-elite conflict, regions 2 and 3 disappear and we only have to consider regions 1 and 4. Technically speaking, when $\lambda_L = \lambda_K$, conditions (3) and (4) are mutually incompatible, which implies that region 1 is empty. Similarly, when $\lambda_L = \lambda_K$, conditions (5) and (6) are mutually incompatible and, hence, region 2 is also empty. Furthermore, when $\lambda_L = \lambda_K$, (7) is identical to (9) and (8) is identical to (10), which greatly simplifies region 4. Intuitively, since both elite factions prefer the same trade policy it doesn't really matter which elite faction controls the dictatorship. The only relevant decision for the elite is whether to mount a coup that implements $(0, \lambda_E)$, where $\lambda_E = \lambda_L = \lambda_K$, or implicitly accept the partially credible people's proposal.

Suppose that the people propose their preferred policy, i.e., $(\lambda_D, \tau_D) = (\tau_P, \lambda_P)$. Then, from (7) and (8) the elite does not mount a coup if and only if $(1 - \varphi) v_L(0, \lambda_E) < v_L(\tau_P, \lambda_P)$ or $(1 - \varphi) v_K(0, \lambda_E) < v_K(\tau_P, \lambda_P)$, that is, whenever at least one of the elite faction finds the coup too costly. Thus, if $\varphi \geq \min_i \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_E)$, the people do not need to make any concession in order to avert a coup. Under this condition, we say that democracy is *consolidated*.

On the other hand, if this condition does not hold, then the people must offer some sort of concession if they want to avert a coup. The people are always willing to promise to make a concession, since the advent of a dictatorship would completely eliminate the possibilities of redistribution through the income tax and transfer system and would pave the way for the implementation of a harmful trade policy. Moreover, a coup has a very real cost in terms of resources. Be this as it may, the people's promises are only partially credible, which means that even the most generous promise could not be enough to convince the elite to refrain from mounting a coup. The most generous promise that the people can make is $(\tau_D, \lambda_D) = (0, \lambda_E)$. Then, from (7) and (8) the elite does not mount a coup if and only if $(1 - \varphi) v_L(0, \lambda_E) < r v_L(0, \lambda_E) + (1 - r) v_L(\tau_P, \lambda_P)$ or $(1 - \varphi) v_K(0, \lambda_E) < r v_K(0, \lambda_E) + (1 - r) v_K(\tau_P, \lambda_P)$. Thus, if $(1 - r) \min_i \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_E) \leq \varphi < \min_i \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_E)$, there is no coup, but the people make some concession in order to avert one. Under this condition, we say that democracy is *semi-consolidated*. Given that democracy can be defended, the people choose to defend it in the cheapest possible way. Thus, they promise $(\tau_D, \lambda_D) = \arg\max_{(\tau, \lambda) \in \bar{S}_C(\varphi, \lambda_E)} v_P(\tau, \lambda)$, where:

$$\bar{S}_C(\varphi, \lambda_E) = \left\{ \begin{array}{l} (\tau, \lambda) \in S : \text{there is } i \in \{L, K\} \text{ such that} \\ \varphi \geq r \bar{\varphi}_i(\tau, \lambda, \lambda_E) + (1 - r) \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_E) \end{array} \right\}.$$

Intuitively, from all the possible promises that would give one elite faction enough expected utility to make it prefer democracy to a coup (formally, the set $\bar{S}(\varphi, \lambda_E)$), the one that will maximize the people's utility in the event that they are forced to keep their promise will be chosen. Furthermore, note that the fundamental trade-off that the people face is between a relatively high income tax rate and their preferred trade policy versus a lower income tax rate and the elite's preferred trade policy.

Finally, if $\varphi < (1 - r) \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$, there is nothing that the people can do in order to avert a coup. In this case, we say that democracy is *unconsolidated*.

The following proposition summarizes the results.

Proposition 1 *Equilibrium*. *Consider a society with **no intra-elite conflict over trade policy**, i.e., $\lambda_L = \lambda_K = \lambda_E \neq \lambda_P$. Let $\bar{\varphi}_i (\lambda_j, \tau, \lambda) = 1 - \frac{v_i(\tau, \lambda)}{v_i(0, \lambda_j)}$ be the fraction of its income that the elite faction i is willing to sacrifice in order to switch policy from (τ, λ) to $(0, \lambda_j)$. Then, the coup game has a unique subgame perfect equilibrium. In this equilibrium:*

1. *If $\varphi \geq \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$, then we are in a **fully consolidated democracy** and the policy that is implemented is (τ_P, λ_P).*

2. *If $(1 - r) \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E) \leq \varphi < \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$, then we are in a **semi-consolidated democracy** and the policy that is implemented is $(\tau_D, \lambda_D) = \arg\max_{(\tau, \lambda) \in \bar{S}_C(\varphi, \lambda_E)} v_P (\tau, \lambda)$ with probability r and (τ_P, λ_P) with probability $(1 - r)$, where:*

$$\bar{S}_C (\varphi, \lambda_E) = \left\{ \begin{array}{l} (\tau, \lambda) \in S : \text{there is } i \in \{L, K\} \text{ such that} \\ \varphi \geq r\bar{\varphi}_i (\tau, \lambda, \lambda_E) + (1 - r) \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E) \end{array} \right\}.$$

3. *If $\varphi < (1 - r) \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$, then the elite mount a **coup**, we are in an **unconsolidated democracy** and the policy that is implemented is $(0, \lambda_E)$.*

The interpretation of proposition 1 is simple. If, for at least one elite factions, the fraction of its income that it must give up in order to mount a coup is higher than the fraction of its income that it is willing to sacrifice in order to switch policy from (τ_P, λ_P) to $(0, \lambda_E)$, then democracy is fully consolidated. If this is not the case, but if, for at least one of the elite factions the fraction of its income that it must give up in order to mount a coup is greater than the the fraction of its income that it is willing to sacrifice in order to switch policy from $(0, \lambda_E)$ with probability r and (τ_P, λ_P) with probability $(1 - r)$ to $(0, \lambda_E)$, then we are in the presence of a semi-consolidated democracy. Finally, if, for both elite factions, the fractions of their income that they must give up in order to mount a coup are higher than the fractions of their income that they are willing to sacrifice in order to switch policy from $(0, \lambda_E)$ with probability r and (τ_P, λ_P) with probability $(1 - r)$ to $(0, \lambda_E)$, then there is a coup and democracy is unconsolidated.

Figure 1 shows a numerical example that illustrates proposition 1, using the following specification: $Y_T = [(Y_K)^\rho + (Y_L)^\rho]^{\frac{1 - \alpha_N}{\rho}} (Y_N)^{\alpha_N}$, $\alpha_N = 0.5$, $\rho = 1$, $K = 1.5$, $L = 1.5$, $N = 1$, $n_L = n_K = 0.10$, $n_N = 80$, $C(\tau) = \frac{\tau^{1+\eta}}{1+\eta}$, with $\eta = 0.75$.

< Please see Figure 1>

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3.2 Coups and trade policy in the presence of intra-elite conflict

When there is intra-elite conflict, the people's decision at the beginning of the game is more complicated.

Suppose that the people promise their preferred policy, i.e., $(\tau_D, \lambda_D) = (\tau_P, \lambda_P)$. Then, from (7)-(10), the elite does not mount a coup if and only if $(1 - \varphi) v_L (0, \lambda_L) \leq v_L (\tau_P, \lambda_P)$ or $(1 - \varphi) v_K (0, \lambda_L) < v_K (\tau_P, \lambda_P)$ (that is, whenever at least one of the elite factions finds the coup that gives rise to a dictatorship controlled by L too costly) and $(1 - \varphi) v_L (0, \lambda_K) < v_L (\tau_P, \lambda_P)$ or $(1 - \varphi) v_K (0, \lambda_K) < v_K (\tau_P, \lambda_P)$ (that is, whenever at least one of the elite factions finds the coup that gives rise to a dictatorship controlled by K too costly). The key difference between this and a case with no intra-elite conflict is that now a dictatorship controlled by L is not the same as one controlled by K, and the people's promise must be good enough to avert both types of dictatorships. Thus, if $\varphi \geq \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_L)$ and $\varphi \geq \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_K)$, then the people does not need to make any concession in order to avert a coup, and democracy is consolidated. Equivalently, if:

$$\varphi \geq \max_j \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_j),$$

democracy is consolidated.

If this condition does not hold, then democracy cannot be consolidated and the people must evaluate the option of promising some concessions. Suppose that the populace promises $(\tau_D, \lambda_D) = (0, \lambda)$. Then, from (7)-(10), this promise is enough to avert a coup if and only if $(1 - \varphi) v_L (0, \lambda_L) < r v_L (0, \lambda) + (1 - r) v_L (\tau_P, \lambda_P)$ or $(1 - \varphi) v_K (0, \lambda_L) < r v_K (0, \lambda) + (1 - r) v_K (\tau_P, \lambda_P)$ (that is, whenever at least one of the elite factions finds that a coup that would give rise to a dictatorship controlled by L would be too costly) and $(1 - \varphi) v_L (0, \lambda_K) < r v_L (0, \lambda) + (1 - r) v_L (\tau_P, \lambda_P)$ or $(1 - \varphi) v_K (0, \lambda_K) < r v_K (0, \lambda) + (1 - r) v_K (\tau_P, \lambda_P)$ (that is, whenever at least one of the elite factions finds that a coup that would give rise to a dictatorship controlled by K would be too costly). Thus, if $\varphi \geq \min_i r \bar{\varphi}_i (0, \lambda, \lambda_L) + (1 - r) \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_L)$ and $\varphi \geq \min_i r \bar{\varphi}_i (0, \lambda, \lambda_K) + (1 - r) \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_K)$, then the people can avert a coup by promising $(0, \lambda)$. Therefore, the people can always stop a coup if and only if

$$\varphi \geq \min_\lambda \max_{\lambda_j} \min_i r \bar{\varphi}_i (0, \lambda, \lambda_j) + (1 - r) \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_j).$$

But, are the people willing to do so?

If the people can stop a coup by promising $(\tau_D, \lambda_D) = (0, \lambda_P)$, then the answer is "yes" and the reason is straightforward. In the event of a coup, the best scenario for the people is a dictatorship controlled by the elite faction with $\lambda_j = \lambda_P$. But in such scenario the people get $(1 - \varphi) v_P (0, \lambda_P)$, while, if they promise $(0, \lambda_P)$, they get $v_P (0, \lambda_P)$ with probability r and $v_P (\tau_P, \lambda_P)$ with probability $(1 - r)$, which clearly dominates $(1 - \varphi) v_P (0, \lambda_P)$. Thus, if $\varphi \geq \min_i r \bar{\varphi}_i (0, \lambda_P, \lambda_L) + (1 - r) \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_L)$ and $\varphi \geq \min_i r \bar{\varphi}_i (0, \lambda_P, \lambda_K) + (1 - r) \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_K)$, then there is no coup, but the people must make some sort of concession. Equivalently, if:

$$\max_{\lambda_j} \min_i r \bar{\varphi}_i (0, \lambda_P, \lambda_j) + (1 - r) \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_j) < \varphi < \max_j \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_j),$$

then democracy is semi-consolidated. Given that the people can and are willing to defend the democracy, they choose to defend it in the cheapest possible way. Thus, they promise $(\tau_D, \lambda_D) = \arg\max_{(\tau, \lambda) \in \cap_j \bar{S}(\varphi, \lambda_j)} v_P (\tau, \lambda)$, where:

$$\bar{S}_C (\varphi, \lambda_j) = \left\{ \begin{array}{l} (\tau, \lambda) \in S : \text{there is } i \in \{L, K\} \text{ such that} \\ \varphi \geq r \bar{\varphi}_i (\tau, \lambda, \lambda_j) + (1 - r) \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_j) \end{array} \right\}.$$

If the people cannot avert a coup by promising $(\tau_D, \lambda_D) = (0, \lambda_P)$, but they can do so by promising $(\tau_D, \lambda_D) = (0, \lambda)$, they may not be willing to stop a coup. In order to see this, assume that the people can induce a dictatorship controlled by the elite faction with $\lambda_j = \lambda_P$. Then, if the people defend democracy, they get $v_P(\tau_D, \lambda_D)$ with probability r, where $\lambda_D \neq \lambda_P$ and $v_P(\tau_P, \lambda_P)$ with probability $(1-r)$, while, if they don not defend democracy, they get $(1-\varphi) v_P(0, \lambda_P)$. Formally, since $\lambda_D \neq \lambda_P$, it is possible that $(1-\varphi) v_P(0, \lambda_P) > r v_P(\tau_D, \lambda_D) + (1-r) v_P(\tau_P, \lambda_P)$. Intuitively, the people may prefer a coup that gives rise to a dictatorship controlled by the elite faction that has the same trade policy preference rather than defend democracy by promising a harmful trade policy. Thus, if:

$$\min_\lambda \max_{\lambda_j} \min_i r\bar\varphi_i(0, \lambda, \lambda_j) + (1-r)\bar\varphi_i(\tau_P, \lambda_P, \lambda_j) \leq \varphi < \max_{\lambda_j} \min_i r\bar\varphi_i(0, \lambda_P, \lambda_j) + (1-r)\bar\varphi_i(\tau_P, \lambda_P, \lambda_j),$$

we are either in a semi-consolidated democracy or there is a coup that gives rise to a dictatorship controlled by the elite faction with $\lambda_j = \lambda_P$.

Finally, if:

$$\varphi < \min_\lambda \max_j \min_i r\bar\varphi_i(0, \lambda, \lambda_j) + (1-r)\bar\varphi_i(\tau_P, \lambda_P, \lambda_j),$$

then there is nothing that the people can do in order to stop a coup. However, this does not mean that the people are completely powerless, since they can try to influence the type of dictatorship that emerges after the coup. Here it becomes necessary to distinguish between two possible situations.

First, assume that the elite faction that has the same trade policy preferences as the people is also the one with more bargaining power, i.e., $\lambda_L = \lambda_P \neq \lambda_K$ and $\chi_L \geq \bar\chi_L$ or $\lambda_K = \lambda_P \neq \lambda_L$ and $\chi_L < \bar\chi_L$. In that case, a coup will occur that gives rise to a dictatorship controlled by the powerful elite faction. The proof is simple. The people cannot avert a coup but, if they promise to embrace a very populist policy, say $\tau_D = 1$, both elite factions will prefer a coup that gives rise to a dictatorship controlled by the powerful elite faction over a democracy. Thus, the people can always induce a coup that gives rise to a dictatorship controlled by the elite faction with $\lambda_j = \lambda_P$.

Second, assume that the elite faction that has the same trade policy preference as the people is the less powerful elite faction, i.e., $\lambda_L \neq \lambda_K = \lambda_P$ and $\chi_L \geq \bar\chi_L$ or $\lambda_K \neq \lambda_L = \lambda_P$ and $\chi_L < \bar\chi_L$. In this case, if both elite factions prefer a dictatorship controlled by the more powerful elite faction over a democracy, then a coup will occur that gives rise to a dictatorship controlled by the more powerful elite faction. Formally, when $\lambda_L \neq \lambda_K = \lambda_P$ and $\chi_L \geq \bar\chi_L$, from (1)-(4), a coup occurs that gives rise to a dictatorship controlled by L if and only if $(1-\varphi) v_K(0, \lambda_L) > r v_K(\tau_D, \lambda_D) + (1-r) v_K(\tau_P, \lambda_P)$ and $(1-\varphi) v_L(0, \lambda_L) > r v_L(\tau_D, \lambda_D) + (1-r) v_L(\tau_P, \lambda_P)$. Thus, if these inequalities hold even when $(\tau_D, \lambda_D) = (0, \lambda)$, then the people cannot avert a coup that gives rise to a dictatorship controlled by L. Equivalently, if:

$$\varphi < \min_{i,\lambda} r\bar\varphi_i(0, \lambda, \lambda_L) + (1-r)\bar\varphi_i(\tau_P, \lambda_P, \lambda_L)$$

then a coup occurs that gives rise to a dictatorship controlled by L, while, if $\varphi \geq \min_{i,\lambda} r\bar\varphi_i(0, \lambda, \lambda_L) + (1-r)\bar\varphi_i(\tau_P, \lambda_P, \lambda_L)$, the people can always induce a coup that gives rise to a dictatorship controlled by K. Similarly, when $\lambda_K \neq \lambda_L = \lambda_P$ and $\chi_L < \bar\chi_L$, from (1), (2), (5) and (6), a coup will occur that gives rise to a dictatorship controlled by K if and only if $(1-\varphi) v_L(0, \lambda_K) > r v_L(\tau_D, \lambda_D) + (1-r) v_L(\tau_P, \lambda_P)$ and $(1-\varphi) v_K(0, \lambda_K) > r v_K(\tau_D, \lambda_D) + (1-r) v_K(\tau_P, \lambda_P)$. Thus, if these inequalities hold even when $(\tau_D, \lambda_D) = (0, \lambda)$, then the people cannot avert a coup that gives rise to a dictatorship controlled by K.

Equivalently, if:

$$\varphi < \min_{i,\lambda} r\bar{\varphi}_i\left(0, \lambda, \lambda_K\right) + \left(1 - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_K\right),$$

then a coup occurs that gives rise to a dictatorship controlled by K, while if $\varphi \geq \min_{i,\lambda} r\bar{\varphi}_i\left(0, \lambda, \lambda_K\right) + \left(1 - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_K\right)$, the people can always induce a coup that gives rise to a dictatorship controlled by L.

The following proposition summarizes the results.

Proposition 2 *Equilibrium. Consider a society with **intra-elite conflict over trade policy**, i.e., $\lambda_L \neq \lambda_K = \lambda_P$ or $\lambda_K \neq \lambda_L = \lambda_P$. Let $\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) = 1 - \frac{v_i(\tau,\lambda)}{v_i(0,\lambda_j)}$ be the fraction of its income that the elite faction i is willing to sacrifice in order to switch policy from (τ, λ) to $(0, \lambda_j)$. Then, the coup game has a unique subgame perfect equilibrium. In this equilibrium:*

1. *If $\varphi \geq \max_{\lambda_j} \min_i \bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$, then we are in a **fully consolidated democracy** and the policy that is implemented is (τ_P, λ_P).*

2. *If $\max_{\lambda_j} \min_i r\bar{\varphi}_i\left(0, \lambda_P, \lambda_j\right) + \left(1 - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right) \leq \varphi < \max_{\lambda_j} \min_i \bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$, then we are in a **semi-consolidated democracy**, and the policy that is implemented is $(\tau_D, \lambda_D) = \arg\max_{(\tau,\lambda)\in\cap_j \bar{S}(\varphi,\lambda_j)} v_P\left(\tau, \lambda\right)$ with probability r and (τ_P, λ_P) with probability $(1 - r)$, where:*

$$\bar{S}\left(\varphi, \lambda_j\right) = \left\{ \begin{array}{l} (\tau, \lambda) \in S : \text{there is } i \in \{L, K\} \text{ such that} \\ \varphi \geq r\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + \left(1 - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right) \end{array} \right\}.$$

3. *If $\min_\lambda \max_{\lambda_j} \min_i r\bar{\varphi}_i\left(0, \lambda, \lambda_j\right) + \left(1 - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right) \leq \varphi < \max_{\lambda_j} \min_i r\bar{\varphi}_i\left(0, \lambda_P, \lambda_j\right) + \left(1 - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$, then we are **either in a semi-consolidated democracy or in an unconsolidated democracy**. In the first case, the policy that is implemented is $(\tau_D, \lambda_D) = \arg\max_{(\tau,\lambda)\in\cap_j \bar{S}(\varphi,\lambda_j)} v_P\left(\tau, \lambda\right)$ with probability r and (τ_P, λ_P) with probability $(1 - r)$. In the second case, a coup occurs that gives rise to a dictatorship controlled by the elite faction with $\lambda_j = \lambda_P$, and the policy that is implemented is $(0, \lambda_P)$.*

4. *If $\varphi < \min_\lambda \max_{\lambda_j} \min_i r\bar{\varphi}_i\left(0, \lambda, \lambda_j\right) + \left(1 - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$, then a coup occurs and we are in an **unconsolidated democracy**.*

   (a) *If the elite faction with $\lambda_j = \lambda_P$ is the more powerful one,[10] then the dictatorship is controlled by the more powerful elite, and the policy that is implemented is $(0, \lambda_P)$.*

   (b) *If the elite faction with $\lambda_j \neq \lambda_P$ is the more powerful one,[11] then, when $\varphi < \min_{i,\lambda} r\bar{\varphi}_i\left(0, \lambda, \lambda_j\right) + \left(1 - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$, the dictatorship is controlled by the more powerful elite and the policy that is implemented is $(0, \lambda_j)$; while, when $\varphi \geq \min_{i,\lambda} r\bar{\varphi}_i\left(0, \lambda, \lambda_j\right) + \left(1 - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$, the dictatorship is controlled by the less powerful elite and the policy that is implemented is $(0, \lambda_P)$.*

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[10]That is $\chi_L \geq \bar{\chi}_L$ when $\lambda_P = \lambda_L \neq \lambda_K$ or $\chi_L < \bar{\chi}_L$, when $\lambda_P = \lambda_K \neq \lambda_L$.

[11]That is $\chi_L \geq \bar{\chi}_L$ when $\lambda_P = \lambda_K \neq \lambda_L$ or $\chi_L < \bar{\chi}_L$, when $\lambda_P = \lambda_L \neq \lambda_K$.

Figure 2 shows a numerical example that illustrates proposition 2, using the following specification: $Y_T = [(Y_K)^\rho + \sigma (Y_L)^\rho]^{\frac{1-\alpha_N}{\rho}} (Y_N)^{\alpha_N}$, $\alpha_N = 0.35$, $\sigma = 1$, $\rho = 0.35$, $K = 0.85$, $L = 1.75$, $H = 1$, $N = 1$, $\gamma = 0.30$, $n_L = n_K = 0.1$, $n_N = 80$, $C(\tau) = \frac{\tau^{1+\eta}}{1+\eta}$ with $\eta = 0.75$ and $\chi_L \geq \bar{\chi}_L$.

< Please see Figure 2>

3.3 Argentina in the twentieth century

At the beginning of the twentieth century, Argentina's factor endowment resembled that of a specialized natural-resource-rich economy. Both the elite and the people supported free trade. However, during the inter-war period, trade opportunities became scarce and the terms of trade worsened, which triggered an industrialization process that then accelerated with the Great Depression during the 1930s and the Second World War. As a result, Argentina embarked on the second half of the twentieth century with a very different economic configuration. In addition, once workers had voted on a large scale for the first time, in 1946, an urban-rural cleavage developed which lasted until the dictatorship of 1976. This new political equilibrium took the economy to the brink of autarky. Democracy was not consolidated, and a series of coups and democratizations took place during this period. However, none of the dictatorships that ruled the country until the coup of 1976, which deposed a highly populist government, were headed by the agricultural free-trade elite, and none of them opened up the economy to any significant degree. By contrast, the military government that took power in 1976 was primarily controlled by the agricultural elite and brought the economy back from the edge of autarky.

Argentina integrated its economy into world markets in the last quarter of the nineteenth century as an exporter of rural products. Until the 1930s, the country had a specialized economy with very little industrial development, and almost all of the domestic demand for manufactures was met with imports. As the country grew, the service sector in the major cities, particularly Buenos Aires, developed rapidly. The State invested heavily in the infrastructure that was required in order to export rural products, such as railroads and harbors, and, later, also in public education (see Galiani et al., 2008). Thousands of immigrants arrived in the country during this period, particularly from Spain and Italy. Although the country was formally a democracy with a constitution and republican institutions, the rural elite played a predominant role in government. Democratization pressures came almost exclusively from the urban middle class. In fact, in 1914 a new electoral law was passed that has been interpreted as an extension of the franchise to the middle class. Nevertheless, trade policy was never a crucial political issue, and the economy remained under a free-trade regime throughout the period in question (see Galiani and Somaini, 2010).

The Great Depression of the 1930s is generally considered to mark the beginning of the import-substitution process in Argentina. The collapse of commodity prices hit the country's economy very hard, since it was so heavily dependent upon exports of agricultural products. In economic and political terms, the 1930s were a transitional period (see Galiani and Somaini, 2010). On the one hand, the rural elite retained most of the political power and tried to use it to mitigate the effects of the change in the terms of trade. On the other hand, two new urban groups were emerging: industrial capitalists and industrial workers. Thus, the society was transitioning away from a specialized economy mainly controlled by members of a rural elite (who were faced with a middle class which demanded political participation and some redistribution, but which did not represent a threat to the country's integration into world markets) and toward a much more complex society with two elite factions: the traditional

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rural elite and the new industrial elite (in conjunction with a large number of protectionist industrial workers, who could easily become a majority in a free election).

The new economic configuration affected almost all the economic and political institutions of the country. In fact, the 1940s were years of direct industrial promotion initiatives, and the State played the leading role in the country's industrial development. First, shortly before Perón assumed power in June 1946, the government created the Argentine Institute for the Promotion of Trade (IAPI). This institution held a monopoly over the country's foreign trade. In its early years, it was clearly anti-agriculture, as it withheld a percentage of the high prices that agricultural products were bringing in the world market after the end of the war. Together with this, a package of what was by then typical protectionist measures was implemented: import tariffs were raised, the multiple exchange-rate system was maintained and a scheme of import permits was created in order to manage the flow of foreign currency. Second, an interventionist State became an active agent in the economy as a result of the wave of nationalizations that the country witnessed in the early Peronist years.

After the Peronist experience, it was clear to all concerned that democracy meant protectionism and populism; thus, the traditional rural elite had a huge incentive to mount a coup, while the new industrial elite had mixed incentives in that regard. Two elements completed the scene. First, the effervescence of subsidies, industrial promotion efforts and ambitious social programs routinely ran up against a major problem, namely, the appearance of a large deficit on the balance of payments (Diaz Alejandro, 1970). Second, the military was no longer a united force that was obedient to the traditional rural elite. On the contrary, the development of major industrial sectors was now in the armed forces' sphere of influence, when not under their direct control. The coup of 1955 reflected this new and complex situation. Although the coup was welcomed by the traditional rural elite and a majority of the middle class, and although the new government implemented transitional policies to promote agricultural exports, the import-substitution policies were never abandoned. In terms of our model (proposition 2), the industrialists supported the coup because they could control the dictatorship and, hence, keep industrial protection mechanisms in place.[12]

The exclusion of the Peronist party, and hence of industrial workers, from the political arena after 1955 put a great deal of pressure on the government, particularly since, by then, industrial workers were well-organized in unions and worshiped Perón as their national leader. Thus, political tensions persisted. In principle, the elites were willing to accept democracy, but only if populist policies were rescinded. Industrial workers preferred this type of democracy to a dictatorship, but they could not credibly pledge to not vote for Perón if free elections were allowed. The "solution" was a democratic regime in combination with the proscription of the Peronist party. Under the proscription scheme, Arturo Frondizi was elected President in 1958 with the support of industrial workers and part of the middle class. Fear of a balance-of-payments crisis paved the way for the "developmentalist" strategy originally envisioned by Perón in 1952-1955 and carried out by Frondizi between 1958 and 1962. Under this strategy, the basic inputs sectors, namely, the metallurgical and oil industries, were developed as a way of overcoming the chronic deficit in the balance of payments.[13] After a few years, a new item

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[12]Symbolically, one of the most famous slogans used by the new government to describe this new policy was "Peronism without Perón", which essentially meant industrialization through import substitution without the populist component of the Peronist policies. In fact, most of the measures that promoted agricultural exports (for example, a devaluation) were thought to alleviate the balance-of-payments constraint; what is more, most of the burden of these measures fell on urban workers rather than on the industrialist elite.

[13]In addition, the automotive industry (which was not particularly "heavy" but nonetheless quite in tune with growing

appeared on the economic policy agenda: the local-market solution for industry was increasingly seen as inefficient, and the idea of an export industry was gaining support among the country's authorities. A military coup overthrew a democratic government in 1966, but economic policy did not change radically.

In the early 1970s, the limitations of the proscription scheme as a permanent solution became increasingly clear. First, the proscription was apparently not enough to convince the elite to refrain from mounting coups, and it did not completely avert populist policies either. In fact, all the democratic governments after 1955 somehow met their demise when they reached the point where they did not have sufficient maneuvering room to simultaneously satisfy the opposing demands of unionized industrial workers and the armed forces (read "the elites"). Second, some industrial workers, although not the traditional Peronist unions, and part of the middle class began to radicalize their position and to move toward socialism. In this context, the proscription scheme was abandoned and the democratic elections of 1973 resulted in the formation of a new Peronist government, which then proceeded to carry out an extreme version of the previous developmentalist strategy. However, the possibilities of growth under import substitution had, by then, been exhausted. The country rapidly slid into chaos: in 1975, in the midst of a social, political and economic crisis that would trigger the bloodiest military coup in Argentina's history the following year, the government's fiscal deficit amounted to almost 15% of GDP. The military government that took power in March 1976 very rapidly made it clear that the import-substitution strategy was no longer part of the government's agenda. This time, the authorities opted for a policy of open trade. Industrial capitalists accepted this policy because the alternative was, at best, a highly populist democracy, if not an outright changeover to socialism. Propositions 5 and 6 capture this change. Note, in particular, that proposition 6 implies that an increase in populism makes a coup controlled by the pro-free-trade rural elite more likely.

Summing up, in terms of our model: in the second half of the twentieth century, Argentina appears to have been a particularly clear example of a case in which intra-elite conflict (the pro-free-trade landlords and the protectionist industrialists) coexisted with a protectionist populace. In fact, as O'Donnell (1977) pointed out, the oscillations in the political regime resulted from shifting alliances between social classes. When industrialists were allied with the working class, democracy prevailed, as did a highly protectionist trade policy and redistributive pressures that were curbed by the proscription of the Peronist party. Two destabilizing forces appeared in this context. First, as soon as economic activity gained strength, a balance-of-payments problem emerged as industrial imports grew and agricultural exports remained stagnant. Second, industrial workers demanded more redistribution and the elimination of the proscription of the Peronist party. In that context, industrialists allied themselves with the landlords in order to force a coup and a devaluation of the currency, which basically raised the real revenues of both of these sectors while depressing workers' real wages. After this economic slump came renewed growth, and, under those circumstances, the industrialists again allied themselves with the working class, particularly when the regime was threatened with strikes, riots and demonstrations that seriously disrupted the order of the industrial workforce. And then the cycle began again. Viewed from this perspective, it is understandable why, between 1945 and 1975, Argentina continuously switched back and forth from one political regime to the next, but nonetheless invariably maintained its import-substitution industrialization policy as its core development strategy. The radicalization of popular demands in the early 1970s paved the way for the breakdown of the proscription solution, which ultimately led to the 1976 coup and the opening of the economy. As predicted by proposition 2, industrialists supported this policy because the alternative

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middle-class demands) was actively promoted.

was, at best, a highly populist democracy, if not an outright changeover to socialism.

4   A static model of democratization

In this section we assume that the status quo is a dictatorship, but that the populace has the choice of organizing a revolution. The timing of events is as follows:

1. **Elite Bargaining**: Landlords and industrialist bargaining over which elite faction controls the elite government. The elite faction in control gains the right to offer a proposal to the people and reset the policy in the implementation stage, if such option is available. The set of possible offers includes democratization.

2. **People's revolt decision**: The populace assesses the elite's proposal and decides to mount a revolution. If the populace organizes a revolution, all factor endowments are expropriated and redistributed evenly among the people, and the economy moves into autarky. The revolution costs a fraction $\mu \in [0, 1]$ of aggregate income, which includes the cost of organizing the revolution as well as the long-standing reduction in economic efficiency caused by the elimination of private property.

3. **Implementation**: If the elite offers to democratize the country and the populace does not organize a revolt, then the people take power and the new democratic government sets the policy. If the elite makes any other offer and the people do not organize a revolution, then the elite stays in power. The elite faction that controls the government might have the opportunity to reset policy, an event that occurs with probability q, or it might be forced to keep its original promise, an event that occurs with probability $(1 - q)$.

We use backward induction to deduce the subgame perfect equilibrium of the democratization game.
The implementation stage.

The implementation stage is relatively simple. First, suppose that the people mount a revolt. Then, each elite faction gets zero utility and the people get $\frac{(1-\mu)\bar{y}(A)}{n_P}$. Second, suppose that the elite offers to democratize the country and the people don not mount a revolt. Then, the people implement $\lambda_P = \arg\max_\lambda v_P(\tau_P(\lambda), \lambda)$ and $\tau_P = \tau_P(\lambda_P)$. Finally, if the elite stays in power and the elite government is controlled by the elite faction j, with probability q, the policy cannot be reset and the elite government must keep its promise, but with probability $(1 - q)$ the policy can be reset and the elite government will implement $\tau_E = 0$ and $\lambda_E = \arg\max_\lambda v_j(0, \lambda)$.

People's revolt decision

The revolt invariably offers $\frac{(1-\mu)\bar{y}(A)}{n_P}$ to the people. However, the people's expected utility, in the event that they do not revolt, will depend on what the elite is offering. First, suppose that the elite offers to democratize the country. Then, if the people don not mount a revolt, they will obtain $v_P(\tau_P, \lambda_P)$. Thus, when the elite offers to bring in a democracy, there is a revolt if and only if $\frac{(1-\mu)\bar{y}(A)}{n_P} > v_P(\tau_P, \lambda_P)$. Second, suppose that the elite that controls the dictatorship is j and it promise (τ, λ). Then, if the people don not mount a revolt, they obtain $qv_P(\tau, \lambda) + (1 - q)v_P(0, \lambda_j)$. Thus, when the elite in charge is j and it promise (τ, λ), there is a revolt if and only if $\frac{(1-\mu)\bar{y}(A)}{n_P} > qv_P(\tau, \lambda) + (1 - q)v_P(0, \lambda_j)$.

The elite bargaining stage

We can identify four possible regions in the elite bargaining stage.

1. There is no way of stopping the revolt. Formally:

$$\frac{(1-\mu)\,\bar{y}\,(A)}{n_P} > v_P\,(\tau_P, \lambda_P). \tag{11}$$

Expression (11) simply says that the people prefer a revolution to democracy. Since the people always prefer democracy to any dictatorship, no matter what concession is offered by the elite ($v_P\,(\tau_P, \lambda_P) > q v_P\,(\tau, \lambda) + (1-q)\,v_P\,(0, \lambda_j)$ for all (τ, λ) and for all λ_j), this expression implies that the elite cannot stop a revolution.

2. Only democratization stop the revolt. Formally:

$$q v_P\,(\tau_P, \lambda_P) + (1-q)\,v_P\,(0, \lambda_P) < \frac{(1-\mu)\,\bar{y}\,(A)}{n_P} \leq v_P\,(\tau_P, \lambda_P). \tag{12}$$

Expression (12) means that democratization is enough to stop a revolution ($\frac{(1-\mu)\bar{y}(A)}{n_P} \leq v_P\,(\tau_P, \lambda_P)$), but there is no other way to stop it. In particular, not even a dictatorship controlled by the elite faction with $\lambda_j = \lambda_P$ plus the promise (τ_P, λ_P) is enough to avert a revolt ($q v_P\,(\tau_P, \lambda_P) + (1-q)\,v_P\,(0, \lambda_P) < \frac{(1-\mu)\bar{y}(A)}{n_P}$).

3. Only an elite government controlled by the elite faction with $\lambda_j = \lambda_P$ can stop the revolt. Formally:

$$q v_P\,(\tau_P, \lambda_P) + (1-q)\min_{\lambda \in \{\lambda_L, \lambda_K\}} v_P\,(0, \lambda) < \frac{(1-\mu)\,\bar{y}\,(A)}{n_P} \leq q v_P\,(\tau_P, \lambda_P) + (1-q)\,v_P\,(0, \lambda_P). \tag{13}$$

Expression (13) says that a dictatorship controlled by the elite faction with $\lambda_j = \lambda_P$ can stop a revolt, provided that it is backed up by the right type of promise ($\frac{(1-\mu)\bar{y}(A)}{n_P} \leq q v_P\,(\tau_P, \lambda_P) + (1-q)\,v_P\,(0, \lambda_P)$), but a dictatorship controlled by the elite faction with $\lambda_j \neq \lambda_P$ cannot ($q v_P\,(\tau_P, \lambda_P) + (1-q)\min_{\lambda \in \{\lambda_L, \lambda_K\}} v_P\,(0, \lambda) < \frac{(1-\mu)\bar{y}(A)}{n_P}$).

4. Both elite governments can stop the revolt. Formally:

$$\frac{(1-\mu)\,\bar{y}\,(A)}{n_P} \leq q v_P\,(\tau_P, \lambda_P) + (1-q)\min_{\lambda \in \{\lambda_L, \lambda_K\}} v_P\,(0, \lambda), \tag{14}$$

Expression (14) means that even a dictatorship controlled by the elite faction with $\lambda_j \neq \lambda_P$ can stop a revolt if it is backed up by the right type of promise.

In regions 1, 2 and 3, the elite factions do not really have many alternatives that they can bring into the negotiations. In region 1 there will be a revolution regardless of the elite proposal; in region 2, both elite factions agree that democratization is the only available alternative to a revolt; and in region 3 only one of the elite faction can avoid democratization. This is not the case in region 4, in which both elite factions can control the dictatorship and avert a revolt. Thus, in this region, the elite factions must bargaining over which faction will have the right to propose a policy and reset policy in the event that the opportunity arises. We assume that the bargaining power of the elite faction L is $\chi_L \in [0, 1]$ and the outcome of the bargaining process is given by:

$$\max_j \chi_L \mathbf{E}\,[v_L\,(j)] + (1 - \chi_L)\,\mathbf{E}\,[v_K\,(j)],$$

where $\mathbf{E}\,[v_i\,(j)]$ is the expected utility of elite faction i when elite faction j controls the dictatorship.

4.1 Democratization and trade policy in the absence of intra-elite conflict

When there is no intra-elite conflict, region 3 disappears, since both elite factions prefer the same trade policy, i.e. $\lambda_L = \lambda_K$. Thus, (11), (12), and (14) characterize the regions in which there is a revolution, there is democratization, and the elite stays in power, respectively. Formally, define $\bar{\mu}(\tau, \lambda)$ to be the proportion of aggregate income that the people are willing to sacrifice to expropriate the elite instead of accepting (τ, λ), i.e.:

$$\bar{\mu}(\tau, \lambda) = 1 - \frac{n_P v_P(\tau, \lambda)}{\bar{y}(A)}.$$

Then, from (11), if $\mu < \bar{\mu}(\tau_P, \lambda_P)$, then there is a revolution; from (12), if $\bar{\mu}(\tau_P, \lambda_P) \leq \mu < q\bar{\mu}(\tau_P, \lambda_P) + (1-q)\bar{\mu}(0, \lambda_E)$, then there is democratization; and from (14), if $\mu \geq q\bar{\mu}(\tau_P, \lambda_P) + (1-q)\bar{\mu}(0, \lambda_E)$, then the elite stays in power.

In order to complete a fully characterization of the subgame perfect equilibrium of the democratization game, we need only to determine which elite faction controls the dictatorship when the elite stays in power and the optimal concession that this faction will promise to make in order to avert the revolt. If the elite has the chance to reset the policy, regardless of which elite faction has the control of the dictatorship, the policy implemented will be $(0, \lambda_E)$. Thus, the only relevant issue is what promise the elite will offer. The set of promises that stop a revolt is given by all the $(\tau, \lambda) \in S$ such that $qv_P(\tau, \lambda) + (1-q)v_P(0, \lambda_E) \geq \frac{(1-\mu)\bar{y}(A)}{n_P}$. Formally:

$$\bar{S}(\mu, \lambda_E) = \{(\tau, \lambda) \in S : \mu \geq q\bar{\mu}(\tau, \lambda) + (1-q)\bar{\mu}(0, \lambda_E)\}.$$

Then, the selected policy will be the one that maximizes $\chi_L v_L(\tau, \lambda) + (1-\chi_L)v_K(\tau, \lambda)$ subject to $(\tau, \lambda) \in \bar{S}(\mu, \lambda_E)$. Equivalently, if the elite faction j is in control, it will pick $(\tau(j), \lambda(j)) = \arg\max_{(\tau, \lambda) \in \bar{S}(\mu, \lambda_E)} v_j(\tau, \lambda)$. Then, the selected policy will be the one favored by L if and only if the bargaining power of L is such that $\chi_L v_L(\tau(L), \lambda(L)) + (1-\chi_L)v_K(\tau(L), \lambda(L))$ is higher than $\chi_L v_L(\tau(K), \lambda(K)) + (1-\chi_L)v_K(\tau(K), \lambda(H))$.

The following proposition summarizes the results.

Proposition 3 *Consider a society with no intra-elite conflict, i.e., $\lambda_E = \lambda_L = \lambda_K \neq \lambda_P$. Let $\bar{\mu}(\tau, \lambda) = 1 - \frac{n_P v_P(\tau, \lambda)}{\bar{y}(A)}$ be the proportion of aggregate income that the people are willing to sacrifice to expropriate the elite instead of accepting (τ, λ). Then, the democratization game has a unique subgame perfect equilibrium. In this equilibrium:*

1. *If $\mu < \bar{\mu}(\tau_P, \lambda_P)$, then there is a revolution.*

2. *If $\bar{\mu}(\tau_P, \lambda_P) \leq \mu < q\bar{\mu}(\tau_P, \lambda_P) + (1-q)\bar{\mu}(0, \lambda_E)$, then there is democratization, and the policy that is implemented is (τ_P, λ_P).*

3. *If $\mu \geq q\bar{\mu}(\tau_P, \lambda_P) + (1-q)\bar{\mu}(0, \lambda_E)$, then the elite stays in power but, possibly, makes concessions.*

   (a) *If the elite faction j controls the dictatorship, then the policy that is implemented is $(\tau(j), \lambda(j)) = \arg\max_{(\tau, \lambda) \in \bar{S}(\mu, \lambda_E)} v_j(\tau, \lambda)$ with probability q and $(0, \lambda_E)$ with probability $(1-q)$, where:*

$$\bar{S}(\mu, \lambda_E) = \{(\tau, \lambda) \in S : \mu \geq q\bar{\mu}(\tau, \lambda) + (1-q)\bar{\mu}(0, \lambda_E)\}.$$

(b) The elite faction L controls the dictatorship if and only if $\chi_L \geq \bar{\chi}_L(\mu)$, where:

$$\bar{\chi}_L(\mu) = \frac{v_K(\tau(K), \lambda(K)) - v_K(\tau(L), \lambda(L))}{v_L(\tau(L), \lambda(L)) - v_L(\tau(K), \lambda(K)) + v_K(\tau(K), \lambda(K)) - v_K(\tau(L), \lambda(L))}.$$

Figure 3 shows a numerical example that illustrates proposition 3, using the following specification: $Y_T = [(Y_K)^\rho + \sigma(Y_L)^\rho]^{\frac{1-\alpha_N}{\rho}} (Y_N)^{\alpha_N}$, $\alpha_N = 0.5$, $\sigma = 1$, $\rho = 1$, $K = 1.75$, $L = 1.75$, $N = 1$, $n_L = n_K = 0.1$, $n_N = 0.8$, $C(\tau) = \frac{\tau^{1+\eta}}{1+\eta}$ with $\eta = 0.75$, and $\chi_L \geq \bar{\chi}_L(\mu)$ for all μ.

$<$ Please see Figure 3 $>$

4.2 Democratization and trade policy in the presence of intra-elite conflict

Now we focus on the case of intra-elite conflict. Here again, (11) and (12) identify the regions in which there is a revolution and democratization, respectively.

From (13), if $q\bar{\mu}(\tau_P, \lambda_P) + (1-q)\bar{\mu}(0, \lambda_P) \leq \mu < q\bar{\mu}(\tau_P, \lambda_P) + (1-q)\max_\lambda \bar{\mu}(0, \lambda)$, then only an elite government controlled by the elite faction with $\lambda_j = \lambda_P$ can stop the revolt. Thus, in this region, the elite factions agree that the faction with $\lambda_j = \lambda_P$ must take control of the dictatorship and next this faction promises to institute a policy that maximizes its utility from the set of promises that stop a revolt. Formally, if the faction with $\lambda_j = \lambda_P$ is j, it selects $(\tau(j), \lambda(j)) = \arg\max_{(\tau, \lambda) \in \bar{S}(\mu, \lambda_j)} v_j(\tau, \lambda)$, where:

$$\bar{S}(\mu, \lambda_j) = \{(\tau, \lambda) \in S : \mu \geq q\bar{\mu}(\tau, \lambda) + (1-q)\bar{\mu}(0, \lambda_j)\}.$$

Moreover, since $v_j(\tau, \lambda_j) \geq v_j(\tau, \lambda)$ and $q\bar{\mu}(\tau, \lambda) + (1-q)\bar{\mu}(0, \lambda_j) \geq q\bar{\mu}(\tau, \lambda_j) + (1-q)\bar{\mu}(0, \lambda_j)$, it must be the case that $\lambda(j) = \lambda_j = \lambda_P$. Thus, j selects $(\tau(j), \lambda_j)$.

From (14), if $\mu \geq q\bar{\mu}(\tau_P, \lambda_P) + (1-q)\max_\lambda \bar{\mu}(0, \lambda)$, then either elite governments can stop a revolt. Thus, in this region, the elite factions bargain over which faction will control the dictatorship. Assume that they agree that the elite faction j will be in control. Then, this faction will promise to institute $(\tau(j), \lambda(j))$, which will only be implemented if j is forced to keep its promise, while if j can reset policy, it will implement $(0, \lambda_j)$. Therefore, the expected utility of elite faction i when the elite faction j is in control is $\mathbf{E}[v_i(j)] = qv_i(\tau(j), \lambda(j)) + (1-q)v_i(0, \lambda_j)$. Thus, L can impose its will if and only if $\chi_L \mathbf{E}[v_L(L)] + (1-\chi_L)\mathbf{E}[v_K(L)] \geq \chi_L \mathbf{E}[v_L(K)] + (1-\chi_L)\mathbf{E}[v_K(K)]$, i.e., $\chi_L \geq \bar{\chi}_L(\mu, q) = \frac{\mathbf{E}[v_K(K)] - \mathbf{E}[v_K(L)]}{\mathbf{E}[v_L(L)] - \mathbf{E}[v_L(K)] + \mathbf{E}[v_K(K)] - \mathbf{E}[v_K(L)]}$.

The following proposition summarizes the results.

Proposition 4 *Consider a society with intra-elite conflict, i.e., $\lambda_P = \lambda_L \neq \lambda_K$ or $\lambda_P = \lambda_K \neq \lambda_L$. Let $\bar{\mu}(\tau, \lambda) = 1 - \frac{n_P v_P(\tau, \lambda)}{\bar{y}(A)}$ be the proportion of aggregate income that the people are willing to sacrifice in order to expropriate the elite instead of accepting (τ, λ). Then, the democratization game has a unique subgame perfect equilibrium. In this equilibrium:*

1. *If $\mu < \bar{\mu}(\tau_P, \lambda_P)$, then there is a revolution.*

2. *If $\bar{\mu}(\tau_P, \lambda_P) \leq \mu < q\bar{\mu}(\tau_P, \lambda_P) + (1-q)\bar{\mu}(0, \lambda_P)$, then there is democratization and the policy that is implemented is (τ_P, λ_P).*

3. If $q\bar{\mu}\left(\tau_P, \lambda_P\right) + (1-q)\,\bar{\mu}\left(0, \lambda_P\right) \leq \mu < q\bar{\mu}\left(\tau_P, \lambda_P\right) + (1-q)\max_\lambda \bar{\mu}\left(0, \lambda\right)$, then the elite stays in power but the dictatorship must be controlled by the elite faction with $\lambda_j = \lambda_P$. Assume that the faction with $\lambda_j = \lambda_P$ is j. Then, the policy that is implemented is $\left(\tau\left(j\right), \lambda_j\right)$ with probability q and $\left(0, \lambda_j\right)$ with probability $\left(1-q\right)$.

4. If $\mu \geq q\bar{\mu}\left(\tau_P, \lambda_P\right) + (1-q)\max_\lambda \bar{\mu}\left(0, \lambda\right)$, then the elite stays in power and the dictatorship can be controlled by any of the elite factions.

    (a) If the elite faction j controls the dictatorship, then the policy that is implemented is $\left(\tau\left(j\right), \lambda\left(j\right)\right) = \arg\max_{(\tau,\lambda)\in\bar{S}(\mu,\lambda_j)} v_j\left(\tau, \lambda\right)$ with probability q and $\left(0, \lambda_j\right)$ with probability $\left(1-q\right)$, where:

    $$\bar{S}\left(\mu, \lambda_j\right) = \left\{(\tau, \lambda) \in S : \mu \geq q\bar{\mu}\left(\tau, \lambda\right) + (1-q)\,\bar{\mu}\left(0, \lambda_j\right)\right\}.$$

    (b) Let $\mathbf{E}\left[v_i\left(j\right)\right] = qv_i\left(\tau\left(j\right), \lambda\left(j\right)\right) + (1-q)\,v_i\left(0, \lambda_j\right)$ be the expected utility of elite faction i when elite faction j controls the dictatorship. Then, the elite faction L controls the dictatorship if and only if $\chi_L \geq \bar{\chi}_L\left(\mu, q\right)$, where:

    $$\bar{\chi}_L\left(\mu, q\right) = \frac{\mathbf{E}\left[v_K\left(K\right)\right] - \mathbf{E}\left[v_K\left(L\right)\right]}{\mathbf{E}\left[v_L\left(L\right)\right] - \mathbf{E}\left[v_L\left(K\right)\right] + \mathbf{E}\left[v_K\left(K\right)\right] - \mathbf{E}\left[v_K\left(L\right)\right]}.$$

Figure 4 shows a numerical example that illustrates proposition 4, using the following specification: $Y_T = \left[\left(Y_K\right)^\rho + \sigma\left(Y_L\right)^\rho\right]^{\frac{1-\alpha_N}{\rho}}\left(Y_N\right)^{\alpha_N}$, $\alpha_N = 0.5$, $\sigma = 1$, $\rho = 0.35$, $K = 2$, $L = 0.75$, $N = 1.5$, $n_L = n_K = 0.1$, $n_N = 0.8$, $C\left(\tau\right) = \frac{\tau^{1+\eta}}{1+\eta}$ with $\eta = 0.75$, and $\chi_L \geq \bar{\chi}_L\left(\mu, q\right)$ for all $\left(\mu, q\right)$.

<center>< Please see Figure 4 ></center>

4.3 Great Britain in the nineteenth century

Britain's bold move toward free trade in 1846 was both unprecedented and unilateral; moreover, it ran counter to the core protectionist ideology of the conservative party while simultaneously undercutting the economic interests of the ruling landed aristocracy. Thereafter, Great Britain had a stable free-trade policy throughout its transition to a fully consolidated democracy, even during international crises and depressions that put the system under stress and prompted many British trading partners to adopt protectionist measures.

Before the Reform Act of 1832, the rural aristocracy dominated British politics. The Reform Act established the right to vote based solely on income and property, thereby considerably changing the distribution of political power. As discussed in Acemoglu and Robinson (2006), the Reform Act had three main features. First, it was passed primarily because there was a fear that social disturbances would arise. Second, it was a strategic concession on the part of the aristocracy, since it did not create a full democracy, but simply extended the franchise to the new industrial and commercial elite and the upper-middle class. Third, the working classes were completely excluded by the reform. In terms of our model, the rural aristocracy and the industrial and commercial elite were the two elite factions. Before the reform, the aristocracy controlled the autocratic government. The reform, although it did not completely transfer control over the autocracy to the industrial and commercial elite, did erode the

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power of the aristocracy and significantly expand the power of the new industrial and commercial elite. However, this was just the beginning of a process that reallocated political power between the aristocracy and the industrial and commercial elite. The debate about the Corn Laws was another decisive factor in this process, as well as an excellent test for the new distribution of political power.

Manufacturers had opposed the protectionist Corn Laws as early as the 1820s, but were never strong enough to repeal them. But, beginning in 1836, an economic downturn, together with a series of poor harvests, goaded the industrialists into action. High food prices and unemployment also gave impetus to both the middle and working classes, with the former being organized as the Anti-Corn Law League and the latter as the Chartist movement. The Anti-Corn Law League was the first modern, nationwide political pressure group to emerge in Britain (see, among others, Howe, 1984, and Turner, 1995). The leaders of the League were manufacturers and professionals engaged in export trade. By the 1840s, the Anti-Corn League had garnered the support of many urban groups, including some urban workers. The Chartists were an organized working-class movement that sought parliamentary reform, arguing that reform must encompass the entire social and political horizon. In contrast, the League chose a single-issue strategy in it efforts to achieve repeal (Schonhard-Bailey, 2006).

The Conservatives entered the government in 1841 with a strong and unified commitment to protecting agriculture, yet their leader, Prime Minister Sir Robert Peel, completely reversed this stance within a few years. In 1846, Prime Minister Peel decided to accept the repeal of the Corn Laws, and about a third of the members of Parliament in his party followed his lead; the rest remained firmly committed to protecting agriculture. Within a month of securing the repeal, the Peel government fell, while the Conservatives remained divided (the repeal of the Corn Laws triggered the expulsion of the Peelite faction from the Tories, led by Bentink and Disraeli), and then remained out of office for decades. This division paved the way for almost 30 years of Whig and Liberal dominance, which "rested on a firm alliance of the urban working and middle classes, of labor and capital" (Rogowski, 1989). During this period, a free-trade policy was the norm. Moreover, "liberal governments steadily pursued even freer trade, lower taxes and transaction costs, expansion of the franchise, and diminution of the remaining powers of local landowners, the Crown, and the House of Lords" (Rogowski, 1989).

Schonhardt-Bailey (2006) tells a simple but compelling story: economic interests generated the momentum behind the repeal movement, a momentum that overshadowed almost all else. Indeed, as part of a broader movement toward democratic reform, these same interests, left unsatisfied, could have snowballed into revolution, as Peel and others had feared (and as happened, just two years later, in France). Schonhard-Bailey (2006) rightly argues that the fatal factor for the Corn Laws was the growth of the British manufacturing industry and export trade, especially in textiles. More particularly, as the industrial prosperity and export boom of the early 1830s began to wane, industrialists became increasingly vocal about the "unfair" protection enjoyed by agriculturists. In fact, after the repeal of the Corn Laws, Peel himself argued, in an elaborate display of concessionary politics, that he sought repeal in order to "satisfy the wishes of those outside" (the middle-class industrialists). He implied that a "narrow representation of Parliament" (control of Parliament by the landed aristocracy) required that concessions be made to satisfy interest groups that were clamoring for reform. The alternative, he implied, was that pressures for reform might become overwhelming, as they had in France (see Schonhard-Bailey, 2006). In sum, repeal was an attempt to moderate the mounting pressures for parliamentary reform: by satisfying the middle class and industrialists with repeal, their drive to gain control of parliamentary seats would wane and, moreover, the working-class Chartist movement (seeking more radical reform of Parliament) would

lose momentum (see Searle, 1993; and Schonhard-Bailey, 2006). In terms of our model, the protectionist aristocracy, by partially transferring control over the government to the pro-free-trade industrialists (the Reform Act of 1832) and allowing a switch in trade policy (the repeal of the Corn Laws in 1846), placated the populace, thereby convincing it to relinquish its more radical demands.

In such a context, the only option for the Conservatives was to match the set of policies offered by the Liberals. In fact, in 1867, Disraeli supported the Second Reform Act, which significantly extended the franchise. Indeed, after the reform, "working-class voters became the majority in all urban constituencies" (Acemoglu and Robinson, 2006). The particular events leading up to the Second Reform Act were similar to those that preceded the Reform Act of 1832: riots and social disturbances that convinced the capitalist and commercial elite that the only alternative to a revolt was an extension of the franchise to the working classes. In fact, the Chartist movement had significantly increased its power since 1832.

The 1873-1876 crisis provided an excellent test for trade policy. After 1875, imports from America had a significant impact on landowners, and the Conservatives, led by Disraeli, had a majority in Parliament. A group of Conservatives guided by Joseph Chamberlain,"... tried to organize a coalition with a family resemblance of Bismarck's grouping of industrialists, farmers and workers hit by foreign competition" (Gourevitch 1986) and attempted to reopen the discussion about tariffs. However, this attempt did not succeed, since even "Disraeli - who had made protection his by-word in the 1840s - flatly refused to help" (Rogowski, 1989). Moreover, this time, workers were clearly against protectionism. "Labor, by the 1870s, was quite strong in support of free trade. In the 1840s, anti-corn-law activists had argued that labor ought to support free trade in order to keep down consumer costs, especially the price of food. Labor activists at the time were more skeptical, seeing tariffs as a middle-class concern that distracted attention from the broader political demands of Chartism. It was only after experiencing the prosperity of the 1850s and 1860s that British labor accepted free trade" (Gourevitch 1986). It is worth mentioning that the protectionist pressures that were brought to bear during the 1873-1876 crisis were really very strong. Internally, some of the consequences of the free-trade policy were "a new wave of bitterness and violence in Ireland (still almost wholly agricultural) [and] the bankruptcy and reform of the Oxford colleges (whose endowments were largely in land)" (Rogowski, 1989). Almost all the countries that played an important role in the international arena, including Germany, France and the United States, implemented protectionist measures, although of different types and to different degrees (Gourevitch, 1986; and Rogowski, 1989).

In 1884 the Third Reform Act extended the coverage of voting regulations to rural constituencies and the "Redistribution Act of 1885 removed many remaining inequalities in the distribution of seats" (Acemoglu and Robinson, 2006). The result was that "after 1884, about 60% of male adults were enfranchised" (Acemoglu and Robinson, 2006). Mainly negotiated during the war, " the Peoples Act of 1918 gave the vote to all adult males over the age of twenty-one and women over the age of thirty who were ratepayers or married to ratepayers" (Acemoglu and Robinson, 2006). In the realm of trade policy, there was no further attempt to alter the free-trade status quo. As already mentioned, this was to be expected, since the newly enfranchised members of the population were industrial workers who supported free trade. Moreover, it is likely that the new industrial and commercial elite was less reluctant to extend the franchise to industrial workers. This was true for two reasons. First, workers did not pose a threat to the free-trade policy favored by this elite group. Second, free trade probably reduced income inequality, thereby making workers less willing to support redistribution through income taxation. The old aristocracy, already severely weakened, preferred this democratization path, which was coupled with

a stable free-trade policy, because, at the least, it restrained the workers' most extreme redistributionist policy proposals. The industrial and commercial elite always enjoyed a huge advantage in its negotiations with the aristocracy, since, if the aristocrats refused to support free trade, the industrial and commercial elite could always accelerate the democratization process and achieve free trade anyway. Of course, this came at a price, namely, welfare legislation.

Summing up, Great Britain in the nineteenth century provides an example of intra-elite conflict (the protectionist, landed aristocracy versus the pro-free-trade industrial and commercial elite) in combination with a pro-free-trade populace. The aristocracy, facing radical demands, had no other option but to gradually concede political power to the new industrial and commercial elite. The Reform Act of 1832 and the repeal of the Corn Laws in 1846 were two landmark events in this process. The repeal of the Corn Laws was an unprecedented move toward free trade that both reflected and reinforced the new distribution of political power. Proposition 4 captures this reallocation of political power among the elite, as well as the switch in trade policy. After 1846, Great Britain had a stable free-trade policy throughout the entire transition to a consolidated democracy, which was fully completed in the twentieth century. The transition was primarily an ongoing bargaining process between industrialists and workers over welfare legislation. Proposition 4 properly captures this transition.

5   A dynamic model of regime determination

In this section we present a fully dynamic model of regime determination. There are several reasons for doing so. First, the dynamic model confirms that the democratization and coup static models that we studied in the previous sections are mutually compatible. Second, the dynamic model captures some situations that, by construction, cannot be captured by the static models. In particular, with a dynamic model, it is possible to have an equilibrium in which waves of democratization and coups alternate with each other, which corresponds more accurately to the model of an unconsolidated democracy. Finally, unlike the static models, in the dynamic model there is a natural way of generating partially credible promises.

Let $y_{i,t}$ be the gross income (before the redistribution scheme) of a member of group i in period t. In each period, the government runs a balanced budget redistribution scheme that taxes the income of all citizens at a rate $\tau_t \in [0,1]$ and redistributes the proceeds through a lump-sum transfer. In each period, the government also selects a trade policy $\lambda_t \in \{A, F\}$. The per period utility function of a member of group i is given by:

$$v_i\left(\tau_t, \lambda_t\right) = \left(1 - \tau_t\right) y_i\left(\lambda_t\right) + \left[\tau_t - C\left(\tau_t\right)\right] \bar{y}\left(\lambda_t\right),$$

where $y_i\left(\lambda_t\right)$ is the the gross income of a member of group i when the trade policy is λ_t and $\bar{y}\left(\lambda_t\right) = \sum_i n_i y_i\left(\lambda_t\right)$ is the average income of society when trade policy is λ_t. The expected utility of a member of group i at time t is given by:

$$V_i = \mathbf{E}_t \sum_{k=t}^{\infty} \beta^{k-t} v_i\left(\tau_k, \lambda_k\right),$$

where $\beta \in (0,1)$ is the common discount factor and $\mathbf{E}_t$ is the expectation operator taken over the probability distribution of sequences of the form $\{\tau_k, \lambda_k\}_{k=t}^{\infty}$.

The choice of who makes collective decisions (τ, λ) in each period and under what restrictions depends on the distribution of political power in society. There are two sources of political power: *de jure* power, which emanates from legal institutions, and *de facto* power, which emanates from the ability

to change legal institutions. Political regimes allocate *de jure* political power to different groups in society. We consider two alternative political regimes: dictatorship or autocracy, and democracy. In a dictatorship, the elites have the *de jure* political power and, hence, the government maximizes the elites' utility. However, sometimes dictatorships face a threat of revolution, which temporarily gives *de facto* political power to the people. In a democracy, the populace has the *de jure* political power and, hence, the government maximizes the people's utility. Sometimes democracies may face the threat of a coup, however, which temporarily gives *de facto* political power to the elites. Revolutions and coups are costly events. A simple way of modeling this is to assume that a fraction μ (φ) of the gross income of society is destroyed in a revolution (coup). The *de facto* political power conferred by the threat of a revolution or a coup is also transitory. A simple way of modeling this is to assume that, if the political regime is a dictatorship, then, during any given period, there is some probability that people will be able to overcome the collective action problem and thus pose a revolutionary threat. Similarly, if the political regime is a democracy, then, in every given period, there is some probability that the elite will be able to pose the threat of a coup. Formally, in a dictatorship, the state of nature can be either H, with probability $q < 1/2$, or L, with probability $(1-q)$. When the state of nature is H, the cost of the revolution is $\mu^H = \mu < 1$; when the state is L, the cost of the revolution is $\mu^L = 1$. Thus, in state H, people may be coming together in order to organize a revolution, while in state L, the revolution has a prohibitive cost. In a democracy, the state of nature can be either H, with probability $r < 1/2$, or L, with probability $(1-r)$. When the state of nature is H, the cost of the coup is $\varphi^H = \varphi < 1$; when the state is L, the cost of the coup is $\varphi^L = 1$. Thus, in state H, the elites may coalesce for the purpose of organizing a coup, while in state L, the cost of the coup is prohibitive.

The timing of events within a given period in a democracy is as follows: **1)** The state φ_t is revealed. **2)** The people propose a policy (τ, λ) to be implemented by the democratic government. **3)** One of the elite faction, indicated by $l \in \{L, K\}$, observes the people's proposal and then chooses to mount a coup or not. If l mounts a coup, it also backs one of the elite's factions to control the new dictatorship. **4)** The other faction of the elite, indicated by $s \in \{L, K\}$, examines the people's proposal and l's move. If l has begun a coup, s must decide whether to support it or not. If s supports the coup, then the coup takes place, the new elite government takes form and the elite faction that controls it selects a policy. The coup costs a faction φ_t of aggregate income. If s does not support the coup, then the coup fails and the elite cannot take power. **5)** If there is no effective coup, either because l does not mount it, or because s does not support it, then the people's proposal is implemented.

The intuition behind this timing is the following. We model a coup as a game between the elites and the people in which the people's promises are credible only when the elites have a credible coup threat, i.e., in the state H. The new issue that we introduce is a second dimension of potential conflict: trade policy. In particular, although all members of the elites prefer the lowest income tax, they may disagree about trade policy. Also, people may have a higher or lower propensity to implement protectionist policies, which implies that democracy may be more costly for one elite group and more attractive for the other. For the intra-elite bargaining over the coup, we assume that one of the elite factions, denoted l, takes the lead and decides whether to mount a coup and proposes which group should control the new elite government, while the other elite faction, denoted s, has veto power. When both elite factions have the same trade policy preferences, it does not significantly matter which one is l and which one is s, since $\lambda_l = \lambda_s \neq \lambda_P$. However, when there is intra-elite conflict over trade policy, it is very important to determine which elite faction has the power to propose and which has veto power. We assume that

the elite faction s and the people share the same trade policy preferences, i.e., $\lambda_l \neq \lambda_s = \lambda_P$. Note also that there is no credible commitment problem between the elite factions, since, once a coup has been mounted, only one faction of the elite will control the new dictatorship.

The timing of events within a given period in a dictatorship is as follows: **1)** The state μ_t is revealed. **2)** The elite faction that controls the dictatorship decides whether to concede the control of the dictatorship to the other elite faction or not. **3)** The elite faction that controls the dictatorship proposes democratization or a policy (τ, λ); and **4)** The people observe the elite's move and decide whether they should mount a revolution or not. If the elite offers democratization and the people accept the offer, they take over, and the new democratic government selects a policy. If the populace organizes a revolution, all factor endowments are expropriated and redistributed evenly among the people, and the economy moves into autarky. The revolution costs a fraction μ_t of aggregate income, which includes the cost of organizing the revolution as well as the long-standing reduction in economic efficiency caused by the elimination of private property.

Only step 2 requires some explanation. The idea is that the elite faction that controls a dictatorship might prefer to concede the control of the dictatorship to the other elite faction if that would help to avoid democratization. This concession is a reallocation of de jure political power between the elite factions and can be accomplished through an extension of the franchise or any political reform that properly rebalances the legal rights of the two elite factions in the autocratic regime.

In order to study this dynamic game, we only consider Markov strategies, which means that the decision of player i in period t can only depend on the political regime at the beginning of the period, the realization of the random variables μ_t or φ_t, and the actions taken by other players in period t before i must move. Given this restriction, we then find the Markov perfect equilibrium of the game.

In order to characterize the Markov perfect equilibrium, it is useful to define some thresholds values for μ and φ. Recall that $\bar{\mu}(\tau, \lambda) = 1 - \frac{n_P v_P(\tau, \lambda)}{\bar{y}(A)}$ denotes the proportion of aggregate income that the people are willing to sacrifice to expropriate the elite rather than accepting (τ, λ), while $\bar{\varphi}_i(\lambda_j, \tau, \lambda) = 1 - \frac{v_i(\tau, \lambda)}{v_i(0, \lambda_j)}$ denotes the fraction of its income that the elite faction i is willing to sacrifice in order to switch policy from (τ, λ) to $(0, \lambda_j)$. In the appendix we prove that the set of promises that will placate a revolt when the autocracy is controlled by the elite faction j is given by:

$$\bar{S}_R(\mu, \lambda_j) = \{(\tau, \lambda) \in S : \mu \geq [1 - \beta(1 - q)]\bar{\mu}(\tau, \lambda) + \beta(1 - q)\bar{\mu}(0, \lambda_j)\}.$$

The intuition is the following. Suppose that the autocracy is controlled by the elite faction j, there is a revolt threat, and the elite promises to implement (τ, λ). For the period concerned, the elite's proposal is completely credible, but in the future it will be credible only when there is a threat of a revolt (an event that occurs with probability q), since if there is no such threat (an event that occurs with probability $(1 - q)$), the elite government can safely implement $(0, \lambda_j)$. $q\bar{\mu}(\tau, \lambda) + (1 - q)\bar{\mu}(0, \lambda_j)$ indicates the proportion of aggregate income that the people are willing to sacrifice in order to expropriate the elite rather than accepting (τ, λ) with probability q and $(0, \lambda_j)$ with probability $(1 - q)$. Thus, $(1 - \beta)\bar{\mu}(\tau, \lambda) + \beta[q\bar{\mu}(\tau, \lambda) + (1 - q)\bar{\mu}(0, \lambda_j)]$ indicates the proportion of aggregate income that the people are willing to sacrifice in order to expropriate the elite rather than accepting (τ, λ) now and (τ, λ) with probability q and $(0, \lambda_j)$ with probability $(1 - q)$ in the future. Since, μ is the proportion of aggregate income that the people must sacrifice in order to mount a revolt and expropriate the elite, $\bar{S}_R(\mu, \lambda_j)$ is the set of promises that placate those threatening to revolt.

In the appendix, we prove that the set of promises that will stop a coup that would give rise to a short-lived dictatorship controlled by the elite faction j is given by:

$$\bar{S}_C\left(\varphi, \lambda_j\right) = \left\{(\tau, \lambda) \in S : \text{there is } i \in \{L, K\} \text{ such that } [1 - \beta(1-q)]\varphi \geq \right.$$
$$\left. [1 - \beta(1 - q - r)]\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + \beta(1 - q - r)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)\right\}.$$

The intuition is the following. Consider a situation in which a threat of a revolt forces the elite to offer to institute a democracy (since, otherwise, the people will revolt). Thus, autocracies cannot be long-lasting because, sooner or later, a revolt will lead to a democracy. Suppose that we are in a democratic regime, there is a coup threat and the people promise to implement (τ, λ). During the period in question, the promise is completely credible, but, in the future, it will be credible only when there is a coup threat (an event that occurs with probability r), since, when there is no such threat, the people can safely implement (τ_P, λ_P). Thus, if the elite does not mount a coup, with probability r, the policy is (τ, λ) and, with probability $(1 - r)$, it is (τ_P, λ_P). Conversely, if every time that there is a coup threat the elite mounts a coup that gives rise to a dictatorship controlled by the elite faction j, then society will continuously switch back and forth between one political regime and the other. Under democracy, the people implement (τ_P, λ_P) until there is a coup and the policy is switched to $(0, \lambda_j)$, which in turn is implemented until a new revolt threat leads to another wave of democratization. Thus, from the point of view of the elite, the key difference between accepting the people's promise or not is that a coup would lead to $(0, \lambda_j)$ under circumstances in which the policy to be implemented would have been (τ, λ) or (τ_P, λ_P). More formally, $(1 - \beta)\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + \beta\left[(r + q)\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + (1 - r - q)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)\right]$ indicates the proportion of its income that elite faction i is willing to sacrifice in order to get $(0, \lambda_j)$ instead of (τ, λ) now and (τ, λ), with probability $(r + q)$, and (τ_P, λ_P), with probability $(1 - r - q)$, in the future. Engineering this policy change has an expected cost for the elite, which is given by $(1 - \beta)\varphi + \beta q \varphi$ (the cost is expressed as a fraction of i's income). The first term is the immediate cost of mounting a coup, while the second term is the expected discounted cost of future coups (there will be a coup each time that a democracy is established, an event that occurs with probability q). Finally, the inequalities that characterize $\bar{S}_C\left(\varphi, \lambda_j\right)$ must be valid only for one $i \in \{L, K\}$ because only one elite faction needs to oppose the coup in order for it to fail.

In the appendix, we also prove that the set of promises that stop a coup which gives rise to a lasting dictatorship controlled by the elite faction j is given by:

$$\tilde{S}_C\left(\varphi, \mu, \lambda_j\right) = \left\{(\tau, \lambda) \in S : \text{there is } i \in \{L, K\} \text{ such that } (1 - \beta)\varphi \geq \right.$$
$$\left. [1 - \beta(1 - r)]\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + \beta(1 - r)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right) - \beta q \bar{\varphi}_i\left(\tau(j), \lambda(j), \lambda_j\right)\right\}$$

where $(\tau(j), \lambda(j)) = \arg\max_{(\tau, \lambda) \in \bar{S}_R(\mu, \lambda_j)} v_j(\tau, \lambda)$. The intuition is similar to the one behind $\bar{S}_C\left(\varphi, \lambda_j\right)$. However, there is one key difference: once the elite mounts a coup, there will be no further attempt at democratization. This does not affect the value of the people's offer, but it significantly changes the cost and benefits of a coup. Now a coup implements $(0, \lambda_j)$ when there is no revolt threat and $(\tau(j), \lambda(j))$ when there is a revolt threat. More formally, $(1 - \beta)\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + \beta\left[r\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + (1 - r)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)\right]$ indicates the proportion of its income that elite faction i is willing to sacrifice in order to obtain $(0, \lambda_j)$ instead of (τ, λ) now and (τ, λ) with probability r and (τ_P, λ_P) with probability $(1 - r)$ in the future. However, a coup cannot always implement $(0, \lambda_j)$, since, when there is a revolt threat, the elite must placate the potential rebels by offering $(\tau(j), \lambda(j))$. For this reason we must subtract $\beta q \bar{\varphi}_i\left(\tau(j), \lambda(j), \lambda_j\right)$

from the benefits of a coup. In terms of the costs, in this situation, a coup occurs only once, which implies that a long-lasting dictatorship costs the elite (expressed as a fraction of its income) just $(1 - \beta) \varphi$.

5.1 In the absence of intra-elite conflict

We begin with a situation in which there is no intra-elite conflict. The following proposition summarizes the results (we present a detailed proof in the appendix).

Proposition 5 *Equilibrium. Consider a society with **no intra-elite conflict over trade policy**, i.e., $\lambda_L = \lambda_K = \lambda_E \neq \lambda_P$. Then, the political regime determination game has a unique Markov perfect equilibrium. In this equilibrium:*

1. *If $\mu \geq [1 - \beta (1 - q)] \bar{\mu} (\tau_P, \lambda_P) + \beta (1 - q) \bar{\mu} (0, \lambda_E)$, the society remains **non-democratic**. When $\mu_t = \mu^L$, the elites set $(0, \lambda_E)$; when $\mu_t = \mu^H$, they offer $(\tau (l), \lambda (l)) = \arg\max_{(\tau,\lambda) \in \bar{S}(\mu, \lambda_E)} v_l (\tau, \lambda)$.*

2. *If $\mu < [1 - \beta (1 - q)] \bar{\mu} (\tau_P, \lambda_P) + \beta (1 - q) \bar{\mu} (0, \lambda_E)$, society switches to democracy the first time $\mu_t = \mu^H$. Thereafter:*

   (a) *If $[1 - \beta (1 - q)] \varphi \geq \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$, then democracy is **fully consolidated** and the people set (τ_P, λ_P).*

   (b) *If $\beta (1 - q - r) \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E) \leq [1 - \beta (1 - q)] \varphi < \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$, then democracy is **semi-consolidated**. When $\varphi_t = \varphi^L$, the people set (τ_P, λ_P); when $\varphi_t = \varphi^H$ they offer $(\tau, \lambda) = \arg\max_{(\tau,\lambda) \in \bar{S}(\varphi, \lambda_E)} v_P (\tau, \lambda)$.*

   (c) *If $[1 - \beta (1 - q)] \varphi < \beta (1 - q - r) \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$, then democracy is **unconsolidated**. The society continuously switches political regimes and trade policies. In a dictatorship, when $\mu_t = \mu^L$, the elites set $(0, \lambda_E)$; when $\mu_t = \mu^H$, they democratize and the people set (τ_P, λ_P). In a democracy, when $\varphi_t = \varphi^L$, the people set (τ_P, λ_P); when $\varphi_t = \varphi^H$, there is a coup and the elites set $(0, \lambda_E)$.*

The main message of proposition 5 can be easily summarized in a less formal way, which also has the advantage of highlighting the relationships between the political regime and trade policy. Consider a society in which there is **no intra-elite conflict over trade policy**. If the cost of organizing a revolt is high enough ($\mu \geq [1 - \beta (1 - q)] \bar{\mu} (\tau_P, \lambda_P) + \beta (1 - q) \bar{\mu} (0, \lambda_E)$), the elites can always placate the populace by offering a temporary concession. In this case, society remains non-democratic, there is very low redistribution and the economy tends to operate under the trade policy preferred by the elites, except under special circumstances, when the best way of stopping a revolt without giving up the political regime is by offering a temporary change in trade policy. If the cost of organizing a revolt is low enough ($\mu < [1 - \beta (1 - q)] \bar{\mu} (\tau_P, \lambda_P) + \beta (1 - q) \bar{\mu} (0, \lambda_E)$), then a temporary concession cannot placate the people and the elites are forced to democratize. The type of democratic regime that emerges will depend on the cost of coups. If the cost of organizing a coup is relatively high ($[1 - \beta (1 - q)] \varphi \geq \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$), then, after the first revolt, society switches from a dictatorship with no income redistribution and the trade policy preferred by the elite to a consolidated democracy with high levels of income taxation and redistribution and a trade policy preferred by the people. If the cost of organizing a coup is moderate ($\beta (1 - q - r) \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E) \leq [1 - \beta (1 - q)] \varphi < \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$), then, after the first revolt,

society switches from a dictatorship with no income redistribution and the trade policy preferred by the elites to a semi-consolidated democracy, which usually levies high income taxes and implements the trade policy preferred by the people, but may sometimes face a coup threat, which it can counter by moderating income taxation and perhaps by introducing a change in trade policy for a brief period. Finally, if the cost of organizing a coup is relatively low ($[1 - \beta (1 - q)] \varphi < \beta (1 - q - r) \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_E)$), then society continuously switches between political regimes, levels of income taxation and types of trade policy. Under a dictatorship, there is no income taxation and the trade policy that is implemented is the one preferred by the elite, while, under a democracy, there is a high level of income taxation and the trade policy that is implemented is the one preferred by the people.

5.2   Intra-elite conflict

Next, we study the equilibrium of the dynamic game when there is intra-elite conflict over trade policy. First, we cover situations in which at least one elite faction can stop a revolt by offering a temporary concession and, hence, the key political issue is who controls the autocracy. The following proposition summarizes the results (we present a detailed proof in the appendix).

Proposition 6 *Equilibrium. Consider a society with **intra-elite conflict over trade policy**, i.e., $\lambda_l \neq \lambda_s = \lambda_P$. Then, the political regime determination game has a unique Markov perfect equilibrium. In this equilibrium, before the first time that $\mu_t = \mu^H$, the autocracy is controlled by the elite faction l, which sets $(0, \lambda_l)$. Thereafter:*

1. *If $\mu \geq [1 - \beta (1 - q)] \bar{\mu} (\tau_P, \lambda_P) + \beta (1 - q) \bar{\mu} (0, \lambda_l)$, the society remains **non-democratic**, but the autocracy continues under the control of l only if $V_l (l, \mu^H) \geq V_l (s, \mu^H)$.[14] Otherwise, the first time that $\mu_t = \mu^H$, the control of the autocracy is transferred to s. Moreover, when the autocracy is under the control of the elite faction j, when $\mu_t = \mu^L$, the autocratic government sets $(0, \lambda_j)$, while when $\mu_t = \mu^H$, it sets $(\tau (j), \lambda (j)) = \arg \max_{(\tau, \lambda) \in \bar{S}_R(\mu, \lambda_j)} v_j (\tau, \lambda)$.*

2. *If $[1 - \beta (1 - q)] \bar{\mu}_P (\tau_P, \lambda_P) + \beta (1 - q) \bar{\mu}_P (0, \lambda_s) \leq \mu < [1 - \beta (1 - q)] \bar{\mu}_P (\tau_P, \lambda_P) + \beta (1 - q) \bar{\mu}_P (0, \lambda_l)$, then, the first time that $\mu_t = \mu^H$, society switches to an **autocracy controlled by s or** to a **democracy**. Moreover:*

   (a) *Suppose that democratization leads to: (i) a fully consolidated democracy; (ii) a semi-consolidated democracy in which each time $\varphi_t = \varphi^H$, the people set $\tau \leq \tau_P (\lambda_P)$ and λ_P; or (iii) a short period of democracy until $\varphi_t = \varphi^H$, followed by a coup that gives rise to a permanent autocracy controlled by s. Then, the first time $\mu_t = \mu^H$, the elite faction l transfers the control of the autocracy to s.*

   (b) *Suppose that democratization leads to: (i) a semi-consolidated democracy in which each time $\varphi_t = \varphi^H$, the people set $\tau \leq \tau_P (\lambda_l)$ and λ_l; or (ii) an unconsolidated democracy with peri-*

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[14]Note that $V_i (j, \mu^H) = (1 - \beta)^{-1} \{[1 - \beta (1 - q)] v_i (\tau (j), \lambda (j)) + \beta (1 - q) v_i (0, \lambda_j)\}$, where $(\tau (j), \lambda (j)) = \arg \max_{(\tau, \lambda) \in \bar{S}_R(\mu, \lambda_j)} v_j (\tau, \lambda)$.

odic coups that give rise to a dictatorship controlled by l. Then the elite faction l choose to democratize if and only if $V_l\left(D, \varphi^L\right) \geq V_l\left(s, \mu^H\right)$.[15]

The main message of proposition 6 can be easily summarized in a less formal but clearer way. Consider a society in which there is **intra-elite conflict** over trade policy. In particular, suppose that the **aristocracy is protectionist, while the capitalists and the populace are pro-free-trade**. If the cost of organizing a revolt is high enough ($\mu \geq [1 - \beta(1-q)]\bar{\mu}(\tau_P, \lambda_P) + \beta(1-q)\bar{\mu}(0, \lambda_l)$), then society remains non-democratic. If the autocracy is controlled by the aristocracy, the economy tends to operate under protectionism, except when the people are threatening to revolt and must be placated with temporary redistribution measures and, possibly, a brief period of free trade. If the autocracy is controlled by the capitalists, there is always a free-trade policy and the potential proponents of a revolt are placated with temporary redistribution measures. The aristocracy will be more willing to transfer control of the autocracy over to the capitalists if such an autocracy can stop revolts with much lower taxation levels than an autocracy controlled by the aristocracy. If the cost of organizing a revolt is low enough ($[1 - \beta(1-q)]\bar{\mu}_P(\tau_P, \lambda_P) + \beta(1-q)\bar{\mu}_P(0, \lambda_s) \leq \mu < [1 - \beta(1-q)]\bar{\mu}_P(\tau_P, \lambda_P) + \beta(1-q)\bar{\mu}_P(0, \lambda_l)$), then there are two possible situations: either the aristocracy transfers the control of the autocracy to the capitalists and, hence, democratization can be avoided, or the aristocracy democratizes. Depending on the type of democratic regime that emerges, the aristocracy prefers one or the other alternative. In particular, suppose that the aristocracy has very little de facto political power in a democracy, such that democratization leads to a fully consolidated democracy, a semi-consolidated democracy that always implements a free trade policy, or a brief period of democracy, followed by a coup that gives rise to an embedded autocracy controlled by capitalists. Then, the aristocracy will always prefer to transfer control over the autocracy to the capitalists. However, suppose that the de facto political power wielded by the aristocracy in a democracy is such that democratization leads to a semi-consolidated democracy that must offer a protectionist trade policy whenever there is a coup threat or to an unconsolidated democracy with periodic coups that give rise to a dictatorship controlled by the aristocracy. Then, the aristocracy might be better off if it offers democratization than if it transfers the control of the autocracy to the capitalists.

Next, we cover situations in which only democratization will stop a revolt and, hence, the key political issues are the consolidation of democracy and the nature of the coups that could take place. The following proposition summarizes the results (we present a detailed proof in the appendix)

Proposition 7 *Equilibrium. Consider a society in which there is **intra-elite conflict over trade policy**, i.e., $\lambda_l \neq \lambda_s = \lambda_P$. Then, there is a unique Markov perfect equilibrium in the game. In this equilibrium, before the first time that $\mu_t = \mu^H$, the autocracy is controlled by the elite faction l, which sets $(0, \lambda_l)$. Thereafter:*

  3. *If $\mu < [1 - \beta(1-q)]\bar{\mu}_P(\tau_P, \lambda_P) + \beta(1-q)\bar{\mu}_P(0, \lambda_s)$, the first time that $\mu_t = \mu^H$, society switches to democracy. Moreover, let $r' = [1 - \beta(1 - q - r)]$, and $\varphi' = [1 - \beta(1-q)]\varphi$. Then:*

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[15]For a semi-consolidated democracy $V_i\left(D, \varphi^L\right) = (1-\beta)^{-1}\{\beta r v_i(\tau_D, \lambda_D) + (1 - \beta r)v_i(\tau_P, \lambda_P)\}$, where $(\tau_D, \lambda_D) = \arg\max_{(\tau, \lambda) \in \tilde{S}_C(, \varphi, \mu, \lambda_P)} v_P(\tau, \lambda)$. For an unconsolidated democracy $V_i\left(D, \varphi^L\right) = (1-\beta)^{-1}[1 - \beta(1-q-r)]^{-1}\{[1 - \beta(1-q)]v_i(\tau_P, \lambda_P) + \beta r v_i(0, \lambda_l) - \beta r[1 - \beta(1-q)]\varphi v_i(0, \lambda_l)\}$. For the defintion of $V_l\left(s, \mu^H\right)$ see the previous footnote.

(a) *If $\varphi' \geq \max_{\lambda_j} \min_i \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_j)$, democracy is **fully consolidated** and the people set (τ_P, λ_P).*

(b) *If $\max_{\lambda_j} \min_i r' \bar{\varphi}_i(0, \lambda_P, \lambda_j) + (1-r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_j) \leq \varphi' < \max_{\lambda_j} \min_i \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_j)$, democracy is **semi-consolidated**. In particular, when $\varphi_t = \varphi^L$, the people set (τ_P, λ_P); while when $\varphi_t = \varphi^H$, they offer a temporary concession in order to stop the coup.*

(c) *If $\min_\lambda \max_{\lambda_j} \min_i r' \bar{\varphi}_i(0, \lambda_P, \lambda) + (1-r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_j) \leq \varphi' < \max_{\lambda_j} \min_i r' \bar{\varphi}_i(0, \lambda_P, \lambda_j) + (1-r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_j)$, democracy is **either semi-consolidated or unconsolidated democracy**. In the first situation, when $\varphi_t = \varphi^L$, the people set (τ_P, λ_P); while when $\varphi_t = \varphi^H$, they offer a concession that includes λ_l in order to stop the coup.[16] In the second situation, society continuously switches between political regimes, but it always maintains the same trade policy $\lambda_s = \lambda_P$. In particular, when $\mu_t = \mu^L$, the elites set $(0, \lambda_s)$; when $\mu_t = \mu^H$, there is democratization and the people set (τ_P, λ_P); when $\varphi_t = \varphi^L$, the people set (τ_P, λ_P); and when $\varphi_t = \varphi^H$, there is a coup and the elites set $(0, \lambda_s)$. Democracy is semi-consolidated democracy if and only if the people cannot induce a coup controlled by s or, even if they can so, they prefer to defend democracy.[17]*

(d) *If $\min_{i,\lambda} r' \bar{\varphi}_i(0, \lambda, \lambda_l) + (1-r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_l) \leq \varphi' < \min_\lambda \max_{\lambda_j} \min_i r' \bar{\varphi}_i(0, \lambda_P, \lambda) + (1-r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_j)$, democracy is **unconsolidated** and **society continuously switches between political regimes, but it always maintains the same trade policy $\lambda_s = \lambda_P$**. In particular, when $\mu_t = \mu^L$, the elites set $(0, \lambda_s)$; when $\mu_t = \mu^H$, there is democratization and the people set (τ_P, λ_P); when $\varphi_t = \varphi^L$, the people set (τ_P, λ_P); and when $\varphi_t = \varphi^H$, there is a coup and the elites set $(0, \lambda_s)$.*

(e) *If $\varphi' < \min_{i,\lambda} r' \bar{\varphi}_i(0, \lambda, \lambda_l) + (1-r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_l)$, democracy is **unconsolidated** and **society continuously switches between political regimes and trade policies**. In particular, when $\mu_t = \mu^L$, the elites set $(0, \lambda_l)$; when $\mu_t = \mu^H$, there is democratization and the people set (τ_P, λ_P); when $\varphi_t = \varphi^L$, the people set (τ_P, λ_P); and when $\varphi_t = \varphi^H$, there is a coup and the elites set $(0, \lambda_l)$.*

The main message of proposition 7 can be easily summarized in a less formal way. Consider a society in which there is **intra-elite conflict over trade policy and a protectionist populace**. Let $\lambda_l = F$ and $\lambda_s = \lambda_P = A$, which can represent, for example, the economic cleavages seen in Argentina in the second half of the twentieth century ($l = L$ are the landlords and $s = K$ are the capitalists). Suppose that the cost of organizing a revolt is relatively low ($\mu < [1 - \beta(1-q)]\bar{\mu}_P(\tau_P, \lambda_P) + \beta(1-q)\bar{\mu}_P(0, \lambda_s)$). If the cost of mounting a coup is very high ($\varphi' \geq \max_{\lambda_j} \min_i \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_j)$), then, after the first revolt, society will switch from an autocracy controlled by l, no redistribution and a free trade policy to a consolidated democracy that implements high levels of taxation and redistribution and a protectionist trade policy. If the cost of mounting a coup is high ($\max_{\lambda_j} \min_i r' \bar{\varphi}_i(0, \lambda_P, \lambda_j) + (1-r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_j) \leq$

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[16] Formally, the people promise $\tau = \arg\max_{(\tau, \lambda_l) \in \cap_j \bar{S}_C(\varphi, \lambda_j)} v_P(\tau, \lambda_l)$ and $\lambda = \lambda_l$

[17] Formally, the people can induce a coup controlled by the elite faction s if and only if there is $(\tau, \lambda) \in \bar{S}_C(\varphi, \lambda_l) - \bar{S}_C(\varphi, \lambda_s)$. If such (τ, λ) exists, it is still possible that the people prefer a semi-democratic regime if $V_P(D, \varphi^H, \tau, \lambda) \geq V_P(s, \mu^L) - \varphi v_P(0, \lambda_s)$, where $V_P(D, \varphi^H, \tau, \lambda) = (1-\beta)^{-1}\{[1-\beta(1-r)]v_i(\tau, \lambda) + \beta(1-r)v_i(\tau_P, \lambda_P)\}$, $\tau = \arg\max_{(\tau, \lambda_l) \in \cap_j \bar{S}_C(\varphi, \lambda_j)} v_P(\tau, \lambda_l)$, $\lambda = \lambda_l$, and $V_i(s, \mu^L) - \varphi v_i(0, \lambda_s) = (1-\beta)^{-1}[1-\beta(1-q-r)]^{-1}\{[1-\beta(1-r)]v_i(0, \lambda_s) + \beta q v_i(\tau_P, \lambda_P) - [1-\beta(1-r)][1-\beta(1-q)]\varphi v_i(0, \lambda_s)\}$.

$\varphi' < \max_{\lambda_j} \min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_j))$, then, after the first revolt, society will switch from an autocracy controlled by l, no redistribution and a free-trade policy to a semi-consolidated democracy which usually implements high levels of redistribution and a protectionist trade policy, but which sometimes lowers income taxes and may introduce free trade for a short period of time in order to counter a threatened coup. If the cost of the coup is moderate $(\min_\lambda \max_{\lambda_j} \min_i r' \bar{\varphi}_i (0, \lambda_P, \lambda) + (1 - r') \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_j) \leq \varphi' < \max_{\lambda_j} \min_i r' \bar{\varphi}_i (0, \lambda_P, \lambda_j) + (1 - r') \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_j))$, then, after the first revolt, society will switch from an autocracy controlled by l, no redistribution and a free-trade policy to either a semi-consolidated or an unconsolidated democracy. A semi-consolidated democracy usually implements high levels of taxation and redistribution and a protectionist trade policy, but sometimes faces a coup threat which it counters by lowering income taxes and temporarily instituting a free trade policy. If the transition is to an unconsolidated democracy, the society will continuously switch between political regimes and levels of income taxation and redistribution, but the protectionist trade policy will always be retained. If the cost of a coup is low $(\min_{i,\lambda} r' \bar{\varphi}_i (0, \lambda, \lambda_l) + (1 - r') \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_l) \leq \varphi' < \min_\lambda \max_{\lambda_j} \min_i r' \bar{\varphi}_i (0, \lambda_P, \lambda) + (1 - r') \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_j))$, then, after the first revolt, society will switch from a dictatorship controlled by l, no redistribution and a free-trade policy to an unconsolidated democracy, with ongoing changes in the political regime and levels of income taxation and redistribution, but with a stable protectionist trade policy. If the cost of a coup is very low $(\varphi' < \min_{i,\lambda} r' \bar{\varphi}_i (0, \lambda, \lambda_l) + (1 - r') \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_l))$, then, after the first revolt, society will switch from an autocracy controlled by l, no redistribution and a free-trade policy to an unconsolidated democracy, with continuous changes in the political regime, levels of income taxation and redistribution, and trade policy.

6 Conclusions

In this paper we have looked at some of the connections between the political regime and trade policy. As we have shown, international trade can crucially affect political alignments and hence the political regime, as well as trade policy. Indeed, our model suggests that significant connections exist among political transitions, trade policy switches, and the comparative advantages of an economy. The critical point is that trade policy opens the way for a political cleavage other than the rich-poor/elite-populace one. Indeed, though we stress the role of trade policy in this paper, our model is more general and applies to any policy variable that could potentially divide the elites.

In fact, once we introduce trade policy as an endogenous outcome of the political game, even when there is no intra-elite conflict over trade policy, the model predicts that major changes in the political regime will be associated with major switches in trade policy. Moreover, the direction of those switches depends on the comparative advantages of the economy and the nature of the political change that occurs. Thus, for instance, democratization in societies with a protectionist elite and a pro-free-trade populace should be associated with an opening of the economy, while democratization in societies with a pro-free-trade elite and a protectionist populace should be accompanied by the proliferation of protectionist measures. When we also incorporate intra-elite conflict over trade policy into the model, a new and more diverse landscape emerges. First, as we have already mentioned in connection with the case of Great Britain, a crucial switch in trade policy can happen before full democratization takes place through a reallocation of political power within the elite. Second, as we discussed in relation to the case of Argentina, there can be coups that give rise to dictatorships that maintain protectionist policies or to dictatorships that open up the economy.

Additionally, for societies with no intra-elite conflict and a pro-free-trade (protectionist) populace, our model predicts a democratization process that begins with an autocracy implementing a protectionist (free-trade) policy; it then moves to a period of unconsolidated democracy and an unstable trade policy and then ends with a consolidated democracy with a free-trade (protectionist) policy. On the other hand, for societies in which there is intra-elite conflict, the model predicts a much more complicated democratization process that can potentially include a changeover in control of the prevailing autocracy and coups that either close or open the economy. The discussion of the cases of Great Britain and Argentina shows that intra-elite conflict over trade policy is an important factor in arriving at an understanding of the different political and economic paths followed by these countries.

The model also points to interesting implications for some institutions and organizations, such as unions or the armed forces, which affect the cost of coups and revolts. For example, unionization probably decreases the cost of a revolt and increases the cost of a coup. If this is the case, then our model can tell us how the different groups will react to legislation that promotes labor unions. Similarly, the cost of a coup depends on the availability and organization of the armed forces. Thus, our model can indicate which groups will be more willing to extend financial support to the military. In general, when there is no intra-elite conflict, the elite is better off when the cost of a coup is low and the cost of a revolt is high, while the opposite is usually true for the general public. However, when there is an intra-elite conflict, the analysis is more subtle. In particular, it is perfectly possible that one of the elite factions will be better off when a coup would be more costly or when a revolt would be less costly. The details are somewhat involved, but the intuition is simple. Consider, for example, the situation of the commercial and industrial elite in Great Britain at the beginning of the nineteenth century. While a revolt would have been very costly for the populace, the aristocracy was able to placate the people without relinquishing control of the government. However, when the people found that a revolt would be less costly, the aristocracy was forced to transfer its control over the autocracy to the commercial and industrial elite, which paved the way for the repeal of the Corn Laws. Thus, it is very likely that a moderate decrease in the cost of a revolt was beneficial for the commercial and industrial elite.

Another interesting implication refers to how populism affects the political regime. Since populism tends to be an elusive and sometimes not very precise concept, we can adopt an agnostic approach and simply associate populism with two parameters of our model. The parameter $1-q$ captures how credible the people's promises are. In this sense, we can say that populism is greater when the people's promises become less credible. A second parameter captures the degree of redistributive pressures exerted on democratic institutions. In this second sense, we can say that populism is greater when democratic institutions are more redistributionist. It is not difficult to show that, for a society with no intra-elite conflict, a more populist democracy, measured in either of these two alternative ways, makes coups more likely and, hence, the consolidation of democracy less likely. It is also possible to show that, for a society in which there is an intra-elite conflict, populism can affect the nature of coups. As we have seen, Argentina is an excellent example. As populist pressures were held at bay in the late 1950s and the 1960s, coups kept protectionist barriers in place, while, when Argentina's democracy became more populist in the 1970s, the protectionist industrial elite agreed to join the pro-free-trade landlords in mounting a coup that did away with protectionist barriers.

7 Appendix

In this appendix we present the proofs for propositions 5, 6 and 7. We begin by writing the Bellman equation of each group in each state. Each state consists of a combination of a political regime (revolution, autocracy controlled by elite faction j, or democracy) and a cost of changing the regime (μ for mounting a revolt and φ for mounting a coup).

Revolution. We begin with the revolutionary state. Since the revolution is an absorbing state, it is easy to compute the expected utility for each group when the people mount a revolt. Each elite group receives a zero payoff forever, while the populace expropriates all of the income of the elite. Therefore:

$$V_i\left(R, \mu_t\right) = \begin{cases} 0 & \text{if } i = L, K, \\ \frac{(1-\mu_t)}{1-\beta} \frac{\bar{y}^A}{n_P} & \text{if } i = P. \end{cases} \tag{15}$$

Autocracy. Suppose that the political regime is an autocracy controlled by the elite faction $j = L, K$. If there is no revolt threat, i.e., $\mu_t = \mu^L$, the elite faction j can implement its preferred policy $(0, \lambda_j)$. In the next period, the political regime will also be an autocracy controlled by the elite faction j; moreover, with probability q, there will be a revolt threat, i.e., $\mu_{t+1} = \mu^H$, and with probability $(1 - q)$, there will be no revolt threat, i.e., $\mu_{t+1} = \mu^L$. Therefore:

$$V_i\left(j, \mu^L\right) = v_i\left(0, \lambda_j\right) + \beta\left[qV_i\left(j, \mu^H\right) + (1-q) V_i\left(j, \mu^L\right)\right].$$

If there is a revolt threat, i.e., $\mu_t = \mu^H$, j has several alternative means of placating the proponents of the revolt. First, j can concede a transitory change in policy (with this policy being denoted as (τ, λ)) without any modification in political institutions. Second, j can transfer the control of the autocracy to the other elite faction. Finally, j can offer democratization. Suppose that j uses the first strategy and the populace does not mount a revolution. Then:

$$V_i\left(j, \mu^H, \tau, \lambda\right) = v_i\left(\tau, \lambda\right) + \beta\left[qV_i\left(j, \mu^H\right) + (1-q) V_i\left(j, \mu^L\right)\right],$$

where $V_i\left(j, \mu^H, \tau, \lambda\right)$ indicates the expected utility of group i when the state is $\left(j, \mu^H\right)$, j offers policy (τ, λ) and the populace does not mount a revolt. If the elite faction j and the populace follow the same strategy every time $\mu_t = \mu^H$, it must be the case that $V_i\left(j, \mu^H\right) = V_i\left(j, \mu^H, \tau, \lambda\right)$ and, therefore:

$$V_i\left(j, \mu^L\right) = \frac{\beta q v_i\left(\tau, \lambda\right) + (1 - \beta q) v_i\left(0, \lambda_j\right)}{1 - \beta}, \tag{16}$$

$$V_i\left(j, \mu^H, \tau, \lambda\right) = \frac{\left[1 - \beta\left(1 - q\right)\right] v_i\left(\tau, \lambda\right) + \beta\left(1 - q\right) v_i\left(0, \lambda_j\right)}{1 - \beta}. \tag{17}$$

The populace is willing to accept j's offer if and only if $V_P\left(j, \mu^H, \tau, \lambda\right) \geq V_R\left(R, \mu^H\right)$, which implies that we can define a critical value of μ, such that, for μ higher than this critical value, the populace agrees to stop the revolt in exchange for j's offer, while, for μ lower than this critical value, the populace mounts a revolt if j maintains the offer (τ, λ). The critical value is is implicitly given by $V_P\left(j, \mu^H, \tau, \lambda\right) = V_R\left(R, \mu^H\right)$, which, after somewhat tedious but straightforward algebra, becomes:

$$\left[1 - \beta\left(1 - q\right)\right] \bar{\mu}\left(\tau, \lambda\right) + \beta\left(1 - q\right) \bar{\mu}\left(0, \lambda_j\right). \tag{18}$$

As we mentioned earlier, the elites have three different ways to placate those calling for a revolt (the elites always prefer to stop the revolt, since it is the worst possible outcome for them). First, j (the elite that controls the dictatorship) can concede a temporary change in policy without making any modification in political institutions. Second, j can transfer the control of the autocracy to the other elite faction. Finally, j can offer democratization. Depending on the value of μ, all or some of these options may effectively placate supporters of a revolt.

Only democracy stops the revolt. If $\mu < [1 - \beta(1-q)]\bar{\mu}(\tau_P, \lambda_P) + \beta(1-q)\min_j \bar{\mu}(0, \lambda_j)$, democratization is the only feasible option that the elite has for placating a revolt, regardless of which elite faction controls the dictatorship. So, suppose that the political regime is a democracy. If there is no coup threat, i.e., $\varphi_t = \varphi^L$, the populace implements its preferred policy (τ_P, λ_P). During the next period, the political regime will also be a democracy; moreover, with probability r there will be a coup threat, i.e., $\varphi_{t+1} = \varphi^H$, while with probability $(1-r)$ there will be no coup threat, i.e., $\varphi_{t+1} = \varphi^L$. Therefore:

$$V_i\left(D, \varphi^L\right) = v_i\left(\tau_P, \lambda_P\right) + \beta\left[rV_i\left(D, \varphi^H\right) + (1-r)V_i\left(D, \varphi^L\right)\right].$$

If there is a coup threat, i.e., $\varphi_t = \varphi^H$, the populace can try to avert it by conceding a temporary change in policy (with this policy being denoted as (τ, λ)). If the elite accepts this concession, then:

$$V_i\left(D, \varphi^H, \tau, \lambda\right) = v_i\left(\tau, \lambda\right) + \beta\left[rV_i\left(D, \varphi^H\right) + (1-r)V_i\left(D, \varphi^L\right)\right],$$

where $V_i\left(D, \varphi^H, \tau, \lambda\right)$ indicates the expected utility of group i when the state is $\left(D, \varphi^H\right)$, the people offer (τ, λ), and the elite does not mount a coup. If the populace and the elite follow the same strategy every time $\varphi_t = \varphi^H$, it must be the case that $V_i\left(D, \varphi^H\right) = V_i\left(D, \varphi^H, \tau, \lambda\right)$ and, therefore:

$$V_i\left(D, \varphi^L\right) = \frac{\beta r v_i\left(\tau, \lambda\right) + (1 - \beta r)v_i\left(\tau_P, \lambda_P\right)}{1 - \beta}, \tag{19}$$

$$V_i\left(D, \varphi^H, \tau, \lambda\right) = \frac{[1 - \beta(1-r)]v_i\left(\tau, \lambda\right) + \beta(1-r)v_i\left(\tau_P, \lambda_P\right)}{1 - \beta}. \tag{20}$$

If the elite decides to mount a coup that gives rise to a dictatorship controlled by the elite faction j, then:

$$V_i^C\left(D, \varphi^H\right) = (1 - \varphi)v_i\left(0, \lambda_j\right) + \beta\left[qV_i\left(j, \mu^H\right) + (1-q)V_i\left(j, \mu^L\right)\right],$$

where $V_i^C\left(D, \varphi^H\right)$ indicates the expected utility of group i when the state is $\left(D, \varphi^H\right)$ and the elite mounts a coup. After the coup, when $\mu_t = \mu^L$, j (the elite faction that controls the dictatorship) implements its most preferred policy, i.e.:

$$V_i\left(j, \mu^L\right) = v_i\left(0, \lambda_j\right) + \beta\left[qV_i\left(j, \mu^H\right) + (1-q)V_i\left(j, \mu^L\right)\right],$$

while when $\mu_t = \mu^H$, there will be democratization, i.e.:

$$V_i\left(j, \mu^H\right) = V_i\left(D, \varphi^L\right).$$

If each time $\varphi_t = \varphi^H$, the elite mounts a coup, it must be the case that $V_i\left(D, \varphi^H\right) = V_i^C\left(D, \varphi^H\right)$ and, therefore, under a democratic regime:

$$V_i\left(D, \varphi^L\right) = \frac{[1 - \beta(1-q)]v_i\left(\tau_P, \lambda_P\right) + \beta r v_i\left(0, \lambda_j\right) - \beta r[1 - \beta(1-q)]\varphi v_i\left(0, \lambda_j\right)}{(1 - \beta)[1 - \beta(1 - q - r)]}, \tag{21}$$

$$V_i^C\left(D, \varphi^H\right) = \frac{[1 - \beta(1-r)]v_i\left(0, \lambda_j\right) + \beta q v_i\left(\tau_P, \lambda_P\right) - [1 - \beta(1-r)][1 - \beta(1-q)]\varphi v_i\left(0, \lambda_j\right)}{(1 - \beta)[1 - \beta(1 - q - r)]} \tag{22}$$

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while, under a dictatorship, $V_i\left(j, \mu^L\right) = V_i\left(D, \varphi^H\right) + \varphi v_i\left(0, \lambda_j\right)$, and $V_i\left(j, \mu^H\right) = V_i\left(D, \varphi^L\right)$.

The elite faction i is willing to accept the populace's offer if and only if $V_i^D\left(D, \varphi^H, \tau, \lambda\right) \geq V_i^C\left(D, \varphi^H\right)$, which implies that we can define a critical value of φ such that, for all φ higher that this critical value, the elite faction i prefers the populace's offer to a coup that gives rise to a dictatorship controlled by the elite faction j. This critical value is implicitly given by $V_i^D\left(D, \varphi^H, \tau, \lambda\right) = V_i^C\left(D, \varphi^H\right)$. After somewhat tedious, but straightforward algebra, we obtain:

$$\frac{r'\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + \left(1 - r'\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)}{\left[1 - \beta\left(1 - q\right)\right]}, \tag{23}$$

where $r' = \left[1 - \beta\left(1 - q - r\right)\right]$.

A coup that gives rise to a dictatorship controlled by j occurs only when $\left[1 - \beta\left(1 - q\right)\right]\varphi < r'\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + \left(1 - r'\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$ for $i = K, L$. Therefore, for a given φ, the set of policies to which the populace can commit in order to stop such a coup, denoted $\bar{S}_C\left(\varphi, \lambda_j\right)$, is given by:

$$\begin{aligned}\bar{S}_C\left(\varphi, \lambda_j\right) &= \{\left(\tau, \lambda\right) \in S : \text{there is } i \in \{L, K\} \text{ such that } \left[1 - \beta\left(1 - q\right)\right]\varphi \geq \\ &\quad \left[1 - \beta\left(1 - q - r\right)\right]\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + \beta\left(1 - q - r\right)\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)\}.\end{aligned}$$

Moreover, if the populace decides to stop a coup, the best way for it to do so is by promising to embrace the policy that maximizes its expected utility from among the set of policies that will stop a coup, i.e., $\left(\tau, \lambda\right) = \arg\max_{\left(\tau, \lambda\right) \in \cap_j \bar{S}_C\left(\varphi, \lambda_j\right)} v_P\left(\tau, \lambda\right)$.

Only one elite faction can stop the revolt without democratization. If $\left[1 - \beta\left(1 - q\right)\right]\bar{\mu}\left(\tau_P, \lambda_P\right) + \beta\left(1 - q\right)\min_j \bar{\mu}\left(0, \lambda_j\right) < \mu < \left[1 - \beta\left(1 - q\right)\right]\bar{\mu}\left(\tau_P, \lambda_P\right) + \beta\left(1 - q\right)\max_j \bar{\mu}\left(0, \lambda_j\right)$, then one elite faction can placate a revolt only through democratization, while the other faction can also stop it by making a temporary change in policy. Suppose that the first elite is j and the second is k. Moreover, assume that, for any given reason, society switches to a democratic regime. Sooner or later, the threat of a coup will arise, i.e., $\varphi_t = \varphi^H$. The complication is that now there are two different types of coups. On the one hand, if a coup gives rise to a dictatorship controlled by j, it will be forced to democratize when $\mu_t = \mu^H$. For this coup, the relevant critical values are given by (23). On the other hand, a coup that gives rise to a dictatorship controlled by k will lead to a permanent autocracy, since, when $\mu_t = \mu^H$, the elite faction k can always stop a revolt by means of a temporary change in policy. Thus, for this coup, we must deduce new critical values.

Suppose that when $\varphi_t = \varphi^H$, the elite decides to mount a coup that gives rise to an autocracy controlled by k. Then, in the present period, k implements its preferred policy $\left(0, \lambda_k\right)$. In the next period, if $\mu_{t+1} = \mu^L$, k implements the same policy again, while if $\mu_{t+1} = \mu^H$, k placates the potential proponents of a revolt with $\left(\tau\left(k\right), \lambda\left(k\right)\right) = \arg\max_{\left(\tau, \lambda\right) \in \bar{S}_R\left(\mu, \lambda_k\right)} v_k\left(\tau, \lambda\right)$ (see below for a definition of $\bar{S}_R\left(\mu, \lambda_k\right)$). Therefore:

$$V_i^C\left(D, \varphi^H\right) = \left(1 - \varphi\right)v_i\left(0, \lambda_k\right) + \frac{\beta}{1 - \beta}\left[qv_i\left(\tau_E, \lambda_E\right) + \left(1 - q\right)v_i\left(0, \lambda_k\right)\right].$$

Again, the elite faction i is willing to accept the populace's offer if and only if $V_i^D\left(D, \varphi^H, \tau, \lambda\right) \geq V_i^C\left(D, \varphi^H\right)$, which implies that we can define a critical value of φ such that, for all φ higher than this critical value, the elite faction i prefers the populace's offer to a coup that gives rise to a dictatorship

controlled by the elite faction k. This critical value is implicitly given by $V_i^D\left(D, \varphi^H, \tau, \lambda\right) = V_i^C\left(D, \varphi^H\right)$. After somewhat tedious but straightforward algebra, we obtain:

$$\frac{[1 - \beta(1-r)]\,\bar{\varphi}_i\left(\tau, \lambda, \lambda_k\right) + \beta(1-r)\,\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_k\right) - \beta q \bar{\varphi}_i\left(\tau(k), \lambda(k), \lambda_k\right)}{(1-\beta)}. \tag{24}$$

A coup that gives rise to a dictatorship controlled by k occurs only when $(1-\beta)\varphi < [1 - \beta(1-r)]\,\bar{\varphi}_i\left(\tau, \lambda, \lambda_j\right) + \beta(1-r)\,\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right) - \beta q \bar{\varphi}_i\left(\tau(j), \lambda(j), \lambda_j\right)$ for $i = K, L$. Therefore, for a given φ, the set of policies that the populace can offer in order to stop such a coup, denoted $\tilde{S}_C\left(\varphi, \mu, \lambda_k\right)$, is given by:

$$\begin{aligned}
\tilde{S}_C\left(\varphi, \mu, \lambda_k\right) &= \{(\tau, \lambda) \in S : \text{there is } i \in \{L, K\} \text{ such that } (1-\beta)\varphi \geq \\
&\quad [1 - \beta(1-r)]\,\bar{\varphi}_i\left(\tau, \lambda, \lambda_k\right) + \beta(1-r)\,\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_k\right) - \beta q \bar{\varphi}_i\left(\tau(k), \lambda(k), \lambda_k\right)\}
\end{aligned}$$

If the populace decides to stop a coup, the best way for it to do so is by choosing the policy from among the set of policies that can stop a coup which maximizes its expected utility. The relevant critical values for a coup that gives rise to a dictatorship controlled by j are given by (23), while, for a coup that gives rise to an autocracy controlled by $k \neq j$, they are given by (24). Therefore, the populace chooses $(\tau, \lambda) = \arg\max_{(\tau, \lambda) \in \tilde{S}_C(\varphi, \mu, \lambda_k) \cap \bar{S}_C(\varphi, \lambda_j)} v_P(\tau, \lambda)$.

Both elite factions can stop the revolt without democratization. If $\mu \geq [1 - \beta(1-q)]\,\bar{\mu}\left(\tau_P, \lambda_P\right) + \beta(1-q)\max_j \bar{\mu}\left(0, \lambda_j\right)$, the elite that controls the autocracy can stop a revolt by promising to support a given policy. Therefore, for a given μ, the set of policies that j can offer in order to stop the revolt, denoted $\bar{S}_R\left(\mu, \lambda_j\right)$, is given by:

$$\bar{S}_R\left(\mu, \lambda_j\right) = \{(\tau, \lambda) \in S : \mu \geq [1 - \beta(1-q)]\,\bar{\mu}(\tau, \lambda) + \beta(1-q)\,\bar{\mu}\left(0, \lambda_j\right)\}.$$

If the elite faction j decides to stop a revolt, the best way for it to do so is by promising to implement the policy that maximizes its expected utility, i.e., $(\tau(j), \lambda(j)) = \arg\max_{(\tau, \lambda) \in \bar{S}_R(\mu, \lambda_j)} v_j(\tau, \lambda)$.

7.1 Proof of proposition 5

Suppose that there is no intra-elite conflict over trade policy. We develop a detailed proof for the case of a protectionist elite and pro-free-trade populace. (The argument is analogous for the case of a pro-free-trade elite and protectionist populace.) Since both elite factions are protectionist and the populace is pro-free-trade, the preferred policies of the groups are given by $\tau_j = 0$ and $\lambda_j = A$ for the elite factions and by $\tau_P = \tau_P(F)$ and $\lambda_P = F$ for the populace.

From (18), if $\mu < [1 - \beta(1-q)]\,\bar{\mu}\left(\tau_P(F), F\right) + \beta(1-q)\,\bar{\mu}(0, A)$, when $\mu_t = \mu^H$, then the elite cannot stop a revolt by making a temporary change in policy, since the populace will prefer to mount a revolt even if the elite offers the populace its preferred policy $(\tau_P(F), F)$. Transferring the control over the autocracy to the other elite faction does not work either, because both elite factions are protectionist and, hence, from the point of view of the populace, both elite factions offer the same policy when $\mu_t = \mu^L$. Therefore, the only available option is democratization. The value of φ will determine the type of democracy that emerges.

From (23), if $[1 - \beta(1-q)]\,\varphi \geq \min_i \bar{\varphi}_i\left(\tau_P(F), F, A\right)$, then the democracy will be consolidated. The reason for this is that, after society switches to a democratic regime, even if there is a coup threat, the

populace can always avert it by offering $(\tau_P(F), F)$. From (23), if $\beta(1 - q - r)\min_i \bar{\varphi}_i(\tau_P(F), F, A) \leq [1 - \beta(1 - q)]\varphi < \min_i \bar{\varphi}_i(\tau_P(F), F, A)$, then the democracy will be semi-consolidated. In order to prove this, note that, after society switches to a democratic regime, whenever there is a coup threat the people can defend democracy by offering the elite its preferred policy $(0, A)$, but they cannot defend it by offering $(\tau_P(F), F)$. Moreover, the populace is always willing to defend democracy, since the policy implemented by the dictatorship is the worst possible policy for the people. Given that democracy can be defended, the people choose to defend it in the least costly way possible. Thus, they promise $(\tau, \lambda) = \arg\max_{(\tau, \lambda) \in \bar{S}(\varphi, F)} v_P(\tau, \lambda)$. Finally, from (23), if $\varphi < \beta(1 - q - r)\min_i \bar{\varphi}_i(\tau_P(F), F, A)$, then democracy will be unconsolidated. In order to prove this, note that there is no temporary change in policy that the populace can offer in order to stop a coup.

From (18), if $\mu \geq [1 - \beta(1 - q)]\bar{\mu}(\tau_P(F), F) + \beta(1 - q)\bar{\mu}(0, A)$, when $\mu_t = \mu^H$, then the elite can placate the potential proponents of a revolt by offering $(\tau_P(F), F)$ and, as a result, society remains non-democratic. Given that the elite can defend the autocracy, they choose to do so in the least costly way possible. Thus, the elite promises $(\tau, \lambda) = \arg\max_{(\tau, \lambda) \in \bar{S}_R(\mu, A)} v_l(\tau, \lambda)$, where l is the elite faction that controls the autocracy.

The proof for the case of a pro-free-trade elite and protectionist populace follows the same steps. The only required modification is to replace each letter A with an F and vice versa. **QED.**

7.2   Proof of proposition 6

Suppose that there is intra-elite conflict over trade policy.

From (18), if $\mu \geq [1 - \beta(1 - q)]\bar{\mu}(\tau_P, \lambda_P) + \beta(1 - q)\bar{\mu}(0, \lambda_l)$, then the elite faction l must select the best way of defending the autocracy when there is a revolt threat. Democratization, although an available option, is clearly dominated by (τ_P, λ_P), when $\mu_t = \mu^H$, and $(0, \lambda_l)$, when $\mu_t = \mu^L$; which always placates the proponents of a revolt in this region. Thus, the relevant decision is between defending the autocracy with or without transferring the control to s. On the one hand, if l decides to placate the proponents of a revolt without transferring control to s, the best way of doing so is to implement $(\tau(l), \lambda(l)) = \arg\max_{(\tau, \lambda) \in \bar{S}_R(\mu, \lambda_l)} v_l(\tau, \lambda)$, when $\mu_t = \mu^H$, and $(0, \lambda_l)$, when $\mu_t = \mu^L$. If such a policy is implemented, then expression (17) implies that the expected utility of group i when $\mu_t = \mu^H$ is given by:

$$V_i(l, \mu^H) = \frac{[1 - \beta(1 - q)] v_i(\tau(l), \lambda(l)) + \beta(1 - q) v_i(0, \lambda_l)}{1 - \beta}.$$

On the other hand, if l transfers control to s, then s placates the proponents of revolt, and the best way in which s do so is to implement $(\tau(s), \lambda(s)) = \arg\max_{(\tau, \lambda) \in \bar{S}_R(\mu, \lambda_s)} v_s(\tau, \lambda)$, when $\mu_t = \mu^H$, and $(0, \lambda_s)$, when $\mu_t = \mu^L$. Since, for s, the preferred trade policy is λ_s, it must be the case that $v_s(\tau, \lambda_s) \geq v_s(\tau, \lambda)$ for all $(\tau, \lambda) \in S$. Since the populace and s share the same trade policy preferences, we have $\bar{\mu}(\tau, \lambda) \geq \bar{\mu}(\tau, \lambda_s)$ for all $(\tau, \lambda) \in S$. Therefore, $\lambda(s) = \lambda_s$. From expression (17), the expected utility of group i is given by:

$$V_i(s, \mu^H) = \frac{[1 - \beta(1 - q)] v_i(\tau(s), \lambda_s) + \beta(1 - q) v_i(0, \lambda_s)}{1 - \beta}.$$

Therefore, l does not transfer control over the autocracy to s and instead defends the autocracy itself, if and only if $V_l(l, \mu^H) \geq V_l(s, \mu^H)$.

From (18), if $[1 - \beta (1 - q)] \bar{\mu} (\tau_P, \lambda_P) + \beta (1 - q) \bar{\mu} (0, \lambda_s) \leq \mu < [1 - \beta (1 - q)] \bar{\mu} (\tau_P, \lambda_P) + \beta (1 - q) \bar{\mu} (0, \lambda_l)$, then the elite faction l has only two available options for placating the proponents of a revolt. First, l can transfer control over the autocracy to s, in which case the expected utility of l will be $V_l \left(s, \mu^H \right)$. Second, l can democratize, in which case several political regimes can arise, depending on the cost of mounting a coup.

Suppose that $\varphi \geq \bar{\varphi}_1$, where

$$\bar{\varphi}_1 = \max \left\{ \frac{\min_i \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_l)}{1 - \beta (1 - q)}, \frac{\min \left\{ \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_s) - \beta q \bar{\varphi}_i (\tau (s), \lambda (s), \lambda_s) \right\}}{1 - \beta} \right\}.$$

Then, from (23) and (24), if the first time that $\mu_t = \mu^H$, the elite faction l democratizes, then society switches to a consolidated democracy because the populace can stop any coup simply by implementing its preferred policy (τ_P, λ_P). Since, from the point of view of l, a consolidated democracy is the worst possible political regime, the first time that $\mu_t = \mu^H$, l transfers control over the autocracy to s and, thereafter, there is an autocracy controlled by s forever.

Suppose that $\min_\lambda \bar{\varphi}_2 (\lambda) \leq \varphi < \bar{\varphi}_1$, where

$$\bar{\varphi}_2 (\lambda) = \max \left\{ \begin{array}{c} \frac{\min_i \{ r' \bar{\varphi}_i (0, \lambda, \lambda_l) + (1 - r') \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_l) \}}{1 - \beta (1 - q)} \\ \frac{\min_i \{ [1 - \beta (1 - r)] \bar{\varphi}_i (\tau, \lambda, \lambda_s) + \beta (1 - r) \bar{\varphi}_i (\tau_P, \lambda_P, \lambda_s) - \beta q \bar{\varphi}_i (\tau (s), \lambda (s), \lambda_s) \}}{1 - \beta} \end{array} \right\}.$$

Then, from (23) and (24), if the first time that $\mu_t = \mu^H$, the elite faction l democratizes, then the populace has the ability to stop any coup, although it must make some concessions when $\varphi_t = \varphi^H$. The populace is always willing to stop a coup that gives rise to a dictatorship controlled by l, since, for the populace, the worst conceivable semi-consolidated democracy is better than an unconsolidated democracy with periodic coups controlled by l. However, it is possible that the populace prefers a coup that gives rise to a permanent autocracy controlled by s to a semi-consolidated democracy (something that can happen only when the populace must promise $\lambda = \lambda_l$ in order to stop the coup when $\varphi_t = \varphi^H$). If this is the case, the populace has an incentive to promise a policy that induces a coup controlled by s.[18] If the populace decides to defend democracy, the best way for it to do so is to offer $(\tau, \lambda) = \arg \max_{(\tau, \lambda) \in \tilde{S}_C(\varphi, \mu, \lambda_s) \cap \bar{S}_C(\varphi, \lambda_l)} v_P (\tau, \lambda)$, when $\varphi_t = \varphi^H$. Then, from expressions (19) and (20), the expected utility of group i is given by:

$$V_i \left(D, \varphi^L \right) = \frac{\beta r v_i (\tau, \lambda) + (1 - \beta r) v_i (\tau_P, \lambda_P)}{1 - \beta},$$

whenever $\varphi_t = \varphi^L$, while it is given by:

$$V_i \left(D, \varphi^H, \tau, \lambda \right) = \frac{[1 - \beta (1 - r)] v_i (\tau, \lambda) + \beta (1 - r) v_i (\tau_P, \lambda_P)}{1 - \beta},$$

whenever $\varphi_t = \varphi^H$. If the populace induces a coup that gives rise to a permanent autocracy controlled by s, from (16) and (17), the expected utility of group i when $\mu_t = \mu^L$ is given by:

$$V_i \left(s, \mu^L \right) = \frac{\beta q v_i (\tau (s), \lambda_s) + (1 - \beta q) v_i (0, \lambda_s)}{1 - \beta},$$

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[18]Such a policy may not exist. If this is the case, the populace will defend democracy and, hence, democracy will be semi-consolidated.

while, when $\mu_t = \mu^H$, it is given by:

$$V_i\left(s, \mu^H\right) = \frac{[1 - \beta(1 - q)]\, v_i\left(\tau(s), \lambda_s\right) + \beta(1 - q)\, v_i\left(0, \lambda_s\right)}{1 - \beta}.$$

Therefore, if l democratizes, there will be a semi-consolidated democracy whenever there is no $(\tau, \lambda) \in \bar{S}_C(\varphi, \lambda_l) - \tilde{S}_C(\varphi, \mu, \lambda_s)$ or:

$$V_P\left(D, \varphi^H, \tau, \lambda\right) \geq (1 - \varphi)\, v_P\left(0, \lambda_s\right) + \beta\left[q V_P\left(s, \mu^H\right) + (1 - q) V_P\left(s, \mu^L\right)\right].$$

Otherwise, there will be a democracy until the first time that $\varphi_t = \varphi^H$, when a coup will give rise to an autocracy controlled by s. Finally, we must consider the decision of l the first time that $\mu_t = \mu^H$. Suppose that democratization leads to a semi-consolidated democracy. Then, l prefers to transfer the control of the dictatorship to s if $V_l\left(s, \mu^H\right) \geq V_l\left(D, \varphi^L\right)$. Otherwise, l prefers to democratize. On the other hand, if democratization leads to an autocracy controlled by s, l always prefers to transfer the control of the dictatorship to s the first time that $\mu_t = \mu^H$, since it makes no sense for l to democratize for the sole purpose of postponing the arrival of an autocracy controlled by s.[19]

Suppose that $\bar{\varphi}_3 \leq \varphi < \min_\lambda \bar{\varphi}_2(\lambda)$, where

$$\bar{\varphi}_3 = \min \left\{ \begin{array}{c} \frac{\min_{i,\lambda}\{r'\bar{\varphi}_i(0,\lambda,\lambda_l) + (1-r')\bar{\varphi}_i(\tau_P,\lambda_P,\lambda_l)\}}{1 - \beta(1-q)}, \\ \frac{\min_{i,\lambda}\{[1-\beta(1-r)]\bar{\varphi}_i(\tau,\lambda,\lambda_s) + \beta(1-r)\bar{\varphi}_i(\tau_P,\lambda_P,\lambda_s) - \beta q \bar{\varphi}_i(\tau(s),\lambda(s),\lambda_s)\}}{1 - \beta} \end{array} \right\}$$

Then, from (23) and (24), if l democratizes the first that time $\mu_t = \mu^H$, then, no matter what policy is implemented by the populace, a coup is always a possibility. Thus, democracy cannot be semi-consolidated, and the most that the populace can do is to influence which faction controls the dictatorship after the coup. From expressions (21) and (22), the expected utility of group i when $\mu_t = \mu^H$ ($\varphi_t = \varphi^L$) is given by:

$$V_i\left(l, \mu^H\right) = V_i\left(D, \varphi^L\right) = \frac{[1 - \beta(1 - q)]\, v_i\left(\tau_P, \lambda_P\right) + \beta r\, v_i\left(0, \lambda_l\right) - \beta r\left[1 - \beta(1 - q)\right]\varphi v_i\left(0, \lambda_l\right)}{(1 - \beta)\left[1 - \beta(1 - q - r)\right]},$$

while, when $\varphi_t = \varphi^H$ ($\mu_t = \mu^L$), it is given by:

$$V_i\left(l, \mu^L\right) - \varphi v_i\left(0, \lambda_l\right) = V_i\left(D, \varphi^H\right) =$$
$$= \frac{[1 - \beta(1 - r)]\, v_i\left(0, \lambda_l\right) + \beta q\, v_i\left(\tau_P, \lambda_P\right) - [1 - \beta(1 - r)][1 - \beta(1 - q)]\varphi v_i\left(0, \lambda_l\right)}{(1 - \beta)\left[1 - \beta(1 - q - r)\right]}.$$

Therefore, if l democratizes, there will be an unconsolidated democracy if there is $(\tau, \lambda) \in \tilde{S}_C(\varphi, \mu, \lambda_s) - \bar{S}_C(\varphi, \lambda_l)$ and:

$$V_P\left(l, \mu^L\right) - \varphi v_P\left(0, \lambda_l\right) \geq (1 - \varphi)\, v_P\left(0, \lambda_s\right) + \beta\left[q V_P\left(s, \mu^H\right) + (1 - q) V_P\left(s, \mu^L\right)\right].$$

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[19]To prove this, suppose that the first time that $\mu_t = \mu^H$, l democratizes and, then, the first time that $\varphi_t = \varphi^H$, the elite mounts a coup controlled by s. Then, democratization would lead to (τ_P, λ_P) untill the first time that $\varphi_t = \varphi^H$, when a coup gives rise to an autocracy controlled by s that lasts for ever (once s takes control of the autocracy, it will never have an incentive to give it up). However, if the first time that $\mu_t = \mu^H$, l transfers control over the autocracy to s, then the first policy to be implemented will be $\tau_E \leq \tau_P$ and $\lambda_E = \lambda_s = \lambda_P$, followed by a dictatorship controlled by s.

Otherwise, the first time that $\varphi_t = \varphi^H$, there will be a coup that gives rise to an autocracy controlled by s. Finally, we must consider the decision of l the first time that $\mu_t = \mu^H$. If democratization leads to an unconsolidated democracy, l prefers to transfer control over the dictatorship to s if $V_l\left(s, \mu^H\right) \geq V_l\left(D, \varphi^L\right)$. Otherwise, l prefers to democratize. On the other hand, if democratization leads to an autocracy controlled by s, l always prefers to transfer control over the dictatorship to s the first time that $\mu_t = \mu^H$. The reason for this is that it makes no sense for l, to democratize for the sole purpose of postponing the arrival of an autocracy controlled by s.

Suppose that $\varphi < \bar{\varphi}_3$. Then, from (23) and (24), if l democratizes the first time that $\mu_t = \mu^H$, then, there is no way that the populace can stop a coup, nor can it influence who controls the dictatorship after the coup. Therefore, if l democratizes, democracy will be unconsolidated if:

$$V_l\left(l, \mu^L\right) - \varphi v_l\left(0, \lambda_l\right) \geq (1 - \varphi)\, v_l\left(0, \lambda_s\right) + \beta\left[q V_l\left(s, \mu^H\right) + (1 - q)\, V_l\left(s, \mu^L\right)\right].$$

Otherwise, the first time that $\varphi_t = \varphi^H$, there will be a coup that gives rise to an autocracy controlled by s. Finally, we focus on the decision of l the first time that $\mu_t = \mu^H$. If democratization leads to an unconsolidated democracy, l prefers to transfer control over the dictatorship to s if $V_l\left(s, \mu^H\right) \geq V_l\left(D, \varphi^L\right)$. Otherwise, l prefers to democratize. On the other hand, if democratization leads to an autocracy controlled by s, l always prefers to transfer control over the dictatorship to s the first time that $\mu_t = \mu^H$.

Note that we have proved stronger statements than the ones in Proposition 6 since we have deduced a complete characterization of the equilibrium when $[1 - \beta(1 - q)]\,\bar{\mu}\left(\tau_P, \lambda_P\right) + \beta(1 - q)\,\bar{\mu}\left(0, \lambda_s\right) \leq \mu < [1 - \beta(1 - q)]\,\bar{\mu}\left(\tau_P, \lambda_P\right) + \beta(1 - q)\,\bar{\mu}\left(0, \lambda_l\right)$, while in Proposition 6 we have weaker statements of the form 'if democratization leads to ... , then ... ' **QED**.

7.3   Proof of Proposition 7

Suppose that there is intra-elite conflict over trade policy.

From (18), if $\mu < \mu < [1 - \beta(1 - q)]\,\bar{\mu}\left(\tau_P, \lambda_P\right) + \beta(1 - q)\,\bar{\mu}\left(0, \lambda_s\right)$, then, when $\mu_t = \mu^H$, the elite can placate the proponents of a revolt only through democratization. Democratization can lead to the advent of several different political regimes, depending on the cost of mounting a coup.

From (23), if $\varphi' \geq \max_{\lambda_j} \min_i \bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$, then the populace can stop a coup by promising (τ_P, λ_P), which implies that democracy is consolidated.

From (23), if $\varphi' < \max_{\lambda_j} \min_i \bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$ and $\varphi' \geq \max_{\lambda_j} \min_i r' \bar{\varphi}_i\left(0, \lambda_P, \lambda_j\right) + (1 - r')\,\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$, then the populace can stop a coup by promising $(0, \lambda_P)$, but not by promising (τ_P, λ_P), which implies that democracy cannot be fully consolidated; it can be semi-consolidated, however, since the populace can always moderate income redistribution and at least one faction of the elite will find that a coup would be too costly. Moreover, not only can the populace defend democracy, but it is also willing to do so. Therefore, in this region, democracy is semi-consolidated. Moreover, the best way of defending democracy is to offer $(\tau, \lambda) = \arg\max_{(\tau, \lambda) \in \cap_j \bar{S}_C(\varphi, \lambda_j)} v_P\left(\tau, \lambda\right)$.

From (23), if $\varphi' < \max_{\lambda_j} \min_i r' \bar{\varphi}_i\left(0, \lambda_P, \lambda_j\right) + (1 - r')\,\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$ and $\varphi' \geq \min_{\lambda} \max_{\lambda_j} \min_i r' \bar{\varphi}_i\left(0, \lambda_P, \lambda\right) + (1 - r')\,\bar{\varphi}_i\left(\tau_P, \lambda_P, \lambda_j\right)$, then the populace has the ability to stop any coup. Clearly, the populace is willing to stop a coup that gives rise to a dictatorship controlled by l, since, for the populace, the worst semi-consolidated democracy is better than an unconsolidated democracy with periodic coups controlled by l. However, it is possible that the populace prefers a coup

that gives rise to a dictatorship controlled by s to a semi-consolidated democracy. If this is the case, the populace has an incentive to promise to introduce a policy that induces a coup controlled by s. The populace can then stop a coup, but not by promising $(0, \lambda_P)$. Thus, the people face a dilemma: they can defend democracy with the promise $(0, \lambda)$ with $\lambda \neq \lambda_P$, or they can simply promise $(0, \lambda_P)$, which will lead to a coup. Therefore, if it is the people's will, democracy can be semi-consolidated. However, it is also possible that the people prefer a coup that gives rise to a dictatorship controlled by s, which has the same trade policy preference as the people, rather than defend democracy by seducing l, which has the opposite trade policy preference. If the people decide to defend democracy, the best policy that they can choose is $\lambda \neq \lambda_P$ and $\tau = \arg\max_{(\tau', \lambda') \in \cap_j \bar{S}_C(\varphi, \lambda_j)} v_P(\tau', \lambda)$. Then, from expressions (19) and (20), the expected utility of group i when $\varphi_t = \varphi^L$ is given by:

$$V_i\left(D, \varphi^L\right) = \frac{\beta r v_i(\tau, \lambda) + (1 - \beta r) v_i(\tau_P, \lambda_P)}{1 - \beta},$$

while, when $\varphi_t = \varphi^H$, it is given by:

$$V_i\left(D, \varphi^H, \tau, \lambda\right) = \frac{[1 - \beta(1 - r)] v_i(\tau, \lambda) + \beta(1 - r) v_i(\tau_P, \lambda_P)}{1 - \beta}.$$

If the people don not defend democracy, and they can induce a coup controlled by s, i.e., there exists $(\tau', \lambda') \in \bar{S}_C(\varphi, \lambda_l) - \bar{S}_C(\varphi, \lambda_s)$, then, from expression (22), the expected utility of group i when $\varphi_t = \varphi^H$ is given by:

$$V_i\left(s, \mu^L\right) - \varphi v_i(0, \lambda_s) = V_i\left(D, \varphi^H\right) =$$
$$= \frac{[1 - \beta(1 - r)] v_i(0, \lambda_s) + \beta q v_i(\tau_P, \lambda_P) - [1 - \beta(1 - r)][1 - \beta(1 - q)] \varphi v_i(0, \lambda_s)}{(1 - \beta)[1 - \beta(1 - q - r)]}.$$

Therefore, the people defend democracy if and only if there is no $(\tau', \lambda') \in \bar{S}_C(\varphi, \lambda_l) - \bar{S}_C(\varphi, \lambda_s)$ or:

$$V_P\left(D, \varphi^H, \tau, \lambda\right) \geq V_P\left(s, \mu^L\right) - \varphi y_P^{\lambda_s}$$

Note, in particular, that if the choice to not defend democracy would lead to a coup controlled by l, the populace will always be willing to defend democracy. However, if the choice to not defend democracy would lead to a coup controlled by s, it is possible that the populace will prefer such a coup rather than a costly defense.

From (23), if $\varphi' < \min_\lambda \max_{\lambda_j} \min_i r' \bar{\varphi}_i(0, \lambda_P, \lambda) + (1 - r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_j)$ and $\varphi' \geq \min_{i, \lambda} r' \bar{\varphi}_i(0, \lambda, \lambda_l) + (1 - r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_l)$, then the people can stop a coup controlled by l, but cannot stop a coup controlled by s. Thus, the people cannot stop a coup, but they can influence who controls the dictatorship after the coup. Since the people always prefer a dictatorship controlled by s to one controlled by the l, the coup will be controlled by s. Thus, in this region, we have an unconsolidated democracy with periodic dictatorships controlled by s.

From (23), if $\varphi' < \min_{i, \lambda} r' \bar{\varphi}_i(0, \lambda, \lambda_l) + (1 - r') \bar{\varphi}_i(\tau_P, \lambda_P, \lambda_l)$, there is no credible promise that the people can make to stop a coup controlled by l. Thus, in this region, democracy is unconsolidated; whenever $\varphi_t = \varphi^H$, there will be a coup controlled by l. **QED**.

References

[1] Acemoglu, Daron (2010), "Institutions, Factor Prices and Taxation: Virtues of Strong States?", *NBER Working Paper 15693*.

[2] Acemoglu, Daron, and James A. Robinson (2000), "Why Did the West Extend the Franchise? Growth, Inequality, and Democracy in Historical Perspective", in *Quarterly Journal of Economics*, 65, 1167-99.

[3] Acemoglu, Daron, and James A. Robinson (2006), *Economic Origins of Dictatorship and Democracy*, Cambridge, Cambridge University Press.

[4] Acemoglu, Daron, and Pierre Yared (2010), "Political Limits to Globalization", *NBER Working Paper 15694*.

[5] Antúnez, Damián, and Pablo Gerchunoff (2002), "De la bonanza económica a la crisis del desarrollo", in Juan Carlos Torre (ed.) *Los Años Peronistas*, Editorial Sudamericana, Buenos Aires.

[6] Brambilla, I., Sebastian Galiani, and Guido Porto (2010), "50 Years of Solitude: Argentina's Trade Policies in the XX Century", (Mimeo).

[7] Caselli, Francesco, and Gennaioli, Nicola (2008) "Economics and Politics of alternative institutional reforms", in *Quarterly Journal of Economics*, 123, 1197-1250

[8] Dahl, Robert A. (1971), *Polyarchy: Participation and Opposition*, New Haven, Yale University Press.

[9] Diaz Alejandro, Carlos F. (1970), *Essays on the Economic History of the Argentine Republic,* New Haven, Yale University Press.

[10] ECLAC (1951), *Economic Survey of Latin America 1949*, United Nations, New York, Department of Economic Affairs.

[11] Findlay, Ronald, and Kevin H. O'Rourke (2007), *Power and Plenty. Trade, War, and the World Economy in the Second Millennium*, Princeton University Press.

[12] Galiani, Sebastian, Daniel Heymann, Carlos Dabus, and Fernando Thome (2008), "On the Emergence of Public Education in Land-Rich Economies", in *Journal of Development Economics*, 86, 434-446.

[13] Galiani, Sebastian, Norman Schofield, and Gustavo Torrens (2010), "Factor Endowments, Democracy and Trade Policy Divergence," *Washington University Working Paper.*

[14] Galiani, Sebastian, and Paulo Somaini (2010), "Path-Dependent Import-Substitution Policies: The Case of Argentina in the 20th Century", *Washington University Working Paper.*

[15] Galor, Oded, Omer Moav, and Dietrich Vollrath. (2009), "Land inequality and the emergence of human capital promoting institutions", in *Review of Economic Studies,* 76, 143-179.

[16] Ghosal Sayantan, and Eugenio Proto (2008), "Democracy, Collective Action and Intra-elite Confict", *Warwick Economic Research Papers No 844.*

[17] Gourevitch, Peter (1986), *Politics in Hard Times. Comparative Responses to International Economic Crisis*, Cornell University Press.

[18] Howe, Anthony (1984), *The Cotton Masters, 1830- 1860.* Oxford University Press.

[19] Lipset, Seymour M. (1959), "Some Social Preresquisites for Democracy: Economic Development and Political Legitimacy", in *American Political Science Review*, 53, 69-105.

[20] Lizzeri, Alessandro, and Nicola Persico (2004), "Why Did the Elites Extend the Suffrage? Democracy and the Scope of Government, with an Application to Britain's Age of Reform", in *Quarterly Journal of Economics.*

[21] Luebbert, Gregory (1991), *Liberalism, Fascism or Social Democracy: Social Classes and the Political Origins of Regimes in Interwar Europe*, New York, Oxford University Press.

[22] Mallon, Richard D. and Juan V. Sourrouille (1975), *Economic policymaking in a conflict society: The Argentine case*, Cambridge, Massachusetts, Harvard University Press.

[23] Moore, Barrington (1966), *The Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*, Boston, Beacon Press.

[24] O'Donnell, Guillermo (1973), *Modernization and Burocractic Authoritarianism: Studies in South American Politics*, Berkeley, University of California, Institute for International Studies.

[25] O'Donnell Guillermo (1977), "Estado y Alianzas en la Argentina, 1956-1976", in *Desarrollo Económico*, 16(64): 523-554.

[26] O'Donnell Guillermo and Philippe C. Schmitter (1986), *Transitions from Authoritarian Rule: Tentative Conclusions about Uncertain Democracies*, Baltimore, John Hopkins University Press.

[27] Olson, Mancur (1993), "Dictatorship, Democracy, and Development", in *The American Political Science Review.* 83 (3): 567-576.

[28] O'Rourke, Kevin H., and Alan M. Taylor (2006), "Democracy and Protectionism", NBER Working Paper 12250.

[29] Rogowski, Ronald (1987), "Political Cleavages and Changing Exposure to Trade", in *The American Political Science Review*, 81, 1121-1137.

[30] Rogowski, Ronald (1989), *Commerce and Coalitions: How Trade Affects Domestic Political Alignments*, Princeton, New Jersey, Princeton University Press.

[31] Rustow, Dankwart C. (1970), "Transitions to Democracy: Toward a Dynamic Model", in *Comparative Politics*, 2, 337-63.

[32] Schonhardt-Bailey, C. (2006), *From the Corn Laws to Free Trade: Interests, Ideas, and Institutions in Historical Perspective*, Cambridge, Massachusetts, MIT Press.

[33] Searle, Geoffrey R. (1993), *Entrepreneurial Politics in Mid-Victorian Britain*, Oxford University Press.

[34] Stolper, Wolfgang and Paul Samuelson (1941), "Protection and Real Wages", in *Review of Economic Studies*, 9, 58-73.

[35] Turner, Michael J. (1995), *Reform and Respectability: The making of a Middle-Class Liberalism in Early Nineteenth-Century Manchester*, Chetham Society by Carnegie Publishing.
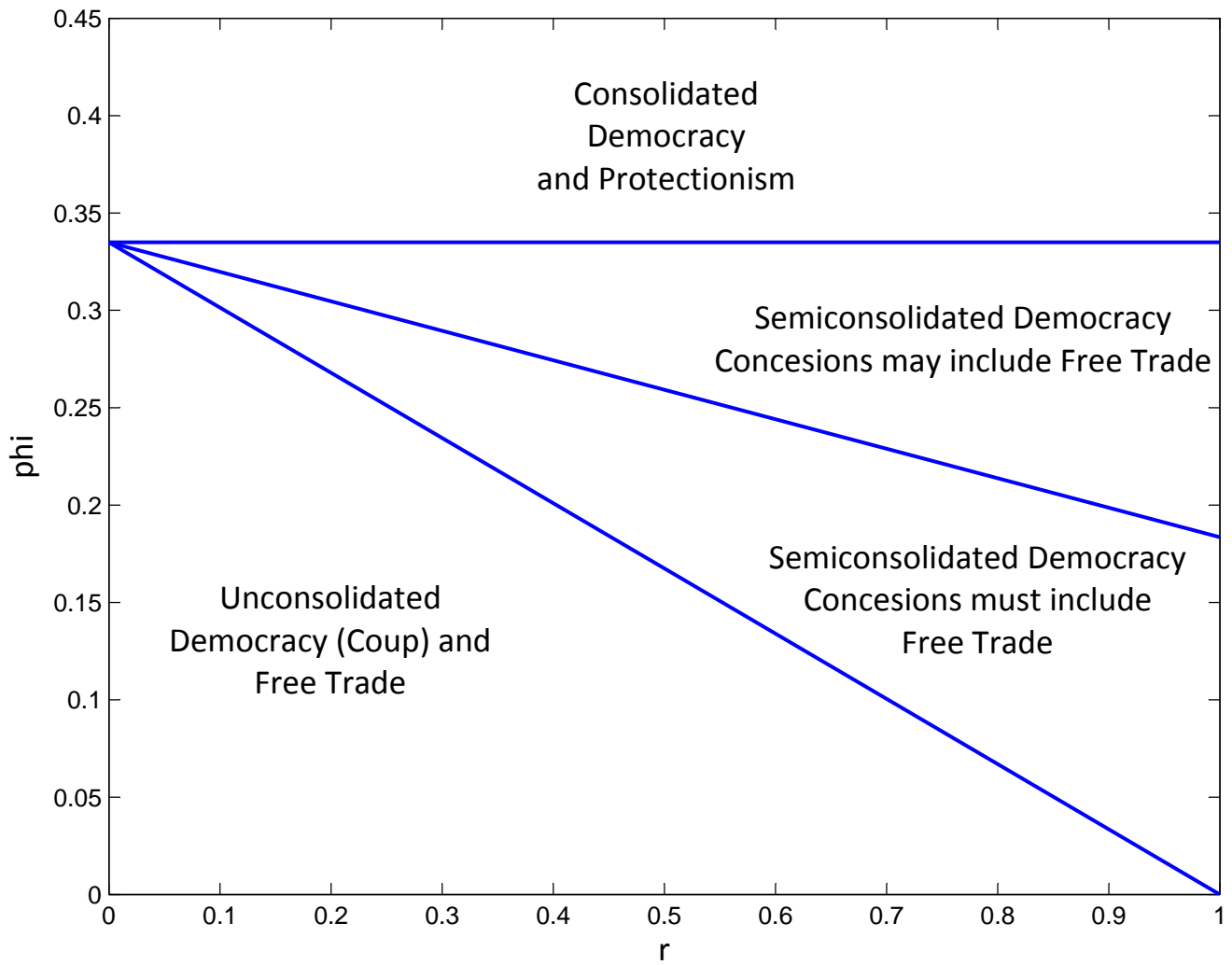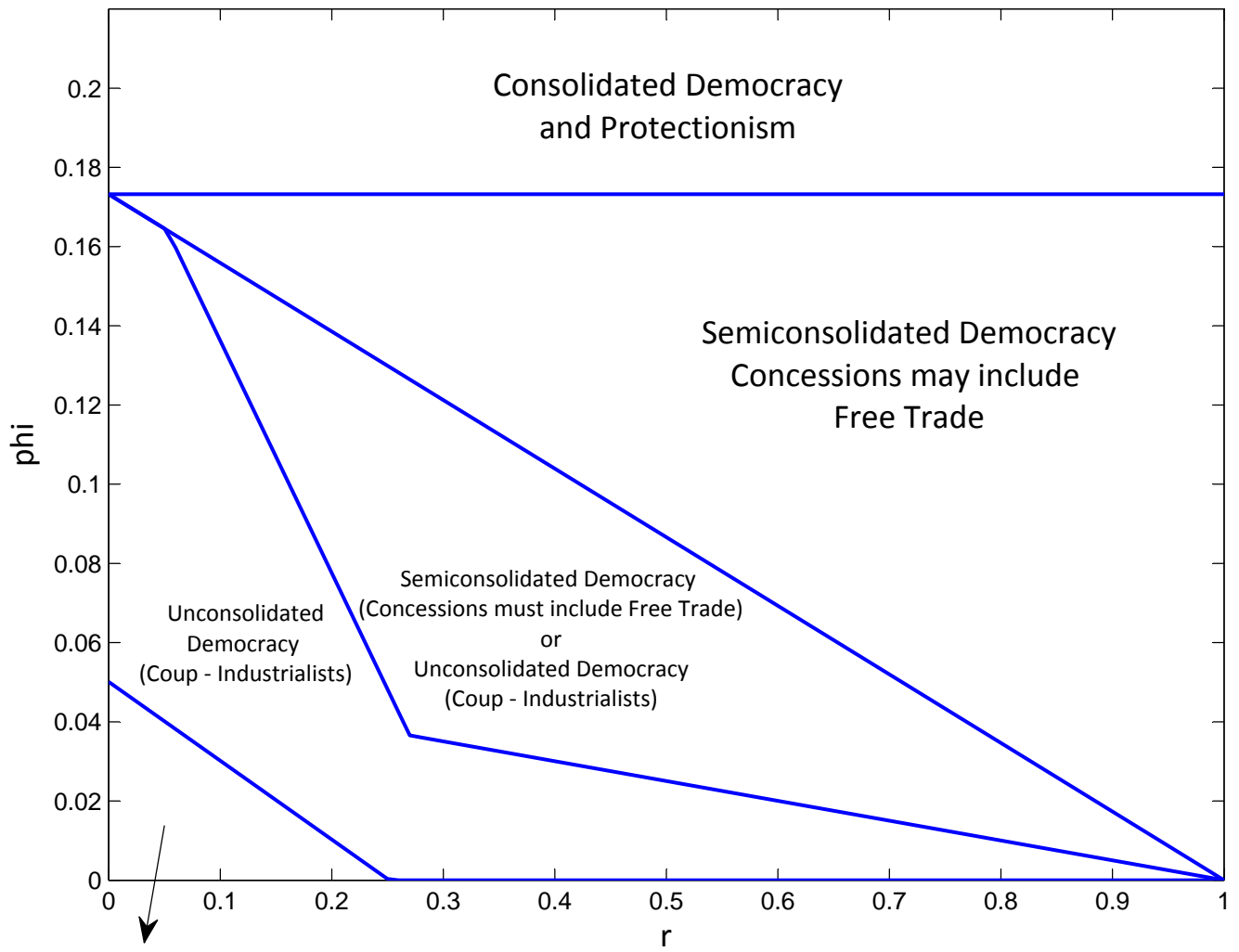
Figure 1: Coups Under No Intra-elite Conflict. Pro-free Trade Elite and Protectionist People

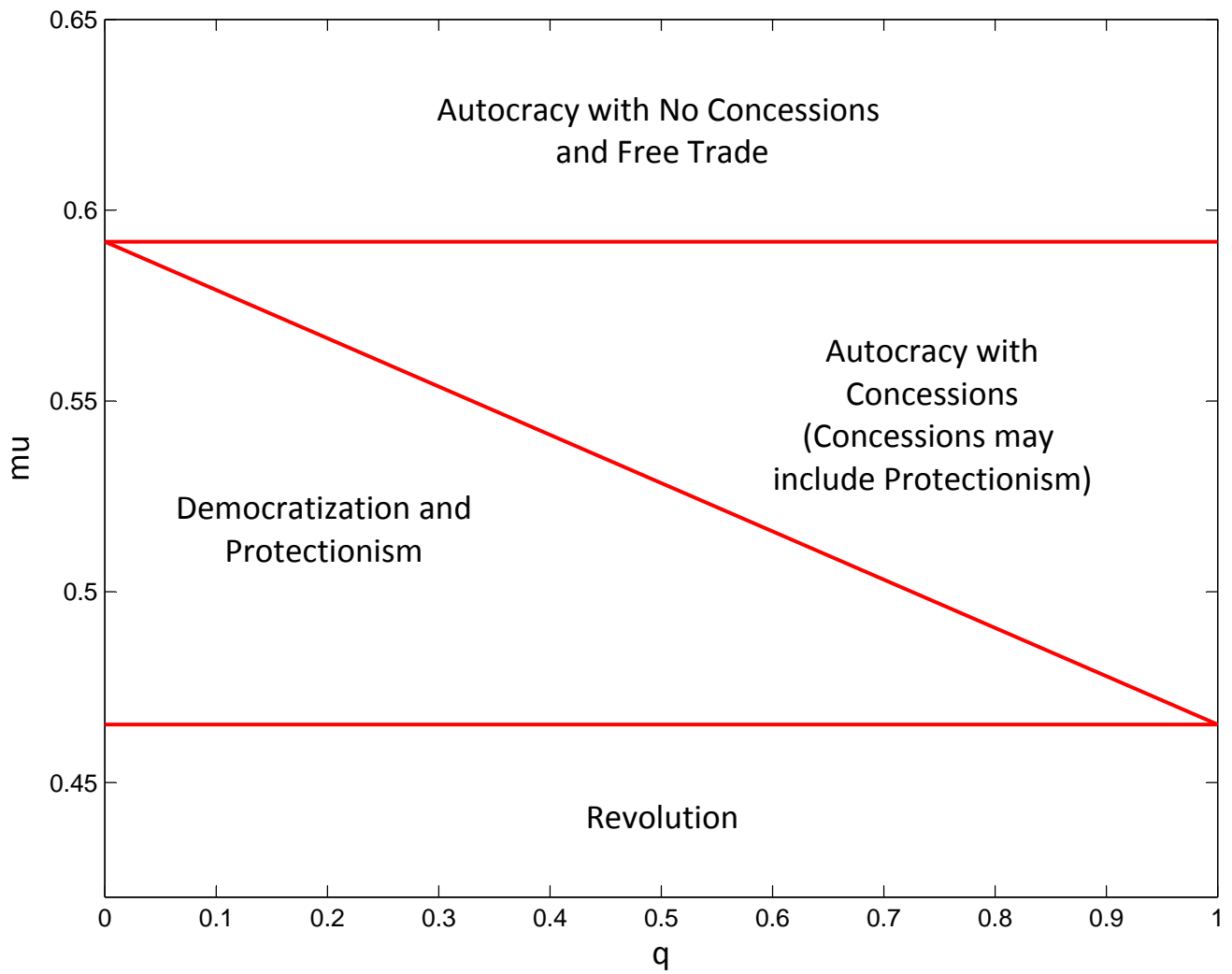**Figure 2: Coups Under Intra-elite Conflict**
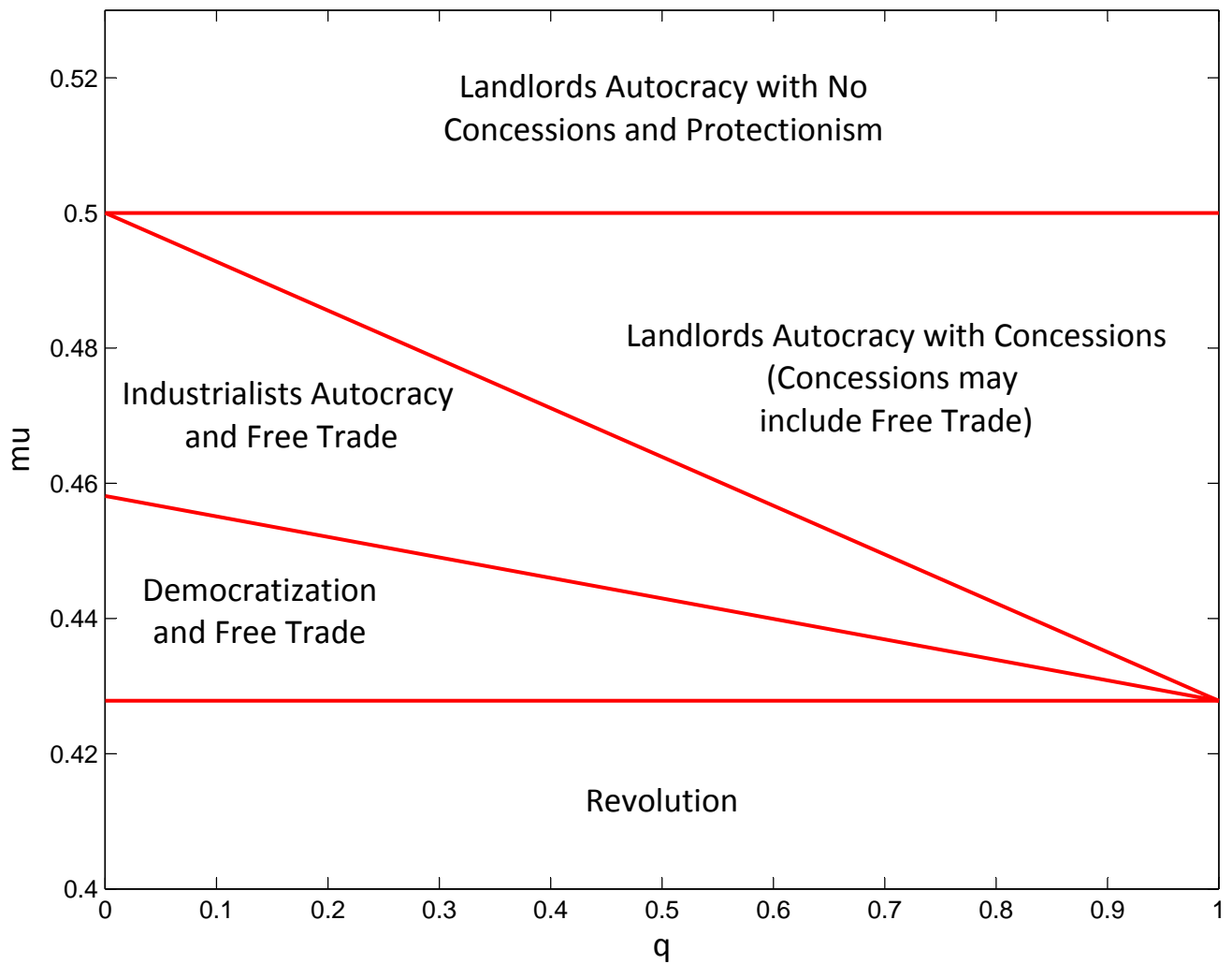
Figure 3: Democratization Under No Intra-elite Conflict

Figure 4: Democratization Under Intra-elite Conflict