

An Economic Theory of Political Institutions: Foreign Intervention and Overseas Investments*

Toke S. Aidt[†] and Facundo Albornoz[‡]

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Abstract

The recent literature on endogenous political institutions highlights domestic economic factors, such as recessions, economic growth and inequality, as key determinants of political transitions. We argue that international capital flows and the possibility that foreign governments, in order to protect economic interests, might seek influence on the regime choice in other countries are important, yet overlooked, determinants of political institutions. Building on Acemoglu and Robinson (2001), we develop a theory of political transitions in economies with access to international capital markets. We show that the possibility of foreign intervention significantly affects regime dynamics and enlarges the set of sustainable political regimes. We relate the analysis to evidence on foreign intervention from around the world.

Keywords: Political transitions; democracy; autocracy; foreign investments; foreign government intervention.

JEL Classification: D72; D74; H71; O15; P16.

1 Introduction

Scholarly historical research and common-sense discussions of world affairs often emphasize foreign intervention as a major determinant of the dynamics of political institutions. For example, Theodore Roosevelt advanced in May 1904 that the U.S. had a “moral mandate” to enforce proper behavior among the nations of Latin America (this came to be called the Roosevelt Corollary to the Monroe Doctrine). Subsequent attempts to enhance “proper behavior” lead

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[†]Faculty of Economics and Jesus College, University of Cambridge, Sidgwick Avenue, Cambridge CB3 9DD, U.K. E-mail: toke.aidt@econ.cam.ac.uk.

[‡]Department of Economics, University of Birmingham, Edgbaston, Birmingham B15 2TT, U.K. E-mail: f.albornoz@bham.ac.uk.

shifting U.S. governments to intervene in favor of dictatorships, to sponsor coup d'états, to support weak democracies and to encourage democratization. Foreign intervention was neither limited to Latin America, nor was it exclusive to the United States. Behind most examples of foreign intervention looms economic goals such as providing a better and more secure investment environment. Yet, the fast growing economics literature on endogenous political institutions has not provided a framework in which the role of economically motivated foreign intervention in the rise, fall and establishment of different forms of democracies and autocracies can be analyzed.

Our theoretical model provides economic foundations for political institutions in situations where international capital flows are important and where investments in other countries are of strategic significance to foreign governments. The main contribution of the paper is to inquire into the incentive of a foreign government to influence regime transitions in another country. We derive conditions under which foreign intervention plays an important role in explaining why certain forms of democracy and autocracy emerge, breakdown or consolidate.

The economic origin of political institutions has received considerable attention by political scientists and economists in recent years (e.g., Boix (2003); Acemoglu and Robinson (2005)). Two different yet complementary streams of literature may be identified. Both focus on an elite's incentive to share political power with other social groups. In one branch of the literature, democratization is seen as a consequence of an economic or political change that makes democracy more profitable for the elite. This might be the case if property rights are better protected under democracy (Gradstein, 2007), if democracy enhances human capital accumulation (Bourguignon and Verdier, 2000), or if a significant fraction of the elite can benefit from greater provision of public services under democratic governments (Lizzeri and Persico, 2004). The other branch sees democracy as the consequence of a compromise reached by the elite and the population to avoid a costly revolution. According to this view, developed by Acemoglu and Robinson (2000, 2005), democracy emerges because the elite cannot commit to redistributive policies. The only way to make promises of future redistribution credible and to avoid a revolution today is to extend the franchise.¹ Transitions from democracy to autocracy can also be studied within this framework. The elite may have an incentive to mount a coup and reinstate autocracy because the majority of voters cannot credibly promise tax cuts for the rich (Acemoglu and Robinson, 2001).

This literature focuses on closed economies with no interaction with the rest of the world. It points to domestic economic factors, such as recessions, economic growth or inequality, as

¹See also Conley and Temimi (2001); Justman and Gradstein (1999).

the main determinants of political transitions.² We argue that two important aspects of the international economy with potential importance for the development of political institutions have been overlooked. The two aspects are international capital inflows/outflows and direct intervention in the political process abroad by foreign governments.

We focus on economic reasons for foreign intervention. Building on Acemoglu and Robinson (2001), we develop a theory of political transitions that emphasizes strategic foreign investments and the possibility of active intervention by foreign governments. As in Acemoglu and Robinson (2001), the cornerstone of this theory is that regime transitions happen because the governing social group cannot commit to redistribute income in a way that satisfies the demands of threatening opposition groups. Foreign intervention interact with this commitment problem by making the threat posed by these opposition groups more or less credible.

Introducing foreign investment into this framework has two main implications. First, it enlarges the set of feasible political regimes. This provides new insights into why some political regimes are more “investment friendly” than others. Second, it gives foreign governments a stake in the type of political regime in other countries. Some regimes are more investment friendly than others. This is what, in our theory, gives foreign governments an incentive to support certain regimes and to try to overthrow others.

In particular, we argue that foreign investments are, due to redistributive pressures, taxed at a higher rate under consolidated democracy than under consolidated autocracy. In the latter, the economic interests of the ruling elite and foreign investors are in line. The objective of the foreign government is to improve the investment climate in the host country. This is achieved by helping or hindering political transitions. In some cases, the optimal intervention strategy is to finance a coup d’état that overthrows a democratic regime and reinstates autocracy. However, often the optimal intervention strategy is more subtle. One possibility is to support an existing autocracy that is threatened by revolution. In the absence of foreign intervention, such a regime must introduce high taxes on foreign investments and use the revenues to finance transfers to the population at large in order to head off a revolution. By funding counter-revolutionary activities, the foreign government can consolidate this autocracy and avoid taxation of foreign investment. Another possibility is to accept a regime transition to democracy, but, then, empower domestic constituencies with interests aligned with foreign investors. In this way, the

²Exception are Acemoglu and Robinson (2005, Chapter 10), who analyze the effect of changes in relative prices triggered by international trade on political institutions, and Boix (2003) who underlines that capital mobility makes democracies less redistributive and therefore are less threatening for the elite.

democratic government is forced to reduce the tax on foreign investments in order to head off a coup.

The rest of this paper is set out as follows. Section 2 presents evidence on the role of capital flows and foreign direct intervention and serves to motivate our theoretical model. Section 3 develops the basic model. Section 4 studies political transitions in the absence of foreign intervention. Section 5 introduces the possibility of foreign intervention. Section 6 studies the possibility of foreign-sponsored coup d'états. Section 7 concludes. The appendix at the end contains most of the proofs and derivations.

2 Foreign Intervention in Historical Perspective

The evidence of foreign interventions affecting the rise, fall and persistence of political regimes is overwhelming. While this is an uncontroversial fact, it is more difficult to identify the motives and mechanisms of intervention. Our theoretical analysis is based on three main ideas:

1. Foreign-sponsored regime change is an important determinate of evolution of political institutions.
2. Foreign intervention aims at enhancing the return to overseas investments of strategic importance.
3. Foreign intervention does not necessarily manifest itself as direct military action. In many cases, it takes more subtle and indirect forms and is aimed at empowering domestic constituencies with interests aligned with those of foreign investors.

What follows below is a discussion of historical evidence in support of these ideas. There are many situations in history in which a foreign government has played a critical role in altering the political process of another country. Foreign-sponsored coup d'état is a prime example of this and range from the U.S. backed coup d'état in Iran in 1953 (Gasirowski, 1987; Kinzer, 2006), in Guatemala 1954 (Immerman, 1980; Kinzer, 2006), and in Chile in 1973 (Kornbluh, 2004) to more recent attempts to depose Hugo Chavez in Venezuela.³ Given its status as world power, the U.S.A. is perhaps the nation that has most frequently intervened to depose foreign

³The plotters of the failed coup in 2002 seem to have had (financial and logistic) support provided by the US government as reported by many newspapers (see for example The Observer, April 21, 2002) and incipient scholarly analysis (Sharma, Tracy, and Kumar, 2004).

governments. However, regime change operations are not exclusive to U.S. foreign policy. For example, the 1974 coup d'état in Niger would not have been possible without the support of France (Higgott and Fuglestad, 1975). Britain was also involved in deposing Mosaddeq in Iran in 1953 (Gasiorowski and Byrne, 2004) and before World War I played an important role in shaping the political landscape in the Middle East by withdrawing or extending support to local elites (Hourani, 1991).

The role of international capital in supporting autocratic regimes has been stressed by O'Donnell (1973, 1978). He contends that in Latin America, authoritarian governments provided a “friendlier” environment for foreign capital than democratically elected governments. Oneal (1994) provides statistical support for this proposition. Pooled cross section and time series analysis of 48 developing countries during the period 1950-85 indicates that the return to U.S. investment abroad was greater in autocratic regimes. This caused a bias in the flow of U.S. capital investment.⁴ However, Rodrik (1996) provides conflicting evidence. He shows that countries with weaker democratic institutions attract less U.S. capital. Focussing on 62 developing and emerging market economies, Harms and Ursprung (2002) provide evidence that points in the same direction. Busse (2004), using cross-sectional and panel data and covering the period from 1972 to 1999 for a sample of 69 developing countries, finds that the impact of democracy on foreign direct investment changed over time. In particular, he argues that the negative effect of democracy on foreign investments observed in the 1970s was replaced by a positive effect thereafter. Taken together, the evidence shows how complex the relationship between foreign investment and political institutions is and calls for a theoretical analysis. We provide such an analysis and argue that the attitude of a political regime, be it democratic or autocratic, towards foreign investments to a large extent depends on how secure the regime is. In particular, the popular “political repression boosts foreign investments” hypothesis is replaced by the hypothesis that “democracy boosts foreign investments” in situations where democratic government is under threat of a coup and/or autocratic government is under threat of a revolution. Foreign intervention plays an important role in causing such outcomes. It is not surprising that the empirical literature, which neither takes into account if a regime is under threat from competing domestic factions or the possibility of foreign intervention, cannot find a

⁴Interestingly, these results are sensitive to regional specificities: foreign investment in Latin America favoured autocratic regimes whereas investment flows in Asia were greater and more profitable under democratic regimes. This would suggest that what matters is the attitudes vis-à-vis foreign capital, not the nature of the political regime *per se*.

stable relationship between the type of a political regime and the flows of foreign investment.

The aims of foreign intervention span a wide range. Sometimes, it serves the purpose of stabilizing political regimes. The dictatorships of Trujillo in the Dominican Republic, Somoza in Nicaragua, Batista in Cuba and the Duvalier dynasty in Haiti constitute clear-cut examples of autocracies that have been stabilized by foreign intervention. Foreign intervention does not, however, exclusively aim at deposing democratic governments. Rafael Leonidas Trujillo, ruler of Dominican Republic for 61 years, was, for example, put in power, supported and then ultimately deposed by U.S. influence (and weaponry).⁵ French intervention in its ex colonies in Africa provides an example of foreign intervention aimed at fostering regime stability. French economic aid and troops deployed in countries such as the Ivory Coast and Senegal were a key determinant of the political status quo that preserved French economic interests in the region (Staniland, 1987; Pepy, 1970). Democratization has also been induced or reinforced by foreign influence, as in Eastern Europe after 1990, Costa Rica, and South Korea since the 1950s. It is also easy to find contemporaneous examples, though somewhat controversial, such as the invasions of Iraq and Afghanistan. It has also been argued that the so-called Plan Colombia funded by the U.S.A. is helping to stabilize the democratic regime in power in Colombia (Nagle, 2002).

A common pattern emerges from these examples of foreign intervention: the aim to protect foreign investment and to generate profitable business opportunities. Ideological or moral motives are also present: political instability, corruption of the ruling elite, and communist influence have frequently been cited as reasons justifying intervention in the regime development of other countries. These motives notwithstanding, economic interest is present behind most, if not all, decisions to depose or to support foreign leaders and the regimes they represent (Kinzer, 2006). For example, the possibility of acquiring oil through channels other than the Anglo-American companies was a major reason for France to intervene in Africa in the 1960s (Pepy, 1970).

The strategic nature of foreign investment plays a central role in the decision to intervene. Strategically relevant investments are often linked to natural resources. The cases of Iran, Venezuela and, arguably, Iraq in 2005 provide good examples of foreign intervention related to oil production. Uranium from Niger was essential for French nuclear production. Chile (copper) and Central America (fruits) and Bolivia (natural gas) serve as well as examples of a new dimension to the natural resources curse: foreign-sponsored political instability.

Foreign intervention comes in many forms and shapes. The most drastic form of foreign intervention employs direct military forces. Mexico in 1847 provides a good example where

⁵See Hall (2000).

Antonio López de Santa Anna overthrew the liberal government of Gómez Farías once U.S. troops had surrounded Mexico City. Other historical cases include U.S. intervention in Hawaii in 1893, the Philippines in 1899 and Nicaragua in 1909 (Kinzer, 2006).

After the Second World War, the consequent debacle of formal colonialism and the emergence of the Cold War caused foreign interventions to become more subtle and multiple new forms of intervention were adopted. This included funding of opposition parties or factions, activities aimed at destabilization the ruling regime such as fuelling national strikes, mounting and funding media operations, and funding demonstrations. This also included training of military forces, which, in due cause, became involved in counter-revolutionary activities that were instrumental for the survival of many autocratic regimes. The so-called School of the Americas is a clear example of this (Millett, 19977). In other cases, intervention simply required the presence of foreign troops. Governments of recently independent former French colonies like Gabon, Togo and Zaire gained stability from the presence of French troops in their countries and considerable economic aid (Staniland, 1987). Unfortunately, meaningful data on the economic resources committed to this type of activities is not generally available. However, a few calculations have been made. According to Kinzer and Schlesinger (1982), President Eisenhower approved in 1953 a CIA plan to get rid of Jacobo Arbenz (Guatemala). The sum of money committed to the task was 6 millions dollars and involved about 100 agents.

Whatever form it might take, foreign intervention requires the complicity of domestic elites. The complementarity between domestic economic factions and foreign capital has been conceptualized by O'Donnell as mutual indispensability (O'Donnell, 1978) and elective affinity (O'Donnell, 1973). In all the examples mentioned above of foreign-sponsored regime change operations, members of domestic elites were encouraged to take power or received support while ruling their countries.

Regime change operations need not overthrow a political system to achieve the goal of generating a “friendlier” investment environment. The constant fear of U.S. intervention added to the atmosphere of constraint characterizing the transition to democracy in Venezuela in 1958 after the fall of Colonel Perez Gimenes. The so-called Pacto de Punto Fijo (a social pact involving the main political and social actors) was a cornerstone of “pacted” democracy. It maintained favorable investment conditions in the booming oil sector. At one point the U.S. marine and Air Force were sent to the Caribbean “in the event their assistance would be required”. The memories of U.S. interventions in Guatemala and Iran were, however, enough to get all parties to agree to “pacted” democracy (Karl, 1987).

3 The Model

We consider a world with two economies: a domestic and a foreign economy. The domestic economy is small relative to the world economy. It is populated by an elite and by workers. Its political regime (S_t^P) can be either democracy (\mathcal{D}), autocracy (\mathcal{A}) or socialism (\mathcal{S}), i.e., the *political state* is $S_t^P \in \{\mathcal{D}, \mathcal{A}, \mathcal{S}\}$. Regime transitions happen through coups, revolutions, or democratization. The opportunities for coups and revolutions depend on many different political, technological and economic factors. To capture this, we assume, as in Acemoglu and Robinson (2000), that the costs of coups and revolutions are stochastic and depend on the *social state* ($S_t^s \in \{G, B\}$). When the social state is G , conditions for either a coup or a revolution are favorable and the costs are relatively low (see below). When the social state is B , a coup or a revolution is prohibitively costly. The probability that the social state is G (B) is denoted ψ ($1 - \psi$).⁶ The costs of coups and revolutions are, typically, high and we assume throughout that $\psi < \frac{1}{2}$.

The foreign economy is populated by investors and ruled by a foreign government. Foreign investors can invest either in the domestic economy or in the world market. A key feature of the model is that the foreign government may attempt to influence the political regime of the domestic economy in order to enhance the return to foreign investments of strategic importance. We return to this in sections 5 and 6.

3.1 The Economic Structure

The domestic economy has infinite time horizon with $t = 0, 1, 2, \dots$. It is populated by a continuum of individuals with measure 1. A fraction L are workers. The remaining fraction $K = 1 - L$ are members of the elite. Each worker is endowed with one unit of labour. This unit is inelastically supplied each period, so that the total supply of labour is L . The majority of the population are workers ($L \geq \frac{1}{2}$). Utility is linear in income, net of taxes, and is discounted with the discount factor $\beta \in (0, 1)$. We use the subscripts W and C , respectively, to denote workers and members of the elite.

The distributional conflict between the elite and workers is central to the model. Foreign investors are caught in the middle of this. We want the model to capture the stylized fact

⁶Acemoglu and Robinson (2001) link, for concreteness, the conditions for social unrest directly to the business cycle. In fact, they assume that coups and revolutions can only take place during recessions. We prefer to focus on (exogenous) political factors. We could capture that social unrest is probably more likely during times of recession than in booms by making ψ an inverse function of economic conditions.

that under autocratic rule, the elite, *ceteris paribus*, wants to tax foreign investments more leniently than workers would do under democratic rule.⁷ To build this feature into the model, we make two postulates: i) the profit income of the elite is increasing in the amount of foreign investment and ii) taxation of foreign investment is distortionary. A simple but compelling way to micro-found these postulates is to introduce the following production structure.

The elite owns a production factor, which we shall call land (T), which is required for production to take place.⁸ Production is organized in a continuum of firms with measure 1. Each member of elite owns $\frac{1}{K}$ units of land and must supply one unit of land per firm in order for production to take place.⁹ Per-period output from a representative firm is produced with labour (l), foreign investments (i) and land (T) using the following production technology:

$$y = A \left\{ l - \frac{1}{2}l^2 + i - \frac{1}{2}i^2 \right\},$$

for $T = 1$ and zero otherwise. $A > 0$ is total factor productivity.¹⁰ The production technology exhibits decreasing returns to scale. We think of the profits as the return to a fixed and immobile stock of land (initially) owned by the elite. Output is sold at the world market at the fixed price of 1. Labour and foreign investments are traded in competitive markets. The factor demands from a representative firm are given by $\omega = A(1 - l)$ and $r = A(1 - i)$, where ω is the real wage and r is the real return to foreign investments in the domestic economy. Labour is in fixed supply and equilibrium employment per firm and in total is L . The supply of foreign investments is determined by the arbitrage condition that $r^* = r - \tau_f$. r^* is the world interest rate and $\tau_f \geq 0$ is a unit tax on foreign investments. The equilibrium inflow of foreign investments per firm and in total is, therefore, given by

$$I(\tau_f) = z - \frac{\tau_f}{A}, \tag{1}$$

where $z = 1 - \frac{r^*}{A}$. We assume that $A > r^*$. This is sufficient to insure equilibrium inflow of investment in all political regimes.

The tax structure, $\tau = (\tau_L, \tau_\pi, \tau_f)$, consists of a tax on wage income (τ_L), a tax on profit income (τ_π), and the tax on foreign investments (τ_f). Taxation is associated with deadweight

⁷See, e.g., Acemoglu and Robinson (2005).

⁸Alternatively, we can assume directly that the elite owns the production technology.

⁹This assumption allows us to vary K and, thereby, capture variations in inequality without changing the scale of production (by creating or destroying firms).

¹⁰The production function is a linear-quadratic approximation to a more general production function. A special case is a linear production function used in Acemoglu and Robinson (2001).

costs. Our analysis requires that the deadweight cost functions associated with τ_L and τ_π are convex. For simplicity, we follow Acemoglu and Robinson (2000) and assume that the deadweight cost functions take the following extreme forms:

$$C_L(\tau_L) = \begin{cases} 0 & \text{for } \tau_L \leq \bar{\tau}_L \\ \infty & \text{for } \tau_L > \bar{\tau}_L \end{cases},$$

$$C_\pi(\tau_\pi) = \begin{cases} 0 & \text{for } \tau_\pi \leq \bar{\tau}_\pi \\ \infty & \text{for } \tau_\pi > \bar{\tau}_\pi \end{cases}.$$

It is possible up to a point (defined by $\bar{\tau}_L$ and $\bar{\tau}_\pi$)¹¹ to tax wages and profits without causing significant deadweight costs. After that it becomes prohibitively expensive to do so.¹² Total tax revenues, $T = L\tau_L + K\tau_\pi + I\tau_f$, are recycled lump sum to citizens. We assume that revenues cannot be targeted at specific groups. Per-period utility of a member of the elite is

$$v_C(\tau) = \frac{\Pi}{K} - \tau_\pi + T - C_L(\tau_L) - C_\pi(\tau_\pi),$$

where $\Pi = A\left(\frac{1}{2}L^2 + \frac{1}{2}I^2\right)$ is profit per firm or unit of land (as well as aggregate profit). Per-period utility of a representative worker is

$$v_W(\tau) = A(1 - L) - \tau_L + T - C_L(\tau_L) - C_\pi(\tau_\pi).$$

3.2 Political transitions, Revolutions, Coups and Democratization

In an autocracy, the elite decides the tax structure, but workers might attempt a revolution. A successful revolution leads to nationalization of land and expropriation of any foreign investments left in the country. A worker's payoff after a revolution, therefore, is¹³

$$v_W(\mathcal{S}) = \frac{\Pi}{L} + \omega = A\left(1 - \frac{1}{2}L\right).$$

¹¹We can allow the thresholds in the two deadweight cost functions to be proportional to the size of the economy (A) such that the “maximum” wage or profit tax is larger in a rich than in a poor economy. We shall return to this issue when we discuss the comparative statics results with respect to A .

¹²Alternative specifications yield similar results, but make it harder to solve the relevant optimal taxation problems. What is important is that the deadweight cost functions are convex.

¹³Foreign investments withdraw before the revolution (see the discussion of the time line below).

Each member of the elite gets a payoff of zero after a revolution. During a revolution, however, some income, μ , is lost. How much depends on the social state. If $S_t^s = B$, then $\mu_B = \infty$ and workers never attempt a revolution. If, on the other hand, $S_t^s = G$, then $\mu_G = \mu < \infty$ and workers might be willing to pay the price of a revolution.¹⁴ A successful revolution leads to socialism. We follow Acemoglu and Robinson (2000, 2001) and assume that socialism is an absorbing state. The lifetime utility of workers after a revolution is

$$V_W(\mathcal{S}) = \frac{v_W(\mathcal{S})}{1 - \beta} - \mu.$$

The elite has a strong incentive to avoid a revolution because they lose everything. It can attempt to prevent a revolution by either giving tax concessions in such a way that workers prefer not to revolt or by giving them the right to vote. The latter option leads to a transition to democracy under which the majority of voters are workers.

In a democracy, workers decide the tax structure. The elite may, however, attempt a coup to reinstate autocracy. A coup is costly because of the turmoil it creates. As a consequence, a portion ϕ of the elite's income is lost during a coup. How much is lost depends on the social state. If $S_t^s = B$, then $\phi_B = \infty$ and the elite never attempts a coup. If, on the other hand, $S_t^s = G$, then $\phi_G = \phi < \infty$ and the elite might be willing to pay the price of a coup.

3.3 Timing of Events

The timing of events within each period is as follows:

1. The social state $S_t^s \in \{G, B\}$ is revealed.
2. The foreign government may initiate an intervention in the domestic economy.
3. If a revolution has happened in the past, then the political regime is socialism and the period ends. If $S_t^P = \mathcal{D}$, workers propose a tax structure. If $S_t^P = \mathcal{A}$, the elite proposes a tax structure.
4. If $S_t^P = \mathcal{A}$, the elite may democratize. If $S_t^P = \mathcal{D}$, the elite may initiate a coup that leads to autocracy. If a political transition takes place, the group that comes to power proposes

¹⁴As pointed out by Acemoglu and Robinson (2000, 2001), this formulation side-steps the free rider problem associated with revolution. This is because a revolution yields private benefits to each worker and taking part in it does not involve any private costs. A similar argument applies to coups.

a new tax structure.

5. If $S_t^P = \mathcal{A}$, workers can initiate a revolution which leads to socialism. If no revolution takes place, the tax structure from stage 3 or 4 is implemented.
6. Foreign investments are made, consumption takes place and the period ends.

This timing of events has three important implications. First, foreign investments are made *after* the current political regime is established and the associated tax structure is decided. This allows foreign investors to react to political transitions by withdrawing investments. For this reason, all political decisions must anticipate the response of foreign investors. Of course, not all foreign investments are footloose in this way. In reality, however, most investments, with the notable exception of infrastructure projects, are at least partially movable at the time scale relevant for political transitions. As discussed in section 7, some of our results, however, also apply to the case of immovable investments (i.e., investments made before the political regime is known). Second, the foreign government can intervene in the domestic economy *before* regime transitions take place with a view to avoid or encourage such transitions. We return to this aspect of the model in section 5 and section 6. Third, coups are only possible against a democracy. Revolutions are only possible against an autocratic. This rules out that a coup and a revolution can happen within the same period.¹⁵

We treat the members of the elite and the workers as two players of a dynamic game. We restrict attention to pure strategy Markov perfect equilibria, i.e., equilibria in which the strategies of the two players in a given period only depend on the current state of the world (and prior actions taken within that period). The formal definitions of strategies and of the equilibrium concept are similar to those given by (Acemoglu and Robinson, 2001, p. 942-43) and are listed in A.6.

4 Political Regimes

We start by assuming that the domestic economy is an autocracy in period 0. This is reasonable when considering long-run institutional development, as virtually all societies were governed by some form of autocracy in the past. We return to the scenario in which the domestic economy is

¹⁵Revolution against a democratic regime is an interesting possibility that we do not consider here. The model can, however, easily be extended to accommodate this possibility.

initially a democracy in section 6 where we analyze the foreign government’s incentive to finance a coup d’état.

4.1 Optimal Taxation in Consolidated Political Regimes

A fully consolidated political regime is never under threat of a revolution or a coup. The group in power can each period and irrespective of the social state implement the tax structure, $\tau = (\tau_L, \tau_\pi, \tau_f)$, that maximizes its per-period payoff. In a consolidated democracy, it is optimal for workers to leave wage income untaxed and to tax profit income and foreign investments only, i.e., $\tau^D = (0, \bar{\tau}_\pi, \tau_f^D)$ where $\tau_f^D = \frac{A-r^*}{2} > 0$. In a consolidated autocracy, the opposite is true: it is optimal for the elite to tax wage income only, while profit income and foreign investments are not taxed at all, i.e., $\tau^A = (\bar{\tau}_L, 0, 0)$.¹⁶

The differential treatment of wage and profit income is driven by distributional considerations. This is also behind the different attitude to taxation of foreign investments. The wage rate is independent of foreign investments. For this reason, workers want to tax foreign investments to maximize revenues. This is achieved by setting $\tau_f = \tau_f^D$. Profits, on the other hand, are increased by foreign investments. For the elite, this concern dominates any desire to raise extra revenues and it wants $\tau_f = 0$. An implication, then, is that the tax structure is foreign investment (FI) friendly and regressive under fully consolidated autocracy. In contrast, under fully consolidated democracy, the tax structure is foreign investment (FI) unfriendly and progressive.¹⁷ In the following, we use the term “FI-unfriendly” to refer to any situation in which foreign investments are being taxed.

Importantly, the difference between the optimal tax structure in a consolidated democracy and autocracy does not imply that democracies always are FI-unfriendly or that autocracies always adopt regressive taxes. To fully understand the implications of the distributional struggle between workers and the elite and its implications for the tax treatment of foreign investments, we need to investigate all the different configurations of democracy and autocracy that can emerge in equilibrium. We begin by considering different types of autocracies.

¹⁶The derivation of τ^D and τ^A can be found in appendix A.1.

¹⁷The use of the terms progressive and regressive to describe the tax structure in the two regimes implicitly assumes that the income of a representative worker is lower than the profit income of a representative member of the elite.

4.2 Autocracies

In an autocracy, the elite decides the tax structure and the extent of redistribution. Workers can, however, threaten the elite with a revolution. This threat of revolution is the key to understanding the behavior of the elite under autocracy.

Workers never attempt a revolution in social state B . If workers initiate a revolution in social state G , they get $V_W(\mathcal{S}, G) = \frac{v_W(\mathcal{S})}{1-\beta} - \mu$. The elite can preempt a revolution either by offering tax concessions or by offering voting rights (democratization). Tax concessions are only credible when the social state is G . They may, therefore, not be sufficient. Voting rights, in contrast, can only be revoked through a costly coup. They can, accordingly, serve as a (partial) commitment device (Acemoglu and Robinson, 2000). Yet, if revolutions are cheap, not even democratization may be enough to head off a revolution. To insure that workers prefer democracy to a revolution, we assume throughout that the cost of a revolution is sufficiently large:¹⁸

$$\mu > \underline{\mu} \equiv \frac{v_W(\mathcal{S})}{1-\beta} - \frac{v_W(\tau^{\mathcal{D}}, \mathcal{D})}{1-\beta} - \frac{\beta\psi (v_W(\tau^{\mathcal{A}}, \mathcal{A}) - v_W(\tau^{\mathcal{D}}, \mathcal{D}))}{(1-\beta(1-2\psi))(1-\beta)}. \quad (2)$$

Naturally, the elite always prefers to give tax concessions if that is sufficient to avoid a revolution. An extension of the franchise is a last resort.

The so-called revolution constraint determines what the elite must do. In appendix A.3, we show that it can be written as

$$v_W(\tau, \mathcal{A}) \geq \frac{\mu(1-\beta) + (1-\psi)\beta v_W(\tau^{\mathcal{A}}, \mathcal{A}) - v_W(\mathcal{S})}{(1-(1-\psi)\beta)}. \quad (3)$$

The constraint insures that a revolution is not in the interest of workers in social state G . To satisfy the revolution constraint, the elite must either implement a tax structure τ such that the payoff of workers, $v_W(\tau, \mathcal{A})$, in state (G, \mathcal{A}) is at least as large as what they would get from staging a revolution, or failing that, give voting rights to workers.

We can use equation (3) to define two important cut-off values for μ . The first cut-off determines if the elite is forced to democratize to head off a revolution. It is found by letting the elite offer the “maximum” tax concession ($\tau = \tau^{\mathcal{D}}$). This defines

$$\mu_1 = \frac{v_W(\mathcal{S})}{1-\beta} - \frac{(1-(1-\psi)\beta)v_W(\tau^{\mathcal{D}}, \mathcal{D})}{1-\beta} - \frac{(1-\psi)\beta v_W(\tau^{\mathcal{A}}, \mathcal{A})}{1-\beta} > \underline{\mu}. \quad (4)$$

¹⁸We show in appendix A.2 that this condition is sufficient.

For $\mu \in (\underline{\mu}, \mu_1)$, tax concessions cannot head off a revolution when $S_t^s = G$ and an extension of the franchise is the only alternative open to the elite. For $\mu \geq \mu_1$, tax concessions can prevent a revolution. The second cut-off determines if tax concessions are needed or not. It is found by evaluating the revolution constraint at $\tau = \tau^A$ and is given by

$$\mu_2 = \frac{v_W(\mathcal{S})}{1 - \beta} - \frac{v_W(\tau^A, \mathcal{A})}{1 - \beta} > \mu_1. \quad (5)$$

For $\mu > \mu_2$, the revolution constraint is not binding. The elite can implement τ^A irrespective of the social state at no risk. In the interval $\mu \in [\mu_1, \mu_2]$, tax concessions are necessary and sufficient to avoid a revolution and autocracy can persist without having to resort to democratization. In this case, we say that the autocracy is semi-consolidated.

The first proposition characterizes the three different types of fully consolidated or semi-consolidated autocracy that can arise along a Markov perfect equilibrium path.

Proposition 1 (*Autocracy*) *Suppose that the domestic economy is initially an autocracy and that $\mu \geq u_1$. The domestic economy remains an autocracy. The tax structure is τ^A in social state B. Moreover, there exists a $\mu_3 \in (\mu_1, \mu_2)$ such that*

1. *If $\mu \in [\mu_1, \mu_3)$, then the autocracy is semi-consolidated. The tax structure is FI-unfriendly ($\tau_f \in (0, \tau_f^D)$) and progressive ($\tau_L = 0, \tau_\pi = \bar{\tau}_\pi$) in social state G.*
2. *If $\mu \in [\mu_3, \mu_2]$, then the autocracy is semi-consolidated. The tax structure is FI-friendly ($\tau_f = 0$) and progressive ($\tau_L > 0, \tau_\pi < \bar{\tau}_\pi$) in social state G.*
3. *If $\mu > \mu_2$, then the autocracy is fully consolidated. The tax structure is always τ^A , i.e., FI-unfriendly and regressive.*

Proof *See appendix A.5 ■*

Without a sufficient threat of a revolution ($\mu \geq \mu_1$), the domestic economy remains an autocracy. This, however, does not imply that the threat of a revolution is irrelevant. Whether the autocracy is consolidated or not depends on the cost of revolution μ in social state G. Proposition 1 makes a distinction between three types of autocracy. Firstly, when the cost of a revolution is extremely high ($\mu > \mu_2$), autocracy is fully consolidated. The elite implements its most-preferred (FI-friendly) tax policy irrespective of the social state. This leads to a stable inflow of foreign investments.

Secondly, for $\mu \leq \mu_2$, the elite must give concessions to avoid a revolution when $S_t^S = G$. This gives rise to two types of semi-consolidated autocracy. As long as the cost of a revolution is relatively high ($\mu \in (\mu_3, \mu_2]$), the elite prefers to cater for foreign investors ($\tau_f = 0$) and heads off the revolution by making the domestic tax structure less regressive. This is done by lowering the tax on wage income (from $\bar{\tau}_L$) and increasing the tax on profit (from zero). However, as the cost of a revolution decreases, the elite must adopt a more and more progressive tax structure. When the cost hits the threshold μ_3 , the tax on wage income is zero and the tax on profit income is $\bar{\tau}_\pi$. For $\mu \in (\mu_1, \mu_3]$, the elite is, therefore, forced to tax foreign investments to generate extra tax revenues with which to please workers. Consequently, an autocracy facing a sufficiently serious threat of revolution is *FI-unfriendly*.¹⁹

4.3 Democracies

Obviously, democracy only emerges along the equilibrium path if the threat of revolution is such that the elite has no choice but to grant universal suffrage in social state G (i.e., $\mu < \mu_1$). However, whether democracy is allowed to consolidate depends on the elite's incentive to mount a coup. This incentive is controlled by the coup constraint. In appendix A.4, we show that it can be written as

$$v_C(\tau, \mathcal{D}) \geq \frac{v_C(\tau^{\mathcal{A}}, \mathcal{A}) - (1 - 2\psi)\beta v_C(\tau^{\mathcal{D}}, \mathcal{D}) - (1 - (1 - \psi)\beta)\phi}{1 - (1 - 2\psi)\beta}. \quad (6)$$

The constraint guarantees that it is not in the interest of the elite to initiate a coup in social state G . To satisfy it workers must adopt a tax structure, τ , in state (G, \mathcal{D}) that gives each member of the elite a payoff, $v_C(\tau, \mathcal{D})$, that is at least as large as what they could get by staging a coup.

The coup constraint defines two important cut-off values of ϕ . The first cut-off determines if workers need to give concessions to avoid a coup. Evaluating equation (6) at the tax structure most-preferred by workers, $\tau^{\mathcal{D}} = (0, \bar{\tau}_\pi, \tau_f^{\mathcal{D}})$, we get

$$\phi_1 \equiv \frac{v_C(\tau^{\mathcal{A}}, \mathcal{A}) - v_C(\tau^{\mathcal{D}}, \mathcal{D})}{1 - (1 - \psi)\beta}. \quad (7)$$

¹⁹The tax structure is volatile within these semi-consolidated regimes because it is adjusted to fit the social state. In contrast to fully consolidated autocracies, semi-consolidated autocracies, therefore, experience large swings in the inflow of foreign investments.

The cut-off ϕ_1 has a natural interpretation. If workers do not give any concessions, the per-period difference between democracy and autocracy is $v_C(\tau^A, \mathcal{A}) - v_C(\tau^D, \mathcal{D})$. Since the elite anticipates that it has to grant voting rights to workers to avoid a revolution every time the state is (G, \mathcal{A}) , it discounts this gain with the probability that the social state is B . Given that democratic rights were granted in the past, ϕ_1 is the maximum the elite is willing to pay for a regime change. Accordingly, if $\phi \geq \phi_1$, the coup constraint is irrelevant. Even in the absence of tax concessions, a coup is not worthwhile. If, on the other hand, $\phi < \phi_1$, workers need to give concessions if they want to avoid a coup.

The second cut-off determines if a coup can be avoided or not. It is found by evaluating equation (6) at the tax structure most-preferred by the elite, $\tau^A = (\bar{\tau}_L, 0, 0)$:

$$\phi_2 \equiv (1 - 2\psi) \beta \phi_1. \quad (8)$$

So, for $\phi \in [0, \phi_2)$, a coup cannot be prevented,²⁰ but for $\phi \in [\phi_2, \phi_1)$ giving appropriate tax concessions in state $S_t^s = G$ is sufficient. Notice that $(1 - 2\psi)$ is the difference between the probability that the social state is B and G . Accordingly, if conditions are often favorable for coups (ψ is large), workers' tax promises for the future become more credible. This makes it easier for them to head off the coup and ϕ_2 is lower. Of course, tax concessions are costly. It might therefore be optimal for workers simply to let a coup happen, in particular if they anticipate to be back in power next time conditions for a revolution are favorable. However, we show in appendix A.6 that this eventuality never arises. It is always better for workers to give the necessary concessions than to let a coup that could be prevented happen.

Following Acemoglu and Robinson (2001), we say that a democracy is *unstable* if it is overthrown by a coup each time the social state is G . A democracy is *semi-consolidated* if workers by giving appropriate tax concessions can preempt coups. It is *fully consolidated* if they can implement their most-preferred tax policy irrespective of the social state without risking a coup. The second proposition characterizes four different types of democracy that can emerge along a Markov perfect equilibrium path.

Proposition 2 (*Democracy*) *Suppose that the economy is initially an autocracy and that $\underline{\mu} < \mu < \mu_1$. There exists a $\phi_3 \in (\phi_2, \phi_1)$ such that the following is true:*

1. *If $\phi < \phi_2$, the domestic economy becomes an unstable democracy that switches regime*

²⁰The assumption that $\psi < \frac{1}{2}$ implies that $\phi_2 > 0$.

each time the social state is G . The tax structure oscillates between periods with $\tau^D = (0, \bar{\tau}_\pi, \tau_f^D)$ and periods with $\tau^A = (\bar{\tau}_L, 0, 0)$.

2. If $\phi \in [\phi_2, \phi_3]$, the domestic economy becomes a semi-consolidated democracy the first time the state is (G, \mathcal{A}) . In social state B , the resulting tax structure is $\tau = \tau^D$. In social state G , the tax structure is regressive ($\tau_L > 0$, $\tau_\pi < \bar{\tau}_\pi$) and FI-friendly ($\tau_f = 0$).
3. If $\phi \in (\phi_3, \phi_1)$, the domestic economy becomes a semi-consolidated democracy the first time the state is (G, \mathcal{A}) . In social state B , the resulting tax structure is $\tau = \tau^D$. In social state G , the tax structure is progressive ($\tau_L = 0$, $\tau_\pi = \bar{\tau}_\pi$) and FI-unfriendly ($\tau_f \in (0, \tau_f^D)$).
4. If $\phi \geq \phi_1$, the domestic economy becomes a consolidated democracy the first time the state is (G, \mathcal{A}) . The resulting tax structure is always progressive ($\tau_L = 0$, $\tau_\pi = \bar{\tau}_\pi$) and FI-unfriendly ($\tau_f = \tau_f^D$).

Proof See appendix A.6 ■

When the threat of revolution is sufficiently serious ($\mu < \mu_1$), the elite has no choice, but to grant universal suffrage. Whether democracy is able to take root and consolidate or not, however, depends on the cost of a coup ϕ . Proposition 2 identifies four different types of democracy. Firstly, when coups are cheap ($\phi < \phi_2$), the elite extend the franchise each time the social state is G , but reverses the decision by mounting a coup as soon as the opportunity presents itself. The result is unstable democracy with oscillation between autocracy and democracy. Regime volatility leads to fiscal volatility. As a consequences, the domestic economy experiences large swings in the flow of foreign investments: foreign investments float into the country under autocracy, but retreat under democracy. Secondly, when coups are very expensive ($\phi \geq \phi_1$), it is never in the interest of the elite to overthrow a democracy. Accordingly, once universal suffrage is granted, a fully consolidated democracy is established. The majority of workers can without risk implement their most-preferred tax structure ($\tau^D = (0, \bar{\tau}_\pi, \tau_f^D)$). Thirdly, for intermediate values of ϕ , a semi-consolidated democracy emerges. Workers adjust the tax structure to preempt coups whenever the social state is G . When the cost of a coup is relatively high ($\phi \in (\phi_3, \phi_1)$), workers reduce the tax on foreign investments (below τ_f^D) but need not adjust the domestic tax structure (τ_L and τ_π) to avoid a coup. The result is FI-unfriendly democracy. However, as the cost of a coup decreases ($\phi \in [\phi_2, \phi_3]$), workers are eventually forced to stop taxing foreign investments and start taxing wages and/or reducing the tax on profits. In other words, a serious threat of a coup can force a democracy to be FI-friendly.

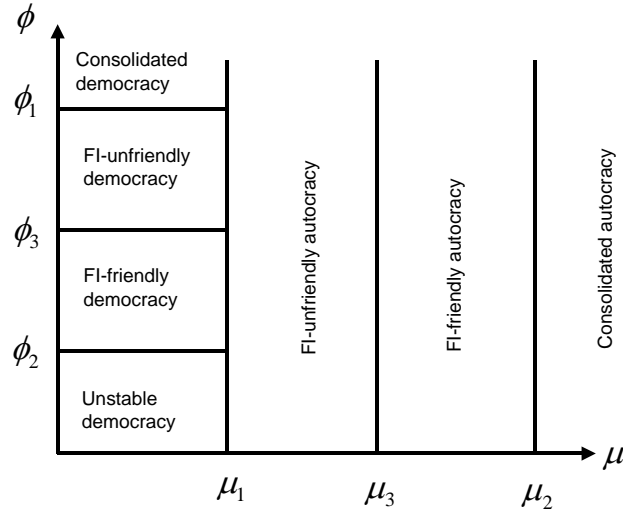
4.4 Discussion

Propositions 1 and 2 give a novel typology of democracies and autocracies.²¹ Figure 1 illustrates this typology for different combinations of the cost of revolutions and coups. It is of interest to compare our typology with that derived by Acemoglu and Robinson (2001). Acemoglu and Robinson (2001) studies political transitions within a closed economy. They find two types of autocracy (consolidated and semi-consolidated autocracy) and three types of democracy (unstable, fully consolidated and semi-consolidated democracy). While our typology replicates this broad pattern, we study an open economy with investment flows and a richer tax structure. This allows us to divide the semi-consolidated regimes more finely. We add to the general typology new regime types that are differentiated according to the tax treatment of foreign investors. An important implication of the two propositions is that there is no simple link between the tax treatment of foreign investors and regime type. An autocracy under threat of revolution may be FI-unfriendly, while a democracy under threat of a coup may be FI-friendly. It is, therefore, not surprising that empirical studies discussed in section 2 are unable to establish robust causal links between flows of foreign investments and political regime types.

Another interesting implication of the two propositions is that the relationship between the tax treatment of foreign investments and the cost of a revolution in countries with autocracy is non-monotonic. To see this, consider a country with unstable democracy. Each time the political state is autocracy, the elite in power treats foreign investments leniently ($\tau_f = 0$). As the cost of a revolution increases, this continues to be the case until the cost reaches the threshold μ_1 . At this point, the country becomes a semi-consolidated autocracy. Each time the social state is G , the elite must now tax foreign investments to raise funds for redistributive purposes. The autocracy has become foreign investment *unfriendly* as a consequence of the increase in μ . Further increases in the cost of revolution, however, makes the regime less and less foreign investment unfriendly. Once the threshold μ_3 is reached, the tax rate τ_f is again zero. Within democratic regimes, a similar non-monotonic relationship between the tax treatment of foreign investors and the cost of a coup exists. To see this, consider again a country that has emerged as an unstable democracy. Each time the country is democratic, foreign investments are taxed

²¹The threshold values of the costs of revolutions and coups that define the different regime types are functions of the economic and political characteristics of the economy, such as factor productivity (A), the discount factor (β), the probability of social unrest (ψ), income distribution (K), and the world interest rate (r^*). In the discussion paper version of the paper (Aidt and Albornoz, 2007), we derive the comparative statics and discuss how the likelihood of different regime types is affected by these characteristics.

Figure 1: Political Regimes



heavily ($\tau_f = \tau_f^D$). An increase in the cost of a coup beyond the threshold ϕ_2 , however, changes this. The democracy becomes foreign investment *friendly*, at least when the social state is G . Further increases in the cost of a coup, however, makes the democracy less and less FI-friendly. We summarize this discussion in the following corollary:

Corollary 1 *The tax treatment of foreign investments by an autocracy (a democracy) is a non-monotonic function of the cost of a revolution (coup).*

5 Foreign Intervention

Foreign investors can observe the political regime and the associated tax structure before they make their investments. As a consequence, they are, at equilibrium, indifferent between investing in the domestic economy and at the world market. However, foreign investments often serve a strategic purpose. This puts a wedge between the private return and the return as perceived by the foreign government. This provides, as discussed in section 2, the foreign government with an incentive to protect investments abroad and, if necessary, actively to hinder or encourage

regime transitions in other countries. The strategic motive obviously differs from case to case, but is always omnipresent. It ranges from strategic access to natural resources as in the case of Iran in 1953 to geopolitics as in South Korea in the 1950s and in Chile in 1973.

We assume that the foreign government wants to maximize the net present value of foreign investments. Its per-period objective function is

$$v_f(\tau_f) = ((r - \tau_f) - r^* + \varepsilon)I(\tau_f).$$

The parameter $\varepsilon > 0$ captures the strategic value of foreign investments. The larger is ε , the higher the stake. The foreign government ideally wants foreign investments to be untaxed. Accordingly, foreign intervention always takes the form of a transfer of resources to the elite. The transfer can either be a subsidy to coups (which reduces ϕ) or funds that help the elite prevent a revolution (by increasing μ). We assume that the intervention decision is made after the social state is observed, but before any regime transition takes place (see the time line).²² This implies that the foreign government can intervene to change or consolidate a political regime when it is needed.

In order to emphasize the impact of foreign intervention on the regime choice, we assume that the domestic economy would become a consolidated democracy in the absence of foreign intervention (i.e., $\mu < \mu_1$ and $\phi > \phi_1$).²³ Therefore, if the foreign government decides not to intervene, its discounted payoff is:²⁴

$$W_f(NI) = \left[\left(\frac{\psi}{1 - \beta} \right) v_f(\tau_f^D) + (1 - \psi)v_f(0) \right] \frac{1}{1 - (1 - \psi)\beta}, \quad (9)$$

where NI denotes the strategy of not intervening and β is the discount factor of the foreign government. The foreign government can prevent the transition from autocracy to consolidated democracy in two ways. Firstly, it can accept the transition to democracy, but then subsidize the elite. By doing so, the threat of a coup becomes so salient that workers must reduce the tax on foreign investments to zero to preempt a coup each time the social state is G . The cost of this strategy, which we call “subsidize the elite” (SE), is $\phi - \phi_3$. It has to be paid each time the social state is G . In this scenario, it is never in the interest of the foreign government to actually

²²It is not important for the results that the foreign government observes the social state before it intervenes. It is, however, realistic that it can adjust its support to foreign regimes in response to social circumstances in the country.

²³Recall that the initial political state is autocracy.

²⁴See appendix A.7 for details.

trigger a coup d'état. It is better to support the elite in opposition. In this way, concessions for foreign investors can be extorted from the ruling majority.²⁵ Secondly, the foreign government can prevent the transition to democracy by helping the elite combat the threat of revolution. The cost of this strategy, which we call the “counter-revolutionary” strategy (CR), is $\mu_3 - \mu$. It has to be paid each time the social state is G . The U.S. Army School of Americas, discussed in section 2, provides an example of this strategy.

Whether the foreign government wants to intervene or not and if so, by which means, depends on the costs and benefits of each strategy. If the foreign government decides to subsidize the elite (strategy SE), the franchise is extended the first time the social state is G . In that period foreign investments are taxed ($\tau_f = \tau_f^D$). In subsequent periods, foreign investments are only taxed when the social state is B . This is because the foreign government intervenes, by donating $\phi - \phi_3$ to the “coup kitty” of the elite whenever the social state is G . Doing so, forces workers to reduce the tax on foreign investments to zero to avoid a coup. The net benefit of strategy SE is:²⁶

$$W_f(SE) = \frac{v_f(0)[(1 - \beta)(1 - \psi) + \psi^2\beta] + v_f(\tau_f^D)(\psi - \psi^2\beta) - (\phi - \phi_3)\psi^2\beta}{(1 - (1 - \psi)\beta)(1 - \beta)}. \quad (10)$$

If, instead, the foreign government decides to support counter-revolutionary activities (strategy CR), the domestic economy stays autocratic. To avoid democratization in social state G , the foreign government must fund counter-revolutionary activities. This neutralizes the threat of revolution sufficiently to enable the elite to stay in power *and* to keep the tax on foreign investments at zero. As a consequence, $\tau_f = 0$ at all times. The net present value of strategy CR is:

$$W_f(CR) = \frac{v_f(0) - \psi(\mu_3 - \mu)}{1 - \beta}. \quad (11)$$

For foreign intervention to take place, one or both of the two intervention strategies must dominate the no intervention strategy. A straight forward comparison of the payoffs associated with the three strategies shows that the foreign government prefers to subsidy the elite rather

²⁵One example is the current pressure by the Brazilian government on the democratic government of Bolivia to prevent nationalization of gas production. The Pacto de Punto Fijo, discussed in section 2, is another good example.

²⁶See appendix A.8 for details.

than not to intervene ($W_f(SE) - W_f(NI) > 0$) when

$$\phi \leq \phi_3 + \frac{\varepsilon z}{A} \equiv \phi(\varepsilon).$$

Likewise, it is better to support counter-revolutionary activities than not to intervene ($W_f(CR) - W_f(NI) > 0$) when

$$\mu \geq \mu_3 - \frac{\varepsilon z}{A(1 - (1 - \psi)\beta)} \equiv \mu(\varepsilon).$$

We assume that the domestic economy would emerge as a consolidated democracy in the absence of foreign intervention, i.e., $\mu < \mu_1$ and $\phi > \phi_1$. We, therefore, need $\phi(\varepsilon) > \phi_1$ and/or $\mu(\varepsilon) < \mu_1$ for foreign intervention of any kind to be optimal. This in turn requires that

$$\varepsilon \geq \frac{(\phi_1 - \phi_3)A}{z} \equiv \varepsilon_\phi \tag{12}$$

and/or

$$\varepsilon \geq \frac{(\mu_3 - \mu_1)(1 - (1 - \psi)\beta)A}{z} \equiv \varepsilon_\mu. \tag{13}$$

In other words, foreign intervention only happens when the foreign government has a sufficiently strong strategic reason to protect investors. We assume in the following that this is, indeed, the case (i.e., that $\varepsilon \geq \max\{\varepsilon_\phi, \varepsilon_\mu\}$), and ask if foreign intervention will be pro-democracy (SE) or pro-autocracy (CR).

5.1 Pro-democracy or Pro-autocracy Intervention?

Given that some type of intervention is optimal, the foreign government must decide on the means of intervention. It follows from equations (10) and (11) that the foreign government is indifferent between the two intervention strategies when

$$\phi = \phi(\mu) \equiv \phi_3 + \frac{(1 - (1 - \psi)\beta)}{\psi\beta}(\mu_3 - \mu) - \frac{\varepsilon z}{A} \frac{1 - \psi\beta}{\psi\beta}. \tag{14}$$

We observe that $\phi < \phi(\mu)$ implies $W_f(SE) > W_f(CR)$. In this case, the foreign government prefers to allow democracy to be established. On the other hand, $\phi \geq \phi(\mu)$ implies that $W_f(SE) \leq W_f(CR)$. In this case, the foreign government prefers to help an autocracy to consolidate. Building on the preceding analysis, the next propositions summarize the foreign

government's optimal intervention strategic.

Proposition 3 (*Pro-autocracy intervention*) Suppose $\mu \in [\mu(\varepsilon), \mu_1]$. Then pro-autocracy foreign intervention takes place whenever $\phi > \phi(\mu)$.

Proposition 4 (*Pro-democracy intervention*) Suppose $\phi \in [\phi_1, \phi(\varepsilon)]$. Then pro-democracy foreign intervention takes place whenever $\phi \leq \phi(\mu)$.

Proposition 3 shows that it is optimal for the foreign government to consolidate autocracies by funding counter-revolutionary activities and blocking universal suffrage (strategy *CR*) when the cost of revolution in social state *G* is relatively high. Conversely, proposition 4 shows that when the cost of a coup in social state *G* is relatively low, the optimal intervention strategy is to accept universal suffrage, for then to subsidize the elite's anti-democratic activities sufficiently to force workers to reduce the tax on foreign investments to zero (strategy *SE*). This is intuitive as a relatively high μ makes it cheap to subsidize counter-revolutionary activities. On the other hand, a relatively low ϕ makes it cheap to subsidize coups. This is illustrated in Figure 2. For ϕ and μ within the dark colored area, it is optimal to create a FI-friendly democracy. In contrast, for ϕ and μ within the light colored area, it is optimal to consolidate a FI-friendly autocracy.

5.2 Economic Causes of Foreign Intervention

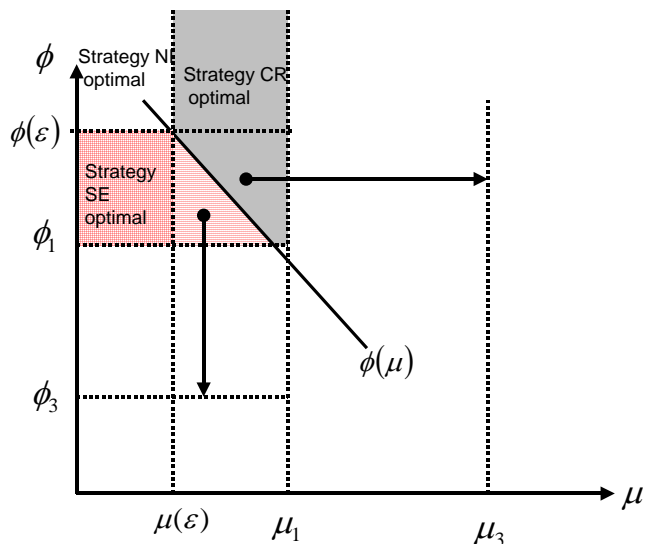
Whether foreign intervention is optimal or not, and if so, how it might manifest itself depend on the economic fundamentals of the model (A, r^*, K). These fundamentals affect the thresholds $\varepsilon_\phi, \varepsilon_\mu$ and $\phi(\mu)$. Through that they increase or decrease the set of parameter values for which each of the three strategies (*NI, SE, CR*) are optimal.²⁷ This allows use to study the economic causes of foreign intervention and the resulting effects on regime dynamics.

First, capital flight, caused by an increase in the world market interest rate, makes foreign intervention *more* likely, i.e., $\frac{\partial \varepsilon_\phi}{\partial r^*} < 0$ and $\frac{\partial \varepsilon_\mu}{\partial r^*} < 0$. The reason is that the foreign government wants to reverse the outflow of capital. This requires more lenient taxation of foreign investments and a change in the political regime. Since capital outflows under democracy induce workers to reduce the tax on foreign investments, the cheapest way of achieving this objective is to create a FI-friendly democracy, i.e., to follow intervention strategy *SE* ($\frac{\partial \phi(\mu)}{\partial r^*} > 0$).

Second, foreign intervention is *more* likely in poor than in rich country ($\frac{\partial \varepsilon_\phi}{\partial A} > 0$ and $\frac{\partial \varepsilon_\mu}{\partial A} > 0$). It is less attractive to invest in a relatively poor than in a rich country. Thus, to encourage a

²⁷See appendix A.9 for the derivation of the comparative statics.

Figure 2: Forms of Foreign Intervention



more investment friendly environment, the foreign government is more likely to intervene in poor countries.²⁸ Which of the two intervention strategies is best suited for a poor country depends on two conflicting effects. On the one hand, there is less foreign investment floating into a poor country. This induces a democratic government to lower the tax on foreign investments. This is in the best interest of the foreign government. For this reason, it is, *ceteris paribus*, more likely to support the creation of a FI-friendly democracy in a poor than in a rich country. On the other hand, workers have less to gain from a revolution in a poor country. This reduces the cost to the foreign government of keeping the elite in power by funding counter-revolutionary activities. The second effect, typically, dominates if the cost of a revolution is independent of total factor productivity.²⁹ However, if the cost of revolution is proportional to A , only the first effect remains. In this case, the foreign government tends to support democratic regimes in poor countries because it is relatively “cheap” to extract tax concessions.

Third, the foreign government is *less likely* to intervene in a society with an unequal distribu-

²⁸This result does not depend on the assumption that the costs of revolutions and coups are independent of A . It holds even if μ and ϕ were proportional to A .

²⁹More specifically, $\frac{\partial \phi(\mu)}{\partial A} > 0$ if ε is sufficiently large and $A > 2r^*$ (see appendix A.9 for the precise conditions).

tion of land ($\frac{\partial \varepsilon_\phi}{\partial K} < 0$ and $\frac{\partial \varepsilon_\mu}{\partial K} = 0$). In the absence of any foreign intervention, the land-owning elite has, *ceteris paribus*, a strong incentive to mount a coup on its own once a democracy has emerged. That reduces the incentive of the foreign government to get involved.

6 Overthrowing Democracies

When the initial political regime is autocracy, foreign intervention is either aimed at stabilizing autocracy (or preventing democratization) or at insuring that emerging democracies are foreign investment friendly. In short, it is not in the interest of foreign governments to overthrow democracy as such. In reality, foreign intervention often triggers coup d'état against democratic or semi-democratic governments. Examples of this are plentiful. We can mention the overthrow of Mossadeq in Iran, the involvement of CIA in deposing Salvador Allende in Chile, or the short-lived coup d'état against Hugo Chavez in Venezuela (see section 2 for more examples). In this section, we study when and why foreign governments might want to overthrow a democracy by financing a coup d'état.

To this end, we assume that the domestic economy, in the absence of any foreign intervention, is a consolidated democracy.³⁰ Without intervention, the foreign government's payoff, therefore, is $\frac{v_f(\tau_f^D)}{1-\beta}$. The foreign government may consider two possible intervention strategies:

1. Forced concessions (*FC*): Subsidize the elite to make a coup sufficiently credible to force the democratic government to reduce the tax on foreign investments to zero in social state G .³¹
2. Coup d'état (*CdE*): Subsidize the elite to trigger a coup d'état and a (temporary) regime transition to autocracy.

The foreign government can, as in the previous section, pay a subsidy, $\phi - \phi_3$, to the elite's "coup kitty" each time the social state is G . In this way, the threat of a coup is enhanced and

³⁰This implies that the initial political state is democracy. In this case, the coup (but not the revolution) constraint needs to be modified. In contrast to the situation in which the initial political state is autocracy, the elite might want to democratize to avoid a revolution for $\mu > \mu_1$. More specifically, for $\mu > \mu_1$, three new " μ -dependent" ϕ -cutoffs can be defined. These are all larger than the three ϕ -cutoffs defined in equations (7), (8) and (32) and increasing in μ . However, for $\mu \leq \mu_1$, the three ϕ -cutoffs continue to be defined by equations (7), (8) and (32). This is all we need for the analysis in the text. A formal proof is available upon request.

³¹This strategy is similar to strategy *SE* discussed in section 5. However, the initial political state is different in the two cases and the consequences of the strategy are different. To emphasize this, in this section we call the strategy *FC* rather than *SE*.

workers stop taxing foreign investments. The payoff associated with strategy FC is:³²

$$W_f(FC) = \frac{\psi v_f(0) + (1 - \psi) v_f(\tau_f^D) - \psi(\phi - \phi_3)}{1 - \beta}. \quad (15)$$

A coup d'état is more expensive. This is because the foreign government must pay $\phi - \phi_2$ each time the state is (G, \mathcal{D}) . The advantage of a coup d'état is that foreign investments are untaxed under autocracy. However, since $\mu < \mu_1$ by assumption, the created autocracy is unstable. The elite must extend the franchise to avoid a revolution each time the state is (G, \mathcal{A}) . The payoff associated with strategy CdE is:³³

$$W_f(CdE) = \frac{(1 - \psi - \beta(1 - 2\psi)) v_f(\tau_f^D) + \psi v_f(0)}{(1 - \beta + 2\psi\beta)(1 - \beta)} - \frac{\psi(\phi - \phi_2)(1 - \beta + \psi\beta)}{(1 - \beta + 2\psi\beta)(1 - \beta)}. \quad (16)$$

The next proposition characterizes the circumstances under which the foreign government finances a coup d'état against a democratically elected government.

Proposition 5 (*Overthrowing a democracy*) *Let*

$$\bar{\phi} = \phi_1(1 - 2\psi)\beta + \frac{\varepsilon z}{2(1 - \beta(1 - \psi))}; \quad (17)$$

$$\underline{\varepsilon} = (1 - \beta + 2\psi\beta)(1 - (1 - \psi)\beta) \frac{z\phi_1}{2}, \quad (18)$$

where ϕ_1 is defined in equation (7). Suppose that the domestic economy is initially a consolidated democracy ($\phi > \phi_1$ and $\mu < \mu_1$). Then, it is optimal for the foreign government to finance a coup d'état if and only if $\phi \in (\phi_1, \bar{\phi})$ and $\varepsilon > \underline{\varepsilon}$.

Proof See Appendix A.11 ■

The proposition shows that the foreign government finances a coup d'état if two conditions are simultaneously satisfied. First, the strategy interest must be sufficiently strong ($\varepsilon > \underline{\varepsilon}$). Second, the cost of a coup cannot be too high ($\phi \in (\phi_1, \bar{\phi})$). Under these circumstances, the foreign government is willing to help overthrow a democracy and to put the elite into power, if only for a while. This is the best way to protect strategic investments in the country. Consequently, a country, which in the absence of foreign intervention would have been a stable and consolidated

³²See appendix A.10 for details.

³³See appendix A.10 for details.

democracy, instead, experiences frequent regime changes with periods of democracy followed by coup d'état and periods of autocracy. The foreign government could, of course, go one step further. It could not only finance a coup d'état, but also fund counter-revolutionary activities once autocracy has been established. This would stabilize the autocracy and keep taxes on foreign investments permanently low. Achieving this is, however, expensive as the cost $\mu - \mu_3$ would have to be incurred in state (A, G) . This, typically, makes this alternative unattractive.³⁴ An implication, then, is that foreign intervention often causes regime instability. This observation can help explain the volatile political history of Latin America.

6.1 Economic Causes of Coups

The incentive of the foreign government to sponsor a coup d'état depends systematically on economic factors. To see how, we ask how strong the strategic interest ε has to be in order to trigger a foreign-sponsored coup d'état.³⁵ Firstly, a coup d'état is *more likely* against a poor democracy than against a rich democracy ($\frac{\partial \varepsilon}{\partial A} > 0$). This is because it is relatively unattractive to invest in a poor democracy. To create a more FI-friendly environment, the foreign government is, therefore, more likely to sponsor a coup.³⁶ Foreign-sponsored coups in poor countries such as those of Central America are examples of this.

Secondly, capital outflows, caused by a high world market interest rate, make coup d'état *more likely* ($\frac{\partial \varepsilon}{\partial r^*} < 0$). The reason is that the foreign government's incentive to improve the investment climate in the domestic economy is enhanced by capital outflow.

Thirdly, democracies in land is owned by a small elite (K is small) are *less likely* to be overthrown by a foreign-sponsored coup d'état ($\frac{\partial \varepsilon}{\partial K} < 0$). The reason is that there is less of a need for foreign intervention. This is because the local elite's incentive to mount a coup by itself is stronger in an "unequal" than in an "equalitarian" society ($\frac{\partial \phi_1}{\partial K} < 0$).

7 Conclusion

We study the influence of foreign governments on the development of political institutions in other countries. We argue that strategic foreign investments are an important driver of foreign

³⁴Formally, this strategy is strictly dominated by strategy CdE when ψ is "low" and ε is "high". A proof is available upon request.

³⁵Alternatively, we could ask what happens to the range $\bar{\phi}(\varepsilon) - \phi_1$. Since by definition $\bar{\phi}(\underline{\varepsilon}) - \phi_1 = 0$, this is equivalent to study what happens to $\underline{\varepsilon}$. The comparative statics are derived in appendix A.12.

³⁶This conclusion also holds in the case where the cost of revolutions and coups are proportional to A .

intervention. We also highlight new channels through which economic factors cause regime transitions.

Our analysis has a number of empirical implications. These contribute to the understanding of the economic origins of political institutions. For example, a worsening of the investment climate in countries that are the destination for strategy foreign investments encourages foreign governments to support regimes that create a more benign investment climate. This tend to destabilize democracies and to enhance the risk of a coup d'état. Financial help from abroad to stage a coup d'état is most likely to be directed at poor democracies. Concentrated ownership of land tends to *reduce* the risk of anti-democratic foreign interventions, including the risk of a foreign-sponsored coup d'état. The relationship between these economic factors and the development of political institutions is very different in the absence of foreign intervention. An empirical implication of this, then, is that it may be hard to identify causal links between economic factors and political institutions. This is because these links are masked by the fact that the intensity of foreign intervention and the nature of foreign investments vary across time and space. Such factors are hard to control for in regression analysis.

Foreign investment takes a somewhat special form in our analysis. Firstly, we focus on footloose foreign investments. In this context, the purpose of foreign intervention is to make the investment environment in a host country more attractive to investors, i.e., to *encourage* foreign investments. In other contexts, the purpose of intervention is to protect *existing* immobile (foreign) investments. Although our model does not apply directly to this situation, some of the insights remain valid. Immobile foreign capital represents an *ex post* inelastic tax base. The incentive of any type of government to tax foreign capital heavily is therefore strong. Suppose, however, that both workers and the elite can, with some probability, commit to the *ex ante* optimal tax structure when they are in power. Then, the reasons that we discuss for foreign intervention remains even if investments are made before the tax structure is decided, but new reasons, of course, emerge. For example, the foreign government may now want to intervene to avoid expropriation of foreign assets. It would also favor political regimes with a high degree of commitment power.³⁷ In addition, the foreign government's intervention threat may itself serve as a commitment devise. These are important issues that should be explored in future research.

Secondly, we assume that firms are domestically owned. This leaves aside the possibility of foreign ownership, including the possibility that subsidiaries of multinational corporations may

³⁷Persson and Tabellini (1994) and Aidt and Magris (2006) discuss how democracies might overcome time inconsistency problems.

be operating in the host country. However, we can analyze this case simply by assuming that some members of the elite are foreigners. In this case, the foreign government will be concerned both with the (strategic) return to foreign investment and with profits from domestic production. In a consolidated democracy, workers tax both foreign investment *and* profits heavily. The later tax gives the foreign government an extra reason to encourage regime transitions away from consolidated democracy. This effect is reinforced by the fact that the elite has less reasons to mount a coup on its own because it has less at stake.

We are, of course, aware that many foreign interventions have occurred in the context of the Cold War. Fighting or supporting communism has most certainly been a driving force behind many foreign interventions by the USA and by the USSR, respectively. These political reasons are, however, complementary to our focus on economic reasons. First, there are cases of coups d'état in which the risk of communism has been overstated as an excuse for intervention. This includes the cases of Zelaya in Nicaragua (1912), Arbenz in Guatemala (1953), Mosaddeq in Iran (1953) and Allende in Chile (1973). Second, the efforts to avoid revolutions are almost always driven by some economic motive.

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A Appendices

A.1 Deriving the optimal tax structure under consolidated democracy and autocracy

In a consolidated democracy, the median voter (a worker) solves the following fiscal problem:

$$\max_{\tau_f, \tau_L, \tau_\pi} A(1-L) - \tau_L + \tau_f I + \tau_L L + \tau_\pi K - C_L(\tau_L) - C_\pi(\tau_\pi)$$

subject to $I = z - \frac{\tau_f}{A} \geq 0$. It is clear that $\tau_L^D = 0$ and $\tau_\pi^D = \bar{\tau}_\pi$. The first order condition for τ_f is $\frac{1}{A}(Az - 2\tau_f) \leq 0$. The second order condition is satisfied. The optimal tax is $\tau_f^D = \frac{Az}{2} = \frac{A-r^*}{2}$. $A > r^*$ insures that $\tau_f^D \geq 0$ and that $I > 0$. Let $\tau^D = \{0, \bar{\tau}_\pi, \tau_f^D\}$. Per-period payoffs are

$$v_C(\tau^D, \mathcal{D}) = \frac{AL^2}{2K} - \bar{\tau}_\pi(1-K) + \frac{(z + 2Kz)zA}{8K} \quad (19)$$

$$v_W(\tau^D, \mathcal{D}) = AK + K\bar{\tau}_\pi + \frac{A}{4}z^2. \quad (20)$$

In a consolidated autocracy, a representative member of the elite solves the following fiscal problem:

$$\max_{\tau_\pi, \tau_L, \tau_f} \frac{\Pi}{K} - \tau_\pi + \tau_f I + \tau_L L + \tau_\pi K - C_L(\tau_L) - C_\pi(\tau_\pi)$$

subject to $I = z - \frac{\tau_f}{A} \geq 0$. Clearly, $\tau_\pi^A = 0$ and $\tau_L^A = \bar{\tau}_L$. The first derivative with respect to τ_f is

$$\frac{1-2K}{AK}\tau_f - \frac{(1-K)z}{K}.$$

The second derivative is positive for $K < \frac{1}{2}$. Thus, the optimal solution is either $\tau_f = 0$ or $\tau_f = Az$ (the tax that prevents any foreign investment inflow). The payoff difference is $\frac{Az^2}{2K} > 0$. Thus, the optimal tax on foreign investments is $\tau_f^A = 0$. Let $\tau^A = \{\bar{\tau}_L, 0, 0\}$. The per-period payoffs are:

$$v_C(\tau^A, \mathcal{A}) = L\bar{\tau}_L + \frac{AL^2}{2K} + \frac{Az^2}{2K} \quad (21)$$

$$v_W(\tau^A, \mathcal{A}) = K(A - \bar{\tau}_L). \quad (22)$$

A.2 Deriving a sufficient condition for democratization to avoid a revolution

If unstable democracy can prevent a revolution, so can fully consolidated democracy and semi-consolidated democracy. Thus, a sufficient condition is that unstable democracy is better for workers than a transition to socialism. Formally, we require

$$\frac{v_W(\mathcal{S})}{1-\beta} - \mu \leq v_W(\tau^{\mathcal{D}}, \mathcal{D}) + \beta W_W(\mathcal{D}). \quad (23)$$

Under the assumption that democracy is unstable, we get

$$W_W(\mathcal{D}) = \psi (v_W(\tau^{\mathcal{A}}, \mathcal{A}) + \beta W_W(\mathcal{A})) + (1 - \psi) (v_W(\tau^{\mathcal{D}}, \mathcal{D}) + \beta W_W(\mathcal{D}))$$

and $v_W(\tau^{\mathcal{D}}, \mathcal{D})$ and $v_W(\tau^{\mathcal{A}}, \mathcal{A})$ are given by equations (20) and (22), respectively. Furthermore, we have

$$W_W(\mathcal{A}) = \psi (v_W(\tau^{\mathcal{D}}, \mathcal{D}) + \beta W_W(\mathcal{D})) + (1 - \psi) (v_W(\tau^{\mathcal{A}}, \mathcal{A}) + \beta W_W(\mathcal{A})).$$

This yields two equations in two unknowns. We can solve to get

$$\begin{aligned} W_W(\mathcal{D}) &= \frac{\psi v_W(\tau^{\mathcal{A}}, \mathcal{A}) + (1 - \beta(1 - 2\psi) - \psi)v_W(\tau^{\mathcal{D}}, \mathcal{D})}{(1 - \beta(1 - 2\psi))(1 - \beta)} \\ W_W(\mathcal{A}) &= \frac{\psi v_W(\tau^{\mathcal{D}}, \mathcal{D}) + (1 - \beta(1 - 2\psi) - \psi)v_W(\tau^{\mathcal{A}}, \mathcal{A})}{(1 - \beta(1 - 2\psi))(1 - \beta)}. \end{aligned}$$

Substitution of this into equation (23) and rearranging yield equation (2).

A.3 Deriving the revolution constraint

Suppose the political state is \mathcal{A} and assume that $\mu > \underline{\mu}$. Workers never initiate a revolution when the social state is B . If workers initiate a revolution in social state G , there is a transition to socialism and they get

$$V_W(\mathcal{S}) = \frac{v_W(\mathcal{S})}{1-\beta} - \mu.$$

A revolution can be prevented by democratization under the maintained assumption that $\mu > \underline{\mu}$, but tax concessions might be sufficient. Suppose that the elite gives concessions. Clearly, these are only given if $S_t^S = G$. Let $v_W(\tau, \mathcal{A})$ be workers' per-period payoff when the elite offers τ . We have

$$V_W(G, \mathcal{A}) = v_W(\tau, \mathcal{A}) + \beta W_W(\mathcal{A}),$$

where

$$W_W(\mathcal{A}) = \psi (v_W(\tau, \mathcal{A}) + \beta W_W(\mathcal{A})) + (1 - \psi) (v_W(\tau^{\mathcal{A}}, \mathcal{A}) + \beta W_W(\mathcal{A})).$$

Solving this equation, we get $W_W(\mathcal{A}) = \frac{\psi v_W(\tau, \mathcal{A}) + (1 - \psi)v_W(\tau^{\mathcal{A}}, \mathcal{A})}{1 - \beta}$. We can write the revolution constraint as

$$\frac{v_W(\mathcal{S})}{1-\beta} - \mu \leq v_W(\tau, \mathcal{A}) + \beta W_W(\mathcal{A}).$$

Substituting the expression for $W_W(\mathcal{A})$ and rearranging yield equation (3).

A.4 Deriving the coup constraint

Suppose the political state is \mathcal{D} . For the elite, the present value starting in state (B, \mathcal{D}) is

$$V_C(B, \mathcal{D}) = v_C(\tau^{\mathcal{D}}, \mathcal{D}) + \beta W_C(\mathcal{D}), \quad (24)$$

where $W_C(\mathcal{D})$ is the continuation value of democracy and $v_C(\tau^{\mathcal{D}}, \mathcal{D})$ is given in equation (19). The continuation value of democracy for the elite is

$$W_C(\mathcal{D}) = \psi V_C(G, \mathcal{D}) + (1 - \psi) V_C(B, \mathcal{D}).$$

The present value starting in state (G, \mathcal{D}) depends on what the elite does in stage 4. Suppose that it wants to mount a coup if workers propose $\tau^{\mathcal{D}}$ in stage 3. To avoid the coup, workers might give tax concessions, but only when the social state is G . Let $v_C(\tau, \mathcal{D})$ be the one-period payoff of the elite under democracy when the tax vector is τ . We then get

$$V_C(G, \mathcal{D}) = v_C(\tau, \mathcal{D}) + \beta W_C(\mathcal{D}). \quad (25)$$

Given the tax vector τ , the elite does not initiate a coup if

$$v_C(\tau^{\mathcal{A}}, \mathcal{A}) - \phi + \beta W_C(\mathcal{A}) \leq v_C(\tau, \mathcal{D}) + \beta W_C(\mathcal{D}), \quad (26)$$

where $v_C(\tau^{\mathcal{A}}, \mathcal{A})$ is given in equation (21). The continuation value of autocracy, $W_C(\mathcal{A})$, is

$$W_C(\mathcal{A}) = \psi V_C(G, \mathcal{A}) + (1 - \psi) (v_C(\tau^{\mathcal{A}}, \mathcal{A}) + \beta W_C(\mathcal{A})). \quad (27)$$

$V_C(G, \mathcal{A})$ depends on what the elite needs to do to prevent a revolution (they always want to do something, if necessary give away the vote). For $\mu > \underline{\mu}$, democratization clearly dominates a revolution from the point of view of the elite, and it is worse than giving tax concessions. So democratization gives a lower bound on what the elite might get in state (G, \mathcal{A}) .³⁸ Suppose the elite democratizes such that

$$V_C(G, \mathcal{A}) = v_C(\tau^{\mathcal{D}}, \mathcal{D}) + \beta W_C(\mathcal{D}). \quad (28)$$

We can now rewrite the coup constraint by substituting equations (27) and (28) into equation (26) and rearrange:

$$\beta (W_C(\mathcal{A}) - W_C(\mathcal{D})) \leq \phi + v_C(\tau, \mathcal{D}) - v_C(\tau^{\mathcal{A}}, \mathcal{A}).$$

Note that

$$W_C(\mathcal{A}) - W_C(\mathcal{D}) = \psi V_C(G, \mathcal{A}) + (1 - \psi) V_C(B, \mathcal{A}) - (\psi V_C(G, \mathcal{D}) + (1 - \psi) V_C(B, \mathcal{D})). \quad (29)$$

Substitute equations (24), (25) and (28) into (29) and rearrange to get

³⁸Note that democracy could not have arisen in the first place if the elite does not democratize to avoid a revolution.

$$W_C(\mathcal{A}) - W_C(\mathcal{D}) = \frac{(1 - \psi) v_C(\tau^{\mathcal{A}}, \mathcal{A}) - (1 - 2\psi) v_C(\tau^{\mathcal{D}}, \mathcal{D}) - \psi v_C(\tau, \mathcal{D})}{1 - (1 - \psi)\beta}.$$

Substitute this back into equation (26) to get equation (6).

A.5 Proof of proposition 1

As a pre-ample to the proofs of propositions 1 and 2, we must define the strategies of the two players and the equilibrium concept. The state of the economy is either (S^S, \mathcal{A}) , (S^S, \mathcal{D}) or \mathcal{S} where $S^S \in \{G, B\}$. When the state is (S^S, \mathcal{D}) , a strategy of the elite is a function of the state and workers' choice of tax structure. When the state is (S^S, \mathcal{A}) , it is a function only of the state. The strategy determines the optimal action of the elite in each state. In state (S^S, \mathcal{D}) , the action space of the elite is to mount a coup or not, and if a coup is mounted, to decide a tax structure. In state (S^S, \mathcal{A}) , the action space of the elite consists of a decision to democratize or not, and in the absence of democratization, a decision on the tax structure. Since state \mathcal{S} is absorbing, we need not specify the strategy of the elite in this state. When the state is (S^S, \mathcal{A}) , a strategy of workers is a function of the state of the world, the elite's decision to introduce universal suffrage or not, and of the elite's proposed tax structure. When the state is (S^S, \mathcal{D}) , workers' strategy is simply a function of the state. The strategy determines the appropriate action of workers. In state (S^S, \mathcal{A}) , their action space is a decision to mount a revolution or not, while in state (S^S, \mathcal{D}) , workers need to decide on the tax structure only. A pure strategy Markov perfect equilibrium is defined as a set of strategies for workers and the elite that are best responses to each other for all possible states.

Given this, we can prove proposition 1 as follows. Assume that $\mu \geq \mu_1$. The initial political state is autocracy, i.e., $S^P = \mathcal{A}$. We can solve for the complete set of Markov perfect equilibria by backward induction. In autocracy, workers move after the elite. In state (B, \mathcal{A}) , the unique best response of workers to any τ set by the elite is not to stage a revolution. The optimal response of the elite is to set $\tau = \tau^{\mathcal{A}}$ and not to democratize. In state (G, \mathcal{A}) , workers' best response to a tax structure that makes them at least as well off as they would be by undertaking a revolution is not to stage a revolution. Their best response to a tax structure that fails to achieve this is to stage a revolution. Moreover, the best response to democratization is not to stage a revolution. Anticipating this, the elite's unique best response is to prevent a revolution by giving the minimum concession required to avoid a revolution. How this is done is described by the following lemma.

Lemma 1 *Suppose that the state is (G, \mathcal{A}) . There exists a value $\mu_3 \in (\mu_1, \mu_2)$ such that it is optimal for the elite to offer the the following tax concessions in state G :*

1. *For $\mu > \mu_2$, the revolution constraint is not binding. The elite sets $\tau^{\mathcal{A}} = (\bar{\tau}_L, 0, 0)$.*
2. *For $\mu \in [\mu_3, \mu_2]$, the revolution constraint is binding. The elite sets $\tau_f = 0$ and adopts a combination of low wage ($0 \leq \tau_L < \bar{\tau}_L$) and high profit taxes ($0 < \tau_\pi \leq \bar{\tau}_\pi$).*

3. For $\mu \in [\mu_1, \mu_3)$, the revolution constraint is binding. The elite sets $\tau_f \in (0, \tau_f^D]$, $\tau_L = 0$ and $\tau_\pi = \bar{\tau}_\pi$.

Proof The problem solved by the elite is

$$\max_{\tau_L, \tau_\pi, \tau_f} \frac{(\frac{1}{2}L^2 + \frac{1}{2}I^2)A}{K} - \tau_\pi + \tau_f I + \tau_L L + \tau_\pi K - C_\pi(\tau_\pi) - C_L(\tau_L)$$

subject to the revolution constraint (equation (3)) and $z - \frac{\tau_f}{A} \geq 0$. Substituting for I from equation (1), we can write the revolution constraint as

$$AK - \tau_L + \tau_L L + \tau_\pi K + \tau_f z - \frac{\tau_f^2}{A} - Q(\mu) \geq 0,$$

where

$$Q(\mu) = \frac{\mu(1 - \beta) + (1 - \psi)\beta v_W(\tau^A, \mathcal{A}) - v_W(\mathcal{S})}{(1 - (1 - \psi)\beta)}.$$

The first order conditions are:

$$\begin{aligned} \tau_L &: L - \xi_r + L\xi_r \leq 0 \\ \tau_\pi &: K + K\xi_r - 1 \leq 0 \\ \tau_f &: z - \frac{2\tau_f}{A} + z\xi_r - \frac{2\xi_r\tau_f}{A} + \frac{1}{K} \left(\frac{\tau_f}{A} - z \right) \leq 0 \\ \xi_r &: AK - \tau_L + \tau_L L + \tau_\pi K + \tau_f z - \frac{\tau_f^2}{A} - Q(\mu) \leq 0 \end{aligned}$$

where ξ_r is the Lagrangian multiplier on the revolution constraint. For $Q(\mu) < v_W(\tau^A, \mathcal{A})$, the unconstrained optimal tax structure $\tau^A = \{\bar{\tau}_L, 0, 0\}$ is sufficient to avoid a revolution. For $Q(\mu) \in [v_W(\tau^A, \mathcal{A}), v_W(\tau'', \mathcal{A})]$, where $v_W(\tau'', \mathcal{A}) = AK + K\bar{\tau}_\pi$ and $\tau'' = \{0, \bar{\tau}_\pi, 0\}$, we have $\tau_f = 0$. A combination of wage and profit taxes are used to satisfy the revolution constraint with

$$\tau_\pi - \tau_L = Q(\mu) - AK.$$

For $Q(\mu) \in (v_W(\tau'', \mathcal{A}), v_W(\tau^D, \mathcal{D})]$, we get that

$$\begin{aligned} \tau_f &= \frac{1}{2}Az - \frac{1}{2}\sqrt{4A^2K + K\bar{\tau}_\pi - Q(\mu) + A^2z^2} \in (0, \tau_f^D] \\ \tau_L &= 0 \text{ and } \tau_\pi = \bar{\tau}_\pi. \end{aligned}$$

For $Q(\mu) > v_W(\tau^D, \mathcal{D})$, the revolution constraint cannot be satisfied in any way by concessions. The lemma follows by noting that $Q(\mu) < v_W(\tau^A, \mathcal{A}) \Leftrightarrow \mu > \mu_2$, $Q(\mu) \in [v_W(\tau^A, \mathcal{A}), v_W(\tau'', \mathcal{A})] \Leftrightarrow \mu \in [\mu_3, \mu_2]$, $Q(\mu) \in (v_W(\tau'', \mathcal{A}), v_W(\tau^D, \mathcal{D})] \Leftrightarrow \mu \in [\mu_1, \mu_3)$ and $Q(\mu) > v_W(\tau^D, \mathcal{D}) \Leftrightarrow \mu < \mu_1$, where μ_3 is the solution to $v_W(\tau'', \mathcal{A}) = Q(\mu)$ and given by

$$\mu_3 = \frac{(1 - \psi)\beta (v_W(\tau'', \mathcal{A}) - v_W(\tau^A, \mathcal{A}))}{1 - \beta} - \frac{v_W(\tau'', \mathcal{A}) - v_W(\mathcal{S})}{1 - \beta} \quad (30)$$

■

The three types of autocracy and the associated tax structures follow immediately from this.

A.6 Proof of Proposition 2

The strategies and the equilibrium concept are defined in appendix A.5. Assume that $\mu \in [\bar{\mu}, \mu_1)$. The initial political state is autocracy, i.e., $S^P = \mathcal{A}$. We can solve for the complete set of Markov perfect equilibria by backward induction. In autocracy, workers move after the elite. In state (B, \mathcal{A}) , the unique best response of workers to any τ set by the elite is not to stage a revolution. Given that the optimal response of the elite is to set $\tau = \tau^{\mathcal{A}}$ and not to democratize. In state (G, \mathcal{A}) , a revolution cannot be prevented by any tax concessions. The best response of workers is to stage a revolution if the elite does not democratize and not to stage one if it does introduce democracy. The elite's unique best response to this is to democratize. This leads to a transition to state (G, \mathcal{D}) and workers set $\tau = \tau^{\mathcal{D}}$ immediately after the transition (there is not threat of a coup). Now consider state (B, \mathcal{D}) . In democracy, workers move before the elite. When the social state is B , the unique best response of the elite to any tax structure chosen by workers is not to mount a coup. Anticipating this, the unique best response of workers is to set $\tau = \tau^{\mathcal{D}}$.

Consider state (G, \mathcal{D}) . First, suppose that $\phi \geq \phi_1$. By construction, the coup constraint does not bind. This means that the best response to any tax structure proposed by workers is not to mount a coup. Workers' unique best response is to set $\tau = \tau^{\mathcal{D}}$. The result is fully consolidated democracy.

Second, suppose that $\phi \in [\phi_2, \phi_1)$. Given the tax structure τ' , the best response of the elite is to mount a coup if

$$v_C(\tau^{\mathcal{A}}, \mathcal{A}) - \phi + \beta W_C(\mathcal{A}) > v_C(\tau', \mathcal{D}) + \beta W_C(\mathcal{D}). \quad (31)$$

The unique best response is not to mount a coup if this condition fails. To derive the best response to this from workers, we begin by characterizing the least costly tax concession required to make the coup constraint bind.

Lemma 2 *Suppose that the political state is (G, \mathcal{D}) . There exists a value $\phi_3 \in (\phi_2, \phi_1)$ such that the least costly tax concession that avoids a coup is:*

1. *For $\phi \in (\phi_3, \phi_1)$, the coup constraint is binding. To prevent a coup, workers reduce the tax on foreign investments to $\tau_f \in (0, \tau_f^{\mathcal{D}})$ but keep $\tau_L = 0$ and $\tau_\pi = \bar{\tau}_\pi$.*
2. *For $\phi \in [\phi_2, \phi_3]$, the coup constraint is binding. Workers reduce the tax on foreign investments to zero and use a combination of high wage ($0 < \tau_L \leq \bar{\tau}_L$) and low profit taxes ($0 \leq \tau_\pi < \bar{\tau}_\pi$) to prevent a coup.*

Proof *The fiscal problem that the workers face is:*

$$\max_{\tau_f, \tau_L, \tau_\pi} AK - (\tau_L - \tau_\pi)K + I\tau_f - C_\pi(\tau_\pi) - C_L(\tau_L)$$

subject to the coup constraint given by equation (6) and $I = z - \frac{\tau_f}{A} \geq 0$. Expanding $v_C(\tau, \mathcal{D})$ in equation (6), the coup constraint reads:

$$\frac{\frac{1}{2}L^2 + \frac{1}{2}\left(z - \frac{\tau_f}{A}\right)^2}{K}A + \left(z - \frac{\tau_f}{A}\right)\tau_f + (\tau_L - \tau_\pi)(1 - K) - O(\phi) \geq 0,$$

where

$$O(\phi) = \frac{v_C(\tau^A, \mathcal{A}) - (1 - 2\psi)\beta v_C(\tau^D, \mathcal{D}) - (1 - (1 - \psi)\beta)\phi}{1 - (1 - 2\psi)\beta}.$$

The first order conditions are

$$\tau_f : z - 2\frac{\tau_f}{A} + \xi_c \left(z - \frac{2}{A}\tau_f + \frac{1}{AK}(\tau_f - Az) \right) \leq 0$$

$$\tau_L : -K + \xi_c(1 - K) \leq 0$$

$$\tau_\pi : K - \xi_c(1 - K) \leq 0$$

$$\xi_c : \frac{\frac{1}{2}(1 - K)^2 + \frac{1}{2}\left(z - \frac{\tau_f}{A}\right)^2}{K}A + \left(z - \frac{\tau_f}{A}\right)\tau_f + (\tau_L - \tau_\pi)(1 - K) - O(\phi) \leq 0,$$

where ξ_c is the Lagrangian multiplier associated with the coup constraint. Notice that $v_C(\tau, \mathcal{D})$ is a convex function of τ_f with a minimum at $\tau_f^{A\min} = \frac{A(1-K)z}{1-2K}$. Notice that $\tau_f^{A\min} > \tau_f^D$. This means that starting from $\tau_f = \tau_f^D$, workers would have to reduce τ_f to increase the elite's welfare as it is clearly not optimal to discretely increase τ_f beyond $\tau_f^{A\min}$. Since the marginal cost of reducing τ_f is zero at $\tau_f = \tau_f^D$, workers first reduce the tax on foreign investments. Once it has reached zero, they begin increasing the tax on wage income and decreasing the tax on profits. Formally, let

$$v_C(\tau', \mathcal{D}) = \frac{A}{K} \left(\frac{1}{2}(1 - K)^2 + \frac{1}{2}z^2 \right) - \bar{\tau}_\pi(1 - K)$$

and $\tau' = (0, \bar{\tau}_\pi, 0)$. For $O(\phi) \in (v_C(\tau^D, \mathcal{D}), v_C(\tau', \mathcal{D}))$, the cheapest way to avoid a coup is to set $\tau_L = 0$, $\tau_\pi = \bar{\tau}_\pi$ and

$$\tau_f = \frac{(1 - K)zA}{1 - 2K} - \frac{1}{1 - 2K}\sqrt{M} \in (0, \tau_f^D),$$

where

$$M = 2KA(1 - 2K)O(\phi) + 2KA(1 - 2K)(1 - K)\bar{\tau}_\pi + A^2K^2z^2 + A^2(K - 1)^2(2K - 1).$$

For $O(\phi) \in [v_C(\tau', \mathcal{D}), v_C(\tau^A, \mathcal{A})]$, the cheapest way to avoid a coup is to set $\tau_f = 0$ and

$$(\tau_L - \tau_\pi) = \frac{1}{1 - K} \left(O(\phi) - \frac{A}{K} \left(\frac{1}{2}z^2 + \frac{1}{2}(1 - K)^2 \right) \right).$$

Let

$$\phi_3 = \frac{\beta(1-2\psi)(v_C(\tau', \mathcal{D}) - v_C(\tau^{\mathcal{D}}, \mathcal{D}))}{1 - (1-\psi)\beta} + \frac{v_C(\tau^{\mathcal{A}}, \mathcal{A}) - v_C(\tau', \mathcal{D})}{1 - (1-\psi)\beta} \quad (32)$$

be the solution to $v_C(\tau', \mathcal{D}) = O(\phi)$. Note that $\phi_1 > \phi_3 > \phi_2$. The lemma then follows by noting that $\phi \in (\phi_3, \phi_1) \Leftrightarrow O(\phi) \in (v_C(\tau^{\mathcal{D}}, \mathcal{D}), v_C(\tau', \mathcal{D}))$, and that $\phi \in [\phi_2, \phi_3] \Leftrightarrow O(\phi) \in [v_C(\tau', \mathcal{D}), v_C(\tau^{\mathcal{A}}, \mathcal{A})]$. ■

The next lemma establishes the conditions under which giving the least costly tax concessions constitutes a best response to the elite's strategy of mounting a coup if condition (31) fails.

Lemma 3 *Suppose that $\psi < \frac{1}{2}$. Then giving the least costly tax concession to avoid a coup is a best response for workers for all $\phi \geq \phi_2$.*

Proof A sufficient condition is that workers are willing to give the maximum concession $\tau^{\mathcal{A}}$ in state G rather than accepting an unstable democracy in which there is a coup every time the state is (G, \mathcal{D}) and enfranchisement every time the state is (G, \mathcal{A}) . Let the expected present value for a worker in state (G, \mathcal{D}) when the maximum concession is given be denoted $V_W(G, \mathcal{D} | \tau^{\mathcal{A}})$. We get that

$$V_W(G, \mathcal{D} | \tau^{\mathcal{A}}) = v_W(\tau^{\mathcal{A}}) + \beta\psi V_W(G, \mathcal{D} | \tau^{\mathcal{A}}) + \beta(1-\psi) V_W(B, \mathcal{D}), \quad (33)$$

where

$$V_W(B, \mathcal{D}) = \frac{v_W(\tau^{\mathcal{D}}) + \beta\psi V_W(G, \mathcal{D} | \tau^{\mathcal{A}})}{1 - \beta(1-\psi)}$$

Substituting this into equation (33), we get

$$V_W(G, \mathcal{D} | \tau^{\mathcal{A}}) = \frac{(1 - \beta(1-\psi)) v_W(\tau^{\mathcal{A}}) + \beta(1-\psi) v_W(\tau^{\mathcal{D}})}{1 - \beta}.$$

The expected present value for a worker in state (G, \mathcal{D}) when a coup leads to unstable democracy (the most benign type of autocracy) is

$$V_W(G, \mathcal{D}) = v_W(\tau^{\mathcal{A}}) + \beta\psi V_W(G, \mathcal{A}) + \beta(1-\psi) V_W(B, \mathcal{A}), \quad (34)$$

where

$$V_W(G, \mathcal{A}) = v_W(\tau^{\mathcal{D}}) + \beta\psi V_W(G, \mathcal{D}) + \beta(1-\psi) V_W(B, \mathcal{D})$$

and

$$V_W(B, \mathcal{A}) = \frac{v_W(\tau^{\mathcal{A}}) + \beta\psi V_W(G, \mathcal{A})}{1 - \beta(1-\psi)}.$$

Note that $V_W(B, \mathcal{D}) = V_W(G, \mathcal{A})$. This implies that

$$V_W(G, \mathcal{A}) = \frac{v_W(\tau^{\mathcal{D}}) + \beta\psi V_W(G, \mathcal{D})}{1 - \beta(1-\psi)}.$$

Substitution in equation (34) gives

$$V_W(G, \mathcal{D}) = \frac{(1 - \beta(1 - \psi))}{(1 - \beta)(1 - \beta(1 - 2\psi))} v_W(\tau^{\mathcal{A}}) + \frac{\beta\psi}{(1 - \beta)(1 - \beta(1 - 2\psi))} v_W(\tau^{\mathcal{D}})$$

We seek a condition such that

$$V_W(G, \mathcal{D} | \tau^{\mathcal{A}}) > V_W(G, \mathcal{D})$$

The difference $V_W(G, \mathcal{D} | \tau^{\mathcal{A}}) - V_W(G, \mathcal{D})$ can be written as

$$\left(\frac{\beta(1 - 2\psi)(1 - \beta(1 - \psi))}{(1 - \beta)(1 - 2\psi)} \right) \left(\frac{v_W(\tau^{\mathcal{D}})}{1 - \beta} - \frac{v_W(\tau^{\mathcal{A}})}{1 - \beta} \right).$$

Since $v_W(\tau^{\mathcal{D}}) > v_W(\tau^{\mathcal{A}})$ this expression is positive iff $\frac{(1-2\psi)}{(1-\beta(1-2\psi))} > 0 \Leftrightarrow \psi < \frac{1}{2}$ ■

Since our maintained assumption is that $\psi < \frac{1}{2}$, we conclude from the lemma that it is a best response for workers to give concessions when this is necessary and sufficient to avoid a coup, i.e., for $\phi \in [\phi_2, \phi_1]$. This gives rise to the two different types of semi-consolidated democracy listed in the proposition.

Thirdly, suppose that $\phi < \phi_2$. Notice that $\phi < \phi_2 \Leftrightarrow O(\phi) > v_C(\tau^{\mathcal{A}}, \mathcal{A})$. This implies that no matter what tax structure workers propose, the unique best response of the elite is to stage a coup. The society moves to state (G, \mathcal{A}) where the elite sets $\tau = \tau^{\mathcal{A}}$ (no threat of revolution immediately after a coup). Following that players follow the optimal strategies for state (\cdot, \mathcal{A}) specified above. This implies that the elite democratizes each time the state is (G, \mathcal{A}) . The society becomes an unstable democracy.

A.7 Deriving $W_f(NI)$

Strategy NI yields:

$$W_f(NI) = \psi(v_f(\tau_f^{\mathcal{D}}) + \beta W_f(\mathcal{D})) + (1 - \psi)(v_f(0) + \beta W_f(NI)), \quad (35)$$

since the domestic economy becomes a consolidated democracy the first time the social state is G . As $W_f(\mathcal{D}) = v_f(\tau_f^{\mathcal{D}}) + \beta W_f(\mathcal{D})$, we obtain $W_f(\mathcal{D}) = \frac{v_f(\tau_f^{\mathcal{D}})}{1 - \beta}$. Substituting this into equation (35) yields equation (9)

A.8 Deriving $W_f(SE)$

Strategy SE yields

$$W_f(SE) = \psi(v_f(\tau_f^{\mathcal{D}}) + \beta W_f(\mathcal{D})) + (1 - \psi)(v_f(0) + \beta W_f(SE)). \quad (36)$$

The expected value of democracy is

$$W_f(\mathcal{D}) = \psi(v_f(0) + (\phi - \phi_3) + \beta W_f(\mathcal{D})) + (1 - \psi)(v_f(\tau_f^{\mathcal{D}}) + \beta W_f(\mathcal{D})).$$

Solving this equation yields

$$W_f(\mathcal{D}) = \frac{\psi(v_f(0) - (\phi - \phi_3)) + (1 - \psi)v_f(\tau_f^{\mathcal{D}})}{1 - \beta}. \quad (37)$$

Substituting equation (37) into equation (36) yields equation (10).

A.9 Deriving the comparative statics with respect to ε_ϕ and ε_μ

Recall that $\varepsilon_\phi = \frac{\phi_1 - \phi_3}{z} A$ and $\varepsilon_\mu = \frac{(\mu_3 - \mu_1)(1 - (1 - \psi)\beta)A}{z} A$, where ϕ_1 and ϕ_3 are defined in equations (7) and (32) and μ_1 and μ_3 are defined in equations (4) and (30). First, we find

$$\frac{\partial \varepsilon_\phi}{\partial r^*} = \frac{(1 + 2\psi\beta - \beta)(2K - 3)A}{8(1 - \beta + \psi\beta)K} < 0$$

as $K < \frac{1}{2}$ and

$$\frac{\partial \varepsilon_\mu}{\partial r^*} = -\frac{A(1 - (1 - \psi)\beta)^2}{4(1 - \beta)} < 0.$$

Second, we find

$$\begin{aligned} \frac{\partial \varepsilon_\phi}{\partial A} &= \frac{(r^* - 2A)(1 + 2\psi\beta - \beta)(2K - 3)}{8(1 - \beta + \psi\beta)K} > 0 \\ \frac{\partial \varepsilon_\mu}{\partial A} &= -\frac{(1 - (1 - \psi)\beta)^2(r^* - 2A)}{4(1 - \beta)} > 0 \end{aligned}$$

because $A > r^*$ and $K < \frac{1}{2}$. Third, we find

$$\frac{\partial \varepsilon_\phi}{\partial K} = \frac{3(r^* - A)(1 + 2\psi\beta - \beta)A}{8(1 - \beta + \psi\beta)K^2} < 0$$

because $A > r^*$ and

$$\frac{\partial \varepsilon_\mu}{\partial K} = -\frac{1}{4(1 - \beta)} < 0.$$

To establish how the choice between the two intervention strategies is affected by r^* , A and K , we need to study how $\phi(\mu)$ is affected. First, calculate

$$\frac{\partial \phi(\mu)}{\partial r^*} = \frac{(r^* - A)(3 - 2K)\beta(1 - 2\psi)}{(1 - (1 - \psi)\beta)4AK} + \frac{(1 - \psi\beta)}{A^2\beta\psi}\varepsilon$$

The first term is negative and the second is positive. Evaluate

$$\left. \frac{\partial \phi(\mu)}{\partial r^*} \right|_{\varepsilon_\phi} = \frac{(r^* - A)(2K - 3)(2\psi^2\beta^2 + (1 - \beta)(1 + \psi\beta))}{8(1 + \beta(1 - \psi))AK\psi\beta} > 0,$$

where $\varepsilon_\phi = \frac{(3-2K)A^2(1-\frac{r^*}{A})(1-\beta+2\psi\beta)}{8K(1+\beta(1-\psi))}$. We conclude that

$$\frac{\partial \phi(\mu)}{\partial r^*} > 0 \text{ for all } \varepsilon > \varepsilon_\phi.$$

Second, calculate

$$\begin{aligned} \frac{\partial \phi(\mu)}{\partial A} &= \frac{(A - r^*)(A + r^*)(3 - 2K)\beta(1 - 2\psi)}{8KA^2} \\ &\quad - \frac{(1 - (1 - \psi)\beta)}{\psi\beta} \frac{K}{1 - \beta} - \frac{(1 - \psi\beta)(2r^* - A)\varepsilon}{\beta\psi A^3}. \end{aligned}$$

This is positive for $A > 2r^*$ and

$$\varepsilon > \frac{8A^3K^2(1 - \beta + \psi\beta) + A\beta^2\psi(1 - 2\psi)(1 - \beta)(3 - 2K)(r^{*2} - A^2)}{8(1 - \beta\psi)(1 - \beta)(A - 2r^*)K}.$$

A.10 The payoff associated with strategy *FC* and *CdE*

To push the democracy to be foreign investment friendly, , thus reducing τ_f to 0. Strategy *FC* yields

$$W_f(FC) = \psi[v_f(0) - (\phi - \phi_3) + \beta W_f(FC)] + (1 - \psi)[v_f(\tau_f^D) + \beta W_f(FC)]$$

as the foreign government must pay the subsidy $\phi - \phi_3$ each time the social state is G . Solving this equation yields equation (15). The payoff to strategy *CdE* is

$$W_f(CdE) = \psi[v_f(0) - (\phi - \phi_2) + \beta W_f(\mathcal{A})] + (1 - \psi)[v_f(\tau_f^D) + \beta W_f(CdE)] \quad (38)$$

as to overthrow a consolidated democracy and create an unstable autocracy (democracy), the foreign government pays $(\phi - \phi_2)$ each time the state is (G, \mathcal{D}) . Note that the value of having autocracy is

$$W_f(\mathcal{A}) = \psi[v_f(\tau_f^D) + \beta W_f(CdE)] + (1 - \psi)[v_f(0) + \beta W_f(\mathcal{A})].$$

We note that the elite democratizes each time the state is (G, \mathcal{A}) since, by assumption, $\mu < \mu_1$ and implements $\tau_f = 0$ when the state is (B, \mathcal{A}) . Solving for $W_f(\mathcal{A})$ and substituting the result into equation (38) yield after some manipulations equation (16).

A.11 Proof of Proposition 5

Firstly, note that

$$\frac{\partial (W_f(CdE) - W_f(FC))}{\partial \phi} = \frac{\beta \psi^2}{(1 - \beta)(1 - \beta + 2\psi\beta)} > 0.$$

Find ϕ such that $W_f(CdE) - W_f(FC) = 0$

$$\underline{\phi} = \phi_3 + (v_f(\tau_f^{\mathcal{D}}) - v_f(0)) \frac{(1 - 2\psi)}{\psi} + \frac{(1 - \beta(1 - \psi))}{\psi\beta} (\phi_3 - \phi_2).$$

For $\psi < \frac{1}{2}$, $\underline{\phi} < \phi_3$. This implies that strategy CdE is always better than strategy FC for $\phi > \phi_1 > \phi_3$. Next, the value of ϕ at which the foreign government is indifferent between strategy CdE and not intervening is

$$\bar{\phi} = \phi_2 + \frac{v_f(0) - v_f(\tau_f^{\mathcal{D}})}{1 - \beta(1 - \psi)} = \phi_1(1 - 2\psi)\beta + \frac{\varepsilon z}{2(1 - \beta(1 - \psi))}.$$

Coup d'état is better than no intervention for $\phi < \bar{\phi}$ as $W_f(CdE)$ is decreasing in ϕ . Moreover,

$$\bar{\phi} > \phi_1 \Leftrightarrow \varepsilon > (1 - \beta + 2\psi\beta)(1 - \beta + \psi\beta) \frac{z\phi_1}{2} \equiv \underline{\varepsilon}.$$

Thus, a necessary and sufficient condition for coup d'état to be the preferred option is that $\varepsilon > \underline{\varepsilon}$ and $\phi \in (\phi_1, \bar{\phi})$.

A.12 Comparative statics with respect to ε

Let $v = \frac{1}{2}(1 - \beta + 2\psi\beta)(1 - \beta + \psi\beta)$. Using equation (18), we get $\frac{\partial \underline{\varepsilon}}{\partial A} = v \left[\frac{\partial \phi_1}{\partial A} z + \phi_1 \frac{\partial z}{\partial A} \right] > 0$; $\frac{\partial \underline{\varepsilon}}{\partial r^*} = v \left[\frac{\partial \phi_1}{\partial r^*} z + \phi_1 \frac{\partial z}{\partial r^*} \right] < 0$ and $\frac{\partial \underline{\varepsilon}}{\partial K} = v z \frac{\partial \phi_1}{\partial K} < 0$.