

UC Irvine

Symposium: Democracy and Its Development 2005-2011

Title

Measuring the Presidential Risk Factor: A Comment on Cheibub's Presidentialism, Parliamentarism, and Democracy

Permalink

<https://escholarship.org/uc/item/8r6956r4>

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Publication Date

2008-05-29

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It is well known that presidential democracies have historically had higher mortality rates than parliamentary democracies (Linz 1990a,b; Przeworski et al. 2000; Cheibub 2007).ⁱ A number of arguments, most derived from the seminal work of Juan Linz, have been advanced about why this is so. Recently Cheibub (2007) has joined those who attempt to explain why presidential systems have been more likely to slide into authoritarianism—the definitional consequence of democratic failure. In this note I critically discuss two aspects of Cheibub’s analysis.

First, Cheibub convincingly argues that there is not evidence that presidential systems produce fewer legislative coalitions, nor that they produce more legislative gridlock; he thus addresses two of Linz’s causal mechanisms for democratic breakdown. That being said however, Cheibub says little about another argument often made for the relative longevity of parliamentary systems, namely, the power-sharing thesis introduced by Lijphart (1977) and Linz (1990a,b); and subsequently formalized by Przeworski (1992). I argue that the power-sharing argument has not been directly rebutted by Cheibub and remains plausible, motivating a reconsideration of the evidence.

Second, empirical work tracking the number of countries with various democratic features has shown that, in the aftermath of the twentieth century’s major wars, the number of regimes with specific democratic elements has tended to surge and then recede (cf. Huntington 1991; Gates et al, 2006; Svobik 2007). Of more specific relevance to Cheibub’s study, which focuses on 1945-2002, is that the end of the Cold War introduced a particular breed of fragile democracy into the population of ostensibly democratic states, especially in Central Europe, Latin America, and Africa. Several scholars have commented on the apparent weakness of these fledgling democracies (e.g., Diamond 1999, Zakaria 1997); many have pointed specifically to an increased incidence of “electoral authoritarianism” during this period (Schedler 2006; Beaulieu and Hyde, 2007).

Below, I argue that the vision of “self-enforcing” democratization found in, for example, Przeworski (1992) and Acemoglu and Robinson (2007)—wherein democracy represents an organic balance of power between society’s actors, arrived at through a potentially long process of political give and take—is relevant for understanding an important difference between the modal democracies born during and after the Cold War. Given the logic of the self-enforcing democratization literature, and the evidence of an increased incidence of “electoral authoritarianism” in the Cold War period, I demonstrate that we should expect a much smaller estimated impact of the presidential risk factor after the Cold War than during it, even if presidentialism’s effect on breakdown remains constant.

Following my theoretical discussion, I present a reappraisal of Cheibub’s data that supports my argument: empirically, under Cheibub’s specification, presidentialism has a

significant (positive) effect on regimes' propensity to become authoritarian, when one confines the sample to democracies born prior to the end of the Cold War (1989); but there is no discernible effect for democracies born after (1990-02). My findings directly refute Cheibub's claim that the data "clearly show that presidentialism cannot be causally related to the breakdown of democratic regimes" (p. 15). Based on a reading of the democratization literature, I draw two conclusions: (1.) evidently, presidentialism increases the risk of authoritarian backsliding for countries that are meaningfully democratic—in a sense discussed below—but its impact in less consolidated democracies is unclear, and (2.) the power-sharing thesis (predicting the greater longevity of parliamentary systems) is indirectly supported by a straightforward research design (Cheibub's).

Theoretical reasons to question Cheibub's Conclusion

Cheibub's Argument

The debate over the relative virtues of presidential and parliamentary executive institutions is long-standing. Some have claimed that a presidential executive increases a democracy's propensity to collapse (e.g., Lijphart 1977; Linz 1990a,b) others argue that it does not make a difference. Recently Cheibub (2007) has stoked the presidential-parliamentary debate by claiming that presidential institutions are not inherently destabilizing. A schematic of his argument is found in Figure 1. First note that Cheibub contends that the well-known empirical correlation between presidential executives and democratic breakdown is spurious. For Cheibub, the real political risk factor for democratic governments is the presence of a "military legacy." Thus, Cheibub explains the fact pattern in the following way: (a) presidential democracies tend to be born more often from military dictatorships than are parliamentary democracies; and (b) democracies born from military dictatorships are more prone to lapse into dictatorship, whether they are presidential or parliamentary. It is worth noting that Cheibub does not argue that there is a causal relationship between military legacies and presidential executives. On the contrary, according to Cheibub, the fact that presidencies have disproportionately followed military dictatorships reflects Latin American dictators' historical predilection for presidential regimes rather than a more general systematic tendency of military dictatorships to prefer presidentialism.

Cheibub's theory produces clear testable hypotheses that he tests using data covering the years 1946-02. His test is a straightforward research design of the following form: Letting B_{it} be an indicator that takes the value 1 in the event that country i with a specific set of democratic characteristics—more on which below—lapses into authoritarianism in year t ; P_{it} indicate the presence of a presidential executive; and X_{it} be a vector of control variables for the i th democratic regime in period t ; Cheibub models the probability of a breakdown as (1.) $P\{B_{it}=1\} = \Phi[\gamma_0 + \gamma_1 P_{it} + \delta' X_{it}]$ (2007, p. 139). Cheibub's published results are reproduced in columns I-III of Table 1 in the appendix. Cheibub's ancillary conclusions are that: (1.) The well-corroborated negative relationship between per capita income and democratic stability is strongly supported in his data, (2.) having had a military presence in the last authoritarian regime is a highly significant risk-factor, and (3.) there is not evidence of a Latin American fixed effect. With respect to

measuring the presidential risk factor, his main objective, Cheibub finds no effect.

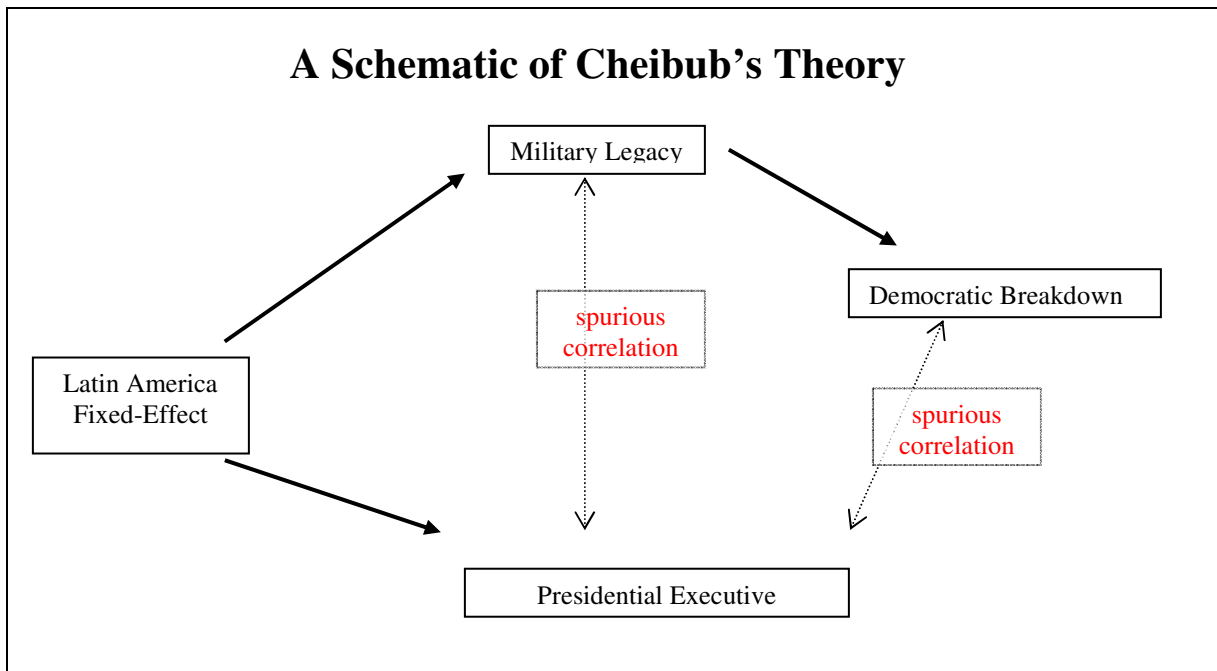


Figure 1

In this note I critically assess Cheibub's conclusion about the risk of presidential institutions on both theoretical and empirical grounds. Cheibub's theory and econometric specification focus on domestic factors—GDP, presidential institutions, military legacies—leaving aside international influences on democratization. Moreover, he focuses on several of the causal paths argued by Linz to connect presidentialism to breakdown, while leaving one in particular largely unexplored. Let's consider each of these points in turn.

A Power-sharing Model of Democratic Breakdown

Cheibub's hypothesis—that military legacies cause breakdown but a presidential executive is not a risk factor—ignores a well-known argument that focuses on the power-sharing features of various democratic institutions. In the context of the presidentialism-parliamentarism debate, this theory has been advanced by Linz (1990) and partially formalized by Przeworski (1991) and Weingast (1997). The central idea resonates with other work in the broader literature on democratization by authors such as Acemoglu and Robinson (2007).

I begin by describing the ideas in Przeworski (1992)—and their recasting in Weingast (1997)—which provide a natural framework for thinking game theoretically about the process of democratization. In the world conjured by these authors, competing factions—thought of as veto players on the democratization process—meet repeatedly an infinite number of times to play an “elections-or-conflict” stage game.ⁱⁱ In Przeworski's framework, democratization takes place when all actors' continuation payoffs under democracy exceed their continuation payoffs under civil war (the presumed consequence

of a democratic breakdown). This condition is precisely Przeworski's notion of "self-enforcing democracy.

Przeworski (1992) clearly understood—albeit, in broad terms—how the Linzian power-sharing argument fit into his own theory. He writes (p. 34):

Linz has developed a number of arguments in favor of parliamentary, as opposed to presidential, systems. I am particularly persuaded by his observation that presidential systems generate a zero-sum game, whereas parliamentary systems increase total payoffs.ⁱⁱⁱ The reasons are the following. In presidential systems, the winner takes all: He or she can form a government without including any losers in the coalition. In fact, the defeated candidate has no political status, as in parliamentary systems, where he or she becomes the leader of the opposition. Hence... under *ceteris paribus* conditions (under which $W+L=T$ is the same in both systems), the value of victory, W , is greater and the value of defeat, L , is smaller under presidential than under parliamentary systems.

In the same footnote Przeworski suggests a second, novel, power-sharing-esque argument for parliamentary institutions.

Assume that political actors discount the future at the rate of r per annum. Under the presidential system, the term is fixed for some period ($t=PRES$), and the expected value of the next round is $r^{PRES}[pW + (1-p)L]$. Under the parliamentary system, the winner governs only as long as he or she can maintain sufficient support in the parliament, say for period $t=PARL$, so that the expected value of the next round is $r^{PARL}[pW + (1-p)L]$. Elementary algebra will show that unless the tenure expected under parliamentarism is notably longer than under presidentialism, the loser has a greater incentive to stay in the democratic game under parliamentarism.^{iv}

The gist of the "power-sharing" thesis—as it has been articulated in the presidential/parliamentary debate—is this: Control of the government is analogous to splitting a pie and executive institutions determine the extent to which the pie can be split. Executive institutions can be placed along a spectrum according to the extent of their "winner-take-allness." Parliaments, it is argued, make the democracy pie more divisible—features such as autonomous and orthogonal ministries allow for more than one party to enjoy a piece of the pie. This putative feature of parliamentary systems increases their average longevity, so the argument goes, because it allows for the possibility of spreading around the spoils of consolidated democratization in ways that are simply infeasible in purely majoritarian systems. According to the power-sharing argument, presidential systems are inherently "winner-take-all," and do not allow for (non-degenerate) divisions of the government pie following any given election.^v It is precisely this ability to divide the government pie that is presumed to increase the life expectancy of parliamentary democracies because it increases the likelihood of co-opting, via constitutional guarantees, those players who might otherwise be inclined to subvert democracy.

Below, I characterize the equilibria wherein all factions prefer democracy to fighting and how this depends on (1.) the conditions of the conflict environment as well, for the first time, (2.) the set of feasible democratic constitutions. My model provides

more institutional structure than Przeworski (1992) and contains his model as a special case. The added features of my model illuminate some ambiguous aspects of the power-sharing literature (e.g., Lijphart 1977). In particular, it points out a distinction between two institutional forms that have been frequently conflated in the literature, namely, “power-sharing” versus “proportional” institutional forms. Both of these types are shown to reduce the likelihood of conflict.

A Model

For the purposes of exposition, I consider the case of $N=2$ factions. It is straightforward to generalize my arguments for a generic N . An extensive form representation of the stage game appears in Figure 1. At the first node t_1 of each stage game the factions can either go down the democracy path or subvert democracy by engaging in a *coup d’etat*, civil war or other nondemocratic behavior. I will refer to this second path as the *Civil War Lottery*. If the players enter the *Civil War Lottery*, each player receives the full government pie in perpetuity—worth $\pi=1$ per period—if they win the war lottery, which they do with probability p_i . The cost of waging a civil war is c_{war} . Hence, for each player the expected value of either player choosing *war* is precisely $p_i(1-\delta)^{-1} - c_{\text{war}}$.

If on the other hand the actors all choose to travel down the democracy path in stage game t , *Nature* draws a distribution of vote shares from a common knowledge distribution $f(\bullet)$ and each player observes the outcome of the election. Having decided to hold elections and observed its outcome, the players are faced with another decision in period t_3 . Each player can either abide by the outcome of the election, in which case each player i receives a period t *Democracy Payoff* of D_{it} , or they can choose to take non-democratic action and face the *Civil War Lottery* for a diminished pie.

The *Democracy Payoff* individual i realizes in the t th period when all parties abide by the outcome of an election is a function of the constitutional parameters which govern the period t election ($\{a_{it}\}, b_t, c_t$)—more on which below; the distribution of realized vote shares in that period $s_t=(s_{1t}, s_{2t})$; and the cost of campaigning in an election, c_{elec} . I define Player i ’s utility in period t is as $D_{it}(\{a_{it}\}, b_t, c_t) = (a_{it} + b_t s_{it} + c_t \{s_{it} > .5\})\pi - c_{\text{elec}}$.

The parameters ($\{a_{it}\}, b_t, c_t$) define my stylized representation of period t ’s power-sharing constitution. a_{it} (*viz.* the **power-sharing term**) represents the fixed share of the pie faction i receives regardless of the outcome of the election. b_t (the **proportionality term**) represents the rate at which each faction’s share of the pie increases with the seat share in period t , and c_t is a **majoritarian term** earned by the faction with the largest vote share.^{vi} The fixed-pie conception of government membership is found in Przeworski (1992) and Weingast (1997)—the difference between my model and theirs is that theirs contains no institutional detail whatever.

The meaning of the constitutional parameters thus explained, I define a **constitution** as an infinite dimensional vector whose t^{th} element is given by ($\{a_{it}\}, b_t, c_t$). For expositional purposes I will focus on **constant constitutions**—those whose parameters do not change from period to period. Note, we can represent constant constitutions as ($\{a_{it}\}, b_t, c_t$) = ($\{a_i\}, b, c$) for some constants $\{a_i\}$, b , and c . Non-constant constitutions would include provisions such as sunset clauses.

Recall the size of the fixed pie has been normalized to unity, $\pi = 1$. This normalization implies the following accounting identity:

$$\sum_{i=1}^2 [a_i + bs_{it} + c \{ s_{it} > .5 \}] = a_1 + a_2 + b + c = 1 \text{ for all } t.$$

Observation 1: *Both parties choosing war is always an equilibrium. For some constitutional and civil war parameters, peaceful equilibria are also possible.*

The existence of the nondemocratic equilibrium is demonstrated by considering the situation from the perspective of either faction when its opponent is playing “war.” The faction does not gain anything by playing “election,” hence (war, war) is always an equilibrium.^{vii} The intuition for the second type of equilibrium is that—given certain exogenous factors and an amenable set of democratic institutions—then all may prefer democracy to fighting. Consider, for example, if $c_{war} = \infty$ and $c_{elec} < \infty$, then both parties will abide by the electoral result, for any democratic constitution.

The appropriate solution concept for this setting—and the one implicit in the Przeworski model—is subgame perfect Nash equilibrium (SPNE). SPNE requires that actors will behave in a manner consistent with the equilibrium regardless of which node they find themselves at. In the current framework, a democratic SPNE is one in which the parties always agree to hold elections and abide by their outcomes.

To see if democracy can exist in a given environment, we put ourselves inside the mind of an electoral loser who asks himself: “What is the continuation value of sticking with democracy?” The answer to this question depends on the future equilibrium actions of the actors, i.e. the particular SPNE being played. The well-known Folk Theorem tells us that the set of potential SPNE is potentially large—depending on which punishment strategies we are willing to admit (Fudenberg and Maskin, 1986). Thus, from a mechanism design standpoint, the problem of democratization is writing a constitution such that the admissible punishments are sufficient to ensure perpetual compliance with democratic outcomes.

In this note I focus on discovering the democratic SPNE that are supported by a Grim Trigger punishment strategy—arguably the most natural and readily implemented punishment technology in this setting.^{viii} When both players are playing Grim Trigger strategies, Player j ’s actions in period t are $w_{ij} = (w_{ij1}, w_{ij4})$, where $w_{ijk} = 0$ if j chooses to play democratically in subperiod t_k and $= 1$ if j chooses to go to war in subperiod t_k . The Grim Trigger strategy stipulates playing $w_{ijk} = 0$ at the beginning of the game ($t=1$) and continuing to do so unless the other player deviates, in which case both players play $w_{ijk} = 1$ thereafter.

For convenience, I refer to the tuple $(c_{elec}, p, c_{war}, \delta)$ as a **conflict environment**. Now we are in a position to formally state an obvious but important point—essentially the one made previously by Linz (1990) and Przeworski (1992).

Proposition 1 [Majoritarianism is a Risk Factor]: *The set of conflict environments which admit a democratic equilibrium via a non-majoritarian constitution ($c < 1$) is larger than the set of conflict environments which admit a democratic equilibrium via a majoritarian constitution ($c = 1$). Thus, increasing a constitution’s non-majoritarian elements increases the likelihood of self-enforcing democratization.*

The next proposition points out that the literature’s conflation of the “power-sharing” and “proportional” institutional forms may have important consequences in some environments.

Proposition 2 [Proportionality vs. Powersharing]: *There are conditions—precisely defined in the appendix—when increasing the “proportionality” of the constitution and decreasing its “power-sharing” will reduce the probability of conflict. Likewise, there are conditions—given in the appendix—when increasing power-sharing and decreasing proportionality will reduce conflict.*

The idea that democracy exists if and when society’s power players have arrived at a mutually agreeable set of democratic institutions for sharing political power is precisely the perspective of, for instance, Acemoglu and Robinson (2007)—who focus on democracy as a codification of power-sharing comprises to previous conflicts between competing elite and non-elite groups. The overwhelming picture in these works is that successful historical democratizations have benefited from a fortuitous organic process: Society’s actors, through a large number of repeated interactions, have arrived on a set of democratic equilibria that all prefer to conflict.

The “Structural Break Argument”

Cheibub’s finding of a nil presidential effect implies one of two mutually exclusive possibilities: (1.) Power-sharing does not increase democracies’ life-expectancy (or, is swamped by other countervailing mechanisms), or, (2.) an independent factor has prevented Cheibub from correctly measuring the deleterious effect of presidential institutions. In the previous section I resurrected the power-sharing argument and cast doubt on possibility (1.). In this section, I give a sensible reason why (2.) might obtain.

Below, I argue that a potential source of difficulty for Cheibub is that his time-series data consist of one era in which nondemocratic countries had systematic inducements to adopt democratic practices, if only nominally, and another era in which they received no such inducements. Problematically, Cheibub’s econometric specification does not account for these important differences.

To get a feel for the problem, contrast the well-known trajectory of Britain—Acemoglu and Robinson’s (2007) canonical example of an organic democracy—with two other observations in Cheibub’s dataset, Sierra Leone in 1996 (a presidential regime) and Nepal in 2001 (a parliamentary regime).

On March 23, 1991, the Revolutionary United Front (RUF), led by Foday Sankoh and backed by Charles Taylor, entered a district in the Eastern Province of Sierra Leone and attacked villages there. The Sierra Leone government was unable to put up significant resistance and soon, reportedly employing child soldiers and brutal tactics against the civilian population, the RUF controlled much of the Eastern Province.

Thirteen months after the initial violence, apparently in response to the government’s inability to suppress the RUF, a group of young military officers led by a 25-year old Captain, Valentine Strasser, launched a military *coup* which sent Sierra Leon’s president into exile and replaced his regime with the National Provisional Ruling Council (NPRC) with Colonel Yahya Kanu, as its chairman. Kanu was assassinated by

unknown gunmen shortly after he took office and Strasser eventually took over as the chairman of the NPRC. Following a series of purgings, Strasser eventually gained some measure of control over the state apparatus.

The NPRC proved to be nearly as ineffectual in repelling the RUF as the government it replaced however: By 1995 the NPRC's military campaign had become so dire that the council found it necessary to hire several hundred mercenaries from the private firm Executive Outcomes to keep the rebels from taking Freetown, Sierra Leone's capital. Within a month they had driven RUF fighters back to enclaves along Sierra Leone's borders, but, by then, Strasser's political support had evaporated and he was himself ousted in a *coup* led by his minister of defence, Brigadier Julius Maada Bio. Bowing to international pressures Bio transferred power to a democratically elected civilian, Alhaji Kabbah, which allowed Sierra Leone to enter Cheibub's dataset in 1996. This putatively democratic regime came to an end a year later, and was coded as a democratic failure, when another insurgent group ousted President Kabbah.^{ix}

Or consider the post-Cold War regime in Nepal, which entered Cheibub's dataset in 1991 and exited in 2001. While Nepal has some institutional features in common with Britain, another parliamentary regime, in important ways, it seems to have more in common with Sierra Leone, a presidential regime. In particular, though Nepal and Sierra Leone may have been democracies in a particular technical sense, in hindsight, neither seemed to possess the type of organic—and stable—democratic institutions that evolved in Britain. Unfortunately for Cheibub's analysis, Sierra Leone and Nepal may not be the only such cases. Consider first the empirical studies following Huntington (1991) which track “waves” in the number of regimes with various democratic features. The most recent work in this area, by Gates et al (2007) and Svobik (2007), suggests that there is an important distinction to be drawn between democracies which are “consolidated” (in a somewhat under-defined sense) and other democracies that we might call “transitional.”

To the general notion that international events affect democratic waves, I add a more specific argument about how the democracies born after the Cold War differ from those born 1945-90: During the Cold War, a higher percentage of nascent democracies emerged via a domestic processes. After, as the work of Zakaria (1997), Schedler (2006) and Beaulieu and Hyde (2007) point out, a higher percentage of new, ostensibly democratic reasons emerge with shallow domestic reasons.

Since Cheibub's classificatory rule for defining democracies—the widely used protocol developed by Przeworski, Alvarez, Cheibub, and Limongi (2000, henceforth PACL)—only checks to see that certain electoral conditions are met, as I spell out formally below, Cheibub's research design is compromised. Ideally, from a research design perspective, one would want to account for how “self-enforcing” a democracy is. But Cheibub's classificatory rule—the well-known PACL protocol—does not distinguish between countries that have a minimal set of democratic features. Britain and Sierra Leone are treated equally.

A solution to this problem would be to code each democracy as either “synthetic” or “organic” and apply the appropriate econometric specification—but that task is beyond the scope of this note. In my reanalysis of Cheibub's findings, I adopt another strategy: I (1) make the bald assumption that the post-Cold War democracies were, as a whole, less “organic” than the previous era's, and then (2.) estimate the presidential effect separately before and after the Cold War.

A Reappraisal of the Evidence

In this section I do two things: (1.) I present my theoretical predictions—which account for the evidence of “electoral authoritarianism” in the more recent data—and (2) present my empirical tests of the predictions. My findings directly refute Cheibub’s claims about parliamentary systems’ propensity to curtail undemocratic competition during the Cold War, and also provide indirect evidence for the “power sharing” arguments described above.

My Theoretical Predictions

Define an indicator variable, Z_{it} , which takes the value 1 if country i has a “self-enforcing” democracy in period t .^x Now, one can re-write Equation 1, the probability of democratic breakdown, as:

$$(2.) P[B_{it} = 1] = \Phi[\gamma_{pres}^o Z_{it} P_{it} + \gamma_{parl}^o Z_{it} (1 - P_{it}) + \gamma_{pres}^s (1 - Z_{it}) P_{it} + \gamma_{parl}^s (1 - Z_{it}) (1 - P_{it}) + \delta' X_{it}]$$

where the independent variables are defined as follows: $P_{it}=1$ if the focal democratic regime is presidential, and 0 otherwise; $Z_{it}=1$ if the focal regime is an “organic” democracy, and 0 otherwise; and $X_{it} \equiv \{GDP_{it}, LatAm_{it}, Military\ Legacy_{it}\}$ is a vector of controls consisting of per capita GDP, a Latin American indicator, and an indicator evaluating to 1 if the military played a role in the country’s most recent authoritarian regime.

The terms in the score function have the following interpretations. The last term, $\delta' X_{it}$, is the vector of controls suggested by Cheibub. These controls are per capita GDP, (measured in thousands of US dollars), a dummy variable for Latin American countries, and a dummy variable for the presence of a “military legacy” which takes the value 1 if the country’s most recent non-democratic regime is controlled either directly or indirectly by the military.

The remaining terms relate a country’s institutions to the likelihood of breakdown: The first and second terms, $\gamma_{pres}^o Z_{it} P_{it}$ and $\gamma_{parl}^o Z_{it} (1 - P_{it})$, represent the impact of presidential and parliamentary institutions respectively in organic democracies. The third and fourth terms, $\gamma_{pres}^s (1 - Z_{it}) P_{it}$ and $\gamma_{parl}^s (1 - Z_{it}) (1 - P_{it})$ represent the institutional risks when the democracy is synthetic (i.e., internationally induced). I will take the liberty of making the following assumption for the sake of exposition.

$$\textbf{Assumption 1: } \gamma_{pres}^s = \gamma_{parl}^s$$

Assumption 1 says that the effect of institutions on the probability of democratic breakdown is nil in synthetic democracies. In other words, the presidentialism-parliamentarism question is moot if democracy is merely window dressing. Assumption 1 is not wildly unrealistic and is not essential for my argument; it does simplify the algebra.^{xi}

Though the true data generating process is evidently given by Equation 2, the model Cheibub actually estimates is given by Equation 1. It is not difficult to show that the expected value of the presidential effect Cheibub estimates is therefore given by: (3.)

$$E[\hat{\gamma}_1] = E[Z_{it}(\gamma_{pres}^o - \gamma_{parl}^o)] = E[Z_{it}](\gamma_{pres}^o - \gamma_{parl}^o).^{xii}$$

A series of observations are in order: First the power-sharing thesis suggests that $(\gamma_{pres}^o - \gamma_{parl}^o) > 0$ (Linz, 1990a,b). Second—per the discussion above—the proportion of organic democracies in Cheibub’s Cold War sample, $E[Z^{CW}]$, is larger than the proportion of organic democracies in the post-Cold War sample, $E[Z^{PCW}]$.

Letting $\hat{\gamma}_1^{CW}$ and $\hat{\gamma}_1^{PCW}$ refer to the estimates of the presidential risk factor using Cheibub’s equation for the Cold War and post-Cold War periods respectively, we are led to the following hypothesis.

$$\textbf{Hypothesis 1: } E[\hat{\gamma}_1^{CW}] > E[\hat{\gamma}_1^{PCW}].$$

Hypothesis 1, formally derived in the mathematical appendix, simply says that, (1.) given the power-sharing democracy arguments and (2.) assuming the incidence of synthetic democracies increased after the Cold War, we should expect the estimated presidential risk factor to be greater during the Cold War than after it, under Cheibub’s specification. The arguments I have laid out in this section justify a reappraisal of the data, a task I turn to in the next section.

The Effect of Presidentialism on Democratic Breakdown^{xiii}

	Cheibub (2007)			Probit Cold War	Probit Post-CW	Relogit Cold War
	I.	II.	III.	IV.	V.	VI.
Per Capita Income (thousands of 19**USD)	-0.2227*** (0.031)	-0.2287*** (0.000)	-0.250*** (0.000)	-0.24*** (0.000)	-.45 (0.18)	-.56*** (0.000)
Presidential Dummy (per Przeworski et al)	0.284** (0.030)	0.0591 (0.691)	0.0487 (0.771)	0.45* (.052)	-0.005 (0.991)	1.01** (0.028)
Military Legacy Dummy (per Przeworski et al)		0.5386*** (0.000)	0.4570*** (0.001)	0.68*** (0.000)	0.59 (0.211)	1.51*** (0.000)
Latin America Dummy			0.0048 (0.0979)	-0.55* (0.057)	NA	-1.31** (0.022)
Constant	-1.4459** (0.000)	-1.5896*** (0.000)	-1.4936*** (0.000)	-1.52*** (0.000)	-1.77*** (0.002)	-2.59*** (0.000)
<i>N</i>	2,446	2,446	2,446	2,204	222	2,204

Empirical Tests of My Propositions

My empirical results appear in Table 1. First, using the same model specifications as Cheibub, I replicate his analysis separately for the sample of democracies between 1946-

89 and 1990-02 respectively. The results of these regressions appear in columns IV and V. As these columns indicate, when the sample is restricted to democracies born prior to the end of the Cold War (i.e., prior to 1989) the presidential indicator is significant and positive—consistent with power-sharing thesis and the literature on “electoral authoritarianism.”^{xiv}

For the sake of completeness I also note that a *relgit* specification is more appropriate, given the relative infrequency of democratic breakdown (King and Zeng 2001). The sixth column of Table 1 contains the *relgit* estimation of the likelihood of democratic breakdown for the Cold War era (the data were insufficient to utilize the approach in the post Cold War era). The *Relgit* analysis provides even stronger support for my predictions—and cast more doubt on Cheibub’s conclusion.

Conclusion

In this paper I have taken issue with Cheibub’s (2007) measurement of the presidential risk factor. First, I re-introduced a theoretical reason—the “power sharing” thesis—why Cheibub should not have gotten the nil finding he reports. Next, I show his results are not stable across the entire post WWII era—presidentialism is a risk factor during the Cold War, and is not a risk factor after the Cold War. Finally, I suggest an explanation, based on a reading of the “electoral authoritarianism” literature, reconciling Cheibub’s findings with the fact pattern.

My conclusions are these: First, a straightforward research design suggests that, during 1946-02 regimes that are labeled parliamentary, by a coarse, but natural standard, are more likely to survive than those that were more clearly presidential. This directly contradicts Cheibub’s main conclusion. Second, the power-sharing theory receives indirect support—it predicts the Cold War empirical finding that presidential executives should have a higher mortality risk. Finally, I conclude that a definitive measurement of the presidential risk factor should account more closely for confounding phenomena like the forces of international versus domestic democratization.

Preliminary Mathematical Appendix:

I make use of the following two lemmata.

Lemma 1 [Power-Sharing and Democratization]: *Suppose both players play a Grim Trigger strategy. The probability that party i refuses to abide by an election that it loses declines as i 's "floor", a_i , increases.*

Lemma 2 states the conditions under which we can decrease the probability of conflict by making (feasible) marginal power-sharing concessions to the electoral loser by increasing the proportionality of the electoral rules.

Lemma 2: *Suppose both players play a Grim Trigger strategy and that the probability that 1 obtains a majority is less than $[\delta(b-c)]^{-1}[(1-\delta)c_{war}+a]$. Under these assumptions, the probability that party 1 refuses to abide by an election that it loses declines as the proportionality of the electoral system, b , increases if $\frac{\partial F}{\partial b} < \frac{\partial F}{\partial c}$.*

Proof of Lemma 1: The probability that party 1 refuses to abide by an election that it loses equals the probability that $a_1 + bS_{1t} + \delta\Gamma_{dem,t+1} < p_i(1-\delta)^{-1} - c_{war}$, where S_{1t} is the random variable representing 1's vote share in period t , and $\Gamma_{dem,t+1}$ is the continuation value under the Grim Trigger after 1's having played democratically in period t . Let F be the cdf governing party 1's seat share. Then the probability that party 1 refuses to abide by an election that it has lost equals $P\{S_{1t} < (p_i(1-\delta)^{-1} - c_{war} - \delta\Gamma_{dem,t+1} - a_1)/b\} = F[(p_i(1-\delta)^{-1} - c_{war} - \delta\Gamma_{dem,t+1} - a_1)/b]$.

Note that $\frac{\partial F}{\partial a_1} = F'((p_i(1-\delta)^{-1} - c_{war} - \delta\Gamma_{dem,t+1} - a_1)/b) \frac{\partial((- \delta\Gamma_{dem,t+1} - a_1)/b)}{\partial a_1}$.

$F'((p_i(1-\delta)^{-1} - c_{war} - \delta\Gamma_{dem,t+1} - a_1)/b)$ is a pdf hence positive *almost everywhere* on its support. Thus it suffices to show that $\frac{\partial((- \delta\Gamma_{dem,t+1} - a_1)/b)}{\partial a_1} < 0$. Note, $\Gamma_{dem,t+1} =$

$$\sum_{t=0}^{\infty} \delta^t E[D_{it}] = \sum_{t=0}^{\infty} \delta^t E[a_1 + bS_{1t} + c\{S_{1t} > .5\}] = \sum_{t=0}^{\infty} \delta^t [a_1 + bE[S_{1t}] + c \Pr[S_{1t} > .5]].$$

Thus, $\frac{\partial -\Gamma_{dem,t+1}}{\partial a_1} = \sum_{t=0}^{\infty} \delta^t [-1] < 0$. Hence, $\frac{\partial F}{\partial a_1} < 0$. **QED.**

Proof of Lemma 2: Recall from above that the probability that party 1 refuses to abide by an election that it loses equals $P[S_{1t} < (p_i(1-\delta)^{-1} - c_{war} - \delta\Gamma_{dem,t+1} - a_1)/b] = F[(p_i(1-\delta)^{-1} - c_{war} - \delta\Gamma_{dem,t+1} - a_1)/b]$. Note first that, if $\frac{\partial F}{\partial b}(\varepsilon) + \frac{\partial F}{\partial c}(-\varepsilon) < 0$ for $\varepsilon \in \mathfrak{R}^+$,

equivalently $\frac{\partial F}{\partial b} < \frac{\partial F}{\partial c}$, then a marginal substitution away from c towards b reduces the probability that party 1 refuses to abide by an election.

Now note that

$$\frac{\partial F}{\partial b} = F'((p_i(1-\delta)^{-1} - c_{\text{war}} - \delta\Gamma_{\text{dem},t+1} - a_1)/b) \frac{\partial((p_i(1-\delta)^{-1} - c_{\text{war}} - \delta\Gamma_{\text{dem},t+1} - a_1)/b)}{\partial b}.$$

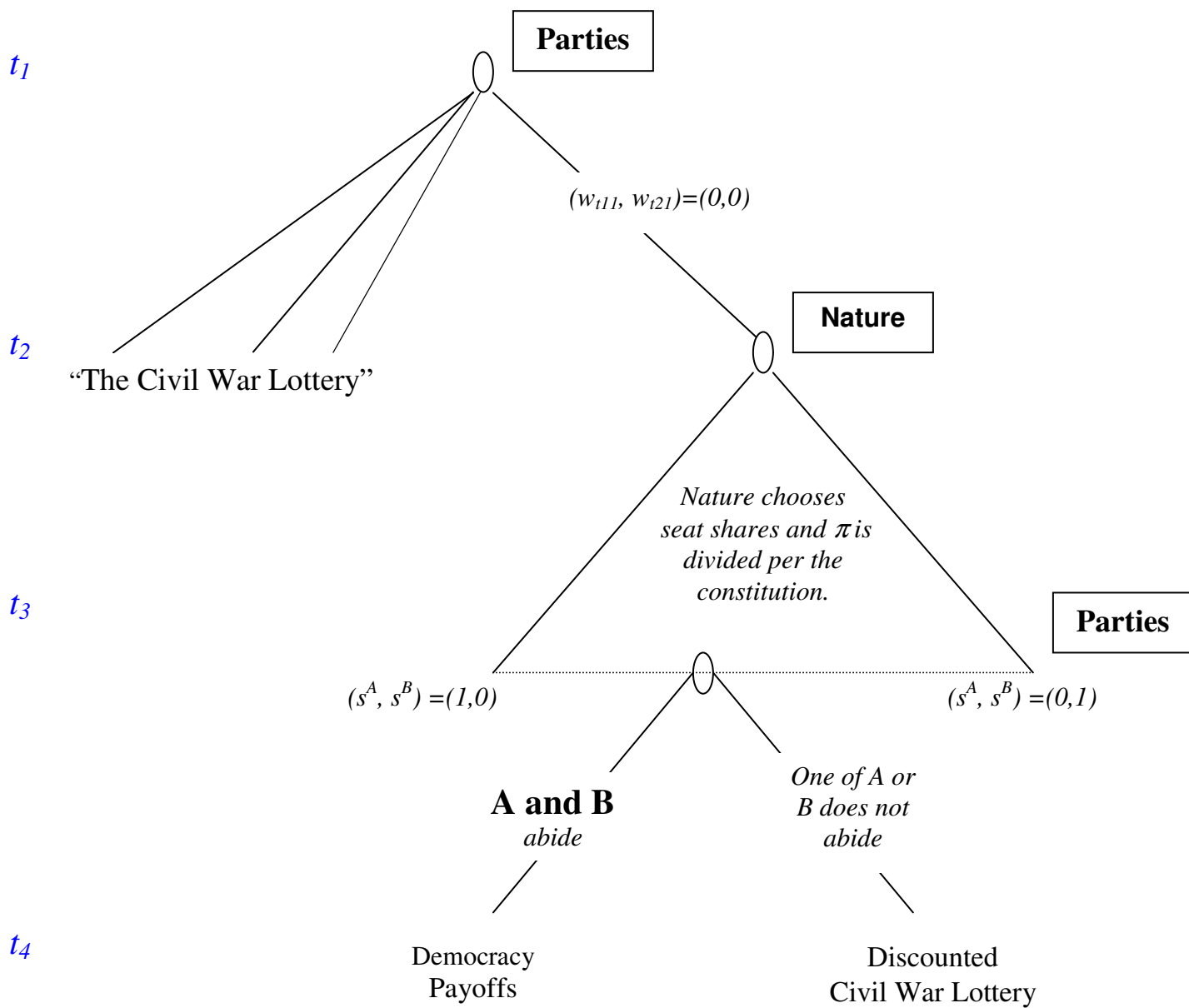
Recall that $\Gamma_{\text{dem},t+1} = \sum_{t=0}^{\infty} \delta^t [a_1 + bE[S_{1t}] + c \Pr[S_{1t} > .5]]$. Thus, $\frac{\partial \Gamma_{\text{dem},t+1}}{\partial b} = - \sum_{t=0}^{\infty} \delta^t E[S_{1t}]$.

Need to type in the remainder of the proof! **QED**.

Derivation of Equation 3 and Hypothesis 1:

Consider the score function in Equation 2, $\gamma_{\text{pres}}^o Z_{it} P_{it} +$

$\gamma_{\text{pres}}^s (1 - Z_{it}) P_{it} + \gamma_{\text{parl}}^s (1 - Z_{it})(1 - P_{it}) + \delta' X_{it}$. Elementary algebra demonstrates that the term Cheibub estimates as the presidential risk factor is given by $[Z_{it}(\gamma_{\text{pres}}^o - \gamma_{\text{parl}}^o) + (1 - Z_{it})(\gamma_{\text{pres}}^s - \gamma_{\text{parl}}^s)]$. Thus, Equation 3 follows from Assumption 1. Hypothesis 1 follows from the power-sharing thesis—i.e., $(\gamma_{\text{pres}}^o - \gamma_{\text{parl}}^o) > 0$ —and the “electoral authoritarianism” assumption—i.e., $E[Z^{CW}] > E[Z^{PCW}]$. **QED**.



The t -period "Democratic Consolidation" Subgame
 Figure 2.

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ⁱ Much thanks is due to Gary Cox for his invaluable guidance, José Antonio Cheibub for graciously sharing his data and expertise, and Travis Knowles and Kaare Strom for stimulating conversation. All errors are mine. This paper is preliminary. Please do not distribute or quote without the author's consent.

ⁱⁱ Though the authors don't note it, the assumption of infinite meetings is mathematically equivalent to a more attractive behavioral model in which players aren't sure in which period the game will end though they believe that there is some positive probability that the game will end in any stage (See Fudenberg and Tirole, 1991, page 148).

ⁱⁱⁱ Here Przeworski seems to have misspoken. $W+L=T$, is a maintained assumption—see a few sentences below. He seems to have meant “parliamentary systems increase the losers’ payoffs.”

^{iv} Przeworski’s compelling conclusion neglects a technical issue that would arise, for instance, if a current period’s loser expected to do well in future periods under a majoritarian constitution. Nevertheless, its obvious that Przeworski’s observation are true—given appropriate conditions on p_t and r_t^{PARL} for $t=1,2,\dots$

^v Shugart and Carey (1992) have made an important refinement of Linz’s stark claim by pointing out that, empirically, in terms of how “winner-take-all” the government is, there exists substantial stochastic overlap between the executive sub-types; contrast Britain’s very winner-take-all parliamentary system to Switzerland’s much more consociational system or contrast the U.S.’s separation-of-powers presidential system with Brazil’s comparatively strong presidency. Shugart and Carey nevertheless argue that parliamentary systems *tend* to facilitate more power-sharing and therefore *tend* to be more long-lived.

^{vi} The notation $\{ \bullet \}$ denotes an indicator function that evaluates to 1 if its argument is true and 0 otherwise. The power-sharing representation can obviously be generalized—subject to the constraints imposed by the fixed-pie assumption—such that the “bonus term” varies by faction and kicks in for any seat share.

^{vii} While this unfortunate type of equilibrium exists regardless of an environment’s potentialities, it is obviously not trembling hand perfect, and therefore, arguably less focal (cf. Selten 1975).

^{viii} If one were interested in also considering the possibility of more complicated punishment strategies, say Tit-for-Tat, the set of conflict environments admitting a democratic SPNE would obviously grow. Hence, in focusing only on the Grim Trigger, I paint a conservative picture of democracy’s prospects.

^{ix} My source here is Wikipedia.

^x In my analyses I use the same classification protocol as Cheibub for (1.) including and excluding country-years into the samples of democracies and (2.) labeling democracies as presidential or parliamentary.

^{xi} One might argue, as Schedler for instance that “although none of the [electoral authoritarian regimes’ nominally democratic] institutions are meant to constitute countervailing powers, all of them represent potential sites of discipline [against the regime’s transgressions] and conflict [which might lead to more substantive shifts towards democracy]” (2006, page 12). Its reasonable to infer then that the existence of specific institutions, even if these owe their existence to external inducements, may have the effect of precipitating substantive democratization in the future by say, acculturating domestic actors to particular democratic *modus operandae* or providing more or less opportunities for the opposition’s dissent.

^{xii} A derivation is provided in the mathematical appendix.

^{xiii} This table replicates the research design in Cheibub (2007, Table 6.3, pg. **). The universe is all country-years that began the year as a democracy (per the PACL protocol). The dependent variable is 1 if the democracy became an authoritarian regime by year’s end (per the PACL protocol). p -values appear in parentheses. ***, **, and * indicate statistical significance at the 1, 5, and 10 percent confidence levels respectively.

Columns I-III reproduce Cheibub’s probit results. Columns IV and V run Cheibub’s regression on the 1946-89 and 1990-02 data separately. Column VI replicates the analysis for the Cold War era but makes technical corrections to account for the paucity of democratic breakdowns (per King and Zeng 2001).

Note, the p -values reported for the presidential indicator correspond to a one-tailed test of the null hypothesis that presidential executives are not more likely to breakdown than parliamentary executives. This approach is more appropriate given the literature—which nowhere suggests that parliamentary executives should be *less* stable than presidential executives—and differs from Cheibub who reported instead the p -value for a two-tailed test. Cheibub’s substantive findings would not have changed were he to have used a (more appropriate) one-tailed test nor would mine have changed were I use a (too conservative) two-tailed test.

^{xiv} Interestingly, when one confines attention to the Cold War era—contra the conventional wisdom (cf. Cheibub 2007)—the Latin American fixed effect seems to decrease, not increase, a country’s propensity to become authoritarian.