

DEMOCRATS, DICTATORS, AND DEMONSTRATORS

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Using a data set of democratic movements and democratic transitions that took place between 1960 and 1990, I investigate the implications for economic growth of these events. There are two comparisons of interest: successful democratic movements to movements that are repressed, and successful democratic movements to democratic transitions that occurred without such movements. None of these events has a positive effect on economic growth. (JEL O4, D74)

I. INTRODUCTION

A sizable amount of recent empirical literature has focused on the relation between democracy and economic growth. However, most of these papers, such as Barro (1996), Helliwell (1994), and the studies summarized in Przeworski and Limongi (1993), concentrate on the relationship between levels of democracy and economic growth. This article focuses on the relationships among democratic movements, governmental responses to these movements, and economic growth.

Democratic movements provide a distinct perspective from analyzing the relationship between levels of democracy and economic variables. Democratic movements by definition focus on collective action and are reflective of the wishes of large segments of society, whereas many actual changes in democracy occur through behind-the-scenes maneuvers of political elites (sometimes, but not always, in response to popular movements).¹

Additionally, a democratic movement can fail if repression of the movement succeeds, as in Burma (now Myanmar) in 1988 and China in 1989. In these and other repressed

movements, although a large segment of society has expressed a desire for a more democratic form of government, the existing government has indicated that it is prepared to resist those demands. This tension between the actual level of democracy and the level desired by citizens presumably has economic consequences in addition to the consequences of the actual level of democracy.

Of course, repression is not the only outcome of democratic movements: for example, democratic movements in Eastern Europe in 1989–90 (with the partial exception of Romania) led to concessions and democratic reforms by the governments involved. The focus of this article includes both repressed and successful democratic movements, as well as democratic transitions that occurred without widespread democratic movements.

In this article I provide an enhanced version of the data set of democratic movements in Minier (2001), incorporating a classification of the government's response to each movement. Using these data, I address two main questions. First, what are the effects of a democratic movement on the economy? Specifically, how does a democratic movement affect economic growth, and, given that a democratic movement has occurred, what are the economic ramifications of a government's response to that movement? In particular, does the choice of repression versus concessions affect subsequent growth? Second, democratic transitions do not always require a widespread democratic movement. How do subsequent economic conditions differ between countries that become

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1. Classic examples of democratic installation "from above" include the democracies imposed on West Germany, Italy, and Japan following World War II and the democratic systems installed by colonial powers, primarily Britain.

democratic through a democratic movement and countries in which no movement occurs?²

II. BACKGROUND

Democratic movements relate to both political instability and democracy. Previous empirical studies have established that political instability is negatively correlated with economic growth, and that the level of democracy is positively correlated with income levels, although the relationship between democracy and growth is more ambiguous.³

The related theoretical literature has focused on the probability of success for a revolution or insurrection more generally, as in Grossman (1991) and Roemer (1985), or the probability that a government grants democratic concessions, as in Rosendorff (2001) and Acemoglu and Robinson (2000).

Political instability can be measured in a number of ways. Londregan and Poole (1990) use whether or not a coup d'état occurs; Alesina et al. (1996) expand this to include constitutional changes. General economic growth studies that include a measure of political instability, such as Barro (1991), generally use some combination of the average number of revolutions, coups, and political assassinations. In this article, I provide additional insight into the relationship between political instability and economic growth by investigating a distinct form of political instability: democratic movements. This should help refine previous work and improve our understanding of what types of political instability matter for growth.

Democratic movements involve three types of political instability. First, a democratic movement by its nature indicates instability: a sizable part of the population wants to change the form of government. Widespread strikes, protests, demonstrations,

and even riots often accompany democratic movements.⁴

Second, many interpretations of political instability address actions taken by the government against its citizens. When a democratic movement is repressed, governments often take actions, such as imposing martial law, curtailing freedoms of assembly and the press, or, in extreme cases, taking military action against demonstrators. Although these actions are generally intended to restore order and stability, they may also strengthen the demonstrators' case against the government. For example, Russia's Bloody Sunday in January 1905 is credited with politicizing many who had previously been indifferent and radicalizing many among the politically active.⁵ Both the existence of a movement and the potential repression of the movement are addressed here.

The third type of political instability is associated with the transition between regime types if the movement is successful. Alesina and Perotti (1994, 359), in a summary of related literature, conclude that "transitions from dictatorship to democracy, being associated with political instability, should typically be periods of low growth." Partly, they argue, this is due to social demands that have been repressed suddenly surfacing; additionally, collapsing dictatorships are likely to leave behind economic problems.⁶

This article differs from these previous works on political instability and economic growth in several ways. By focusing on democratic movements—both successful and repressed—I include episodes of political instability (the repressed movements) that are not included in studies that examine only cases of executive turnover or democratic transition. By limiting the study to democratic movements, I focus on cases in which the issues are political and exclude cases in which demonstrators' demands are

2. Of course, it is important to remember that measured economic growth does not capture all improvements in living standards; for many, the ability to participate in the determination of one's government may well be worth slightly lower growth rates.

3. On instability, see, in addition to the papers discussed in the text, Alesina and Perotti (1996), Hibbs (1973), and Blomberg (1996), as well as more general cross-country studies, such as Barro (1991). Barro (1996, 1999), Huntington (1991), and Lipset (1959) are only several of the many papers that have established a positive correlation between democracy and income levels.

4. The definition of democratic movement used in this paper requires some physical expression of the desire for democracy; see section III.

5. According to Pipes (1990, 26), "among the masses, it damaged irreparably the image of the 'good Tsar.'"

6. Despite this, Minier (1998) finds that countries that became more democratic grew faster, on average, than a priori similar countries that remained authoritarian, although this difference was generally not statistically significant.

purely economic.⁷ In addition, the methodology I use allows for a longer period of economic growth to be examined (5 to 20 years, instead of the 1-year growth rates examined by Londregan and Poole [1990] and Alesina et al. [1996]).

Briefly, the existence of a democratic movement is expected to decrease growth rates due to the diversion of resources, political instability, and uncertainty. Given that such a movement exists, the effect of repression is ambiguous: Although it may restore order quickly, it involves an additional diversion of resources from productive activity and may further increase political instability. Finally, a democratic transition that occurs without a democratic movement is likely to decrease growth rates but by less than a democratic transition initiated by a movement; the diversion of resources is lower without a movement, but uncertainty exists during the transition.

III. DATA

I constructed the data set of democratic movements based on three criteria. Movements included must (1) be relatively large in scale (relative to a country's population); (2) involve a physical expression of the desire for democracy (e.g., protests, demonstrations, or strikes); and (3) be explicitly democratic (i.e., the leaders and/or participants must call specifically for democratic reforms or direct elections). Appendix A describes the identification process more completely and lists the 30 movements in 21 countries that satisfy these criteria; the movements are described in more detail in Minier (2001).⁸

Government responses to the democratic movements included in this study are classified as repressive, conciliatory, or reluctant conciliatory; the success or failure of a movement is an important factor in determining its classification. Most movements fall clearly into the categories of "repressive" (unsuccessful movement) or "conciliatory"

7. This distinction is not always clear. For example, many democratic movements began as protests against economic conditions; they are included here once their demands explicitly include political representation, democracy, and/or direct elections. See section III and Minier (2001) for details.

8. The total of 30 movements counts South Africa as 1 movement.

(the movement succeeds in winning concessions from the government).

Repressive responses encompass some of the following actions: the use of military or police force against protesters; the declaration of martial law; and the curtailment of freedoms of press, assembly, and movement. Examples of repressive responses include the Chinese government's use of force against protesters in Tiananmen Square in 1989 and the declaration of martial law by the Polish government in 1981 following the legalization of the independent trade union Solidarity.

Conciliatory responses by the government generally involve agreeing to hold elections or, as a first step, agreeing to hold talks with the opposition. For example, following strikes by Solidarity in 1988, the Polish government agreed to talks with opposition leaders, and elections were held in 1989.

The "reluctant conciliatory" category includes the remainder of cases; in most, the government initially attempted to repress the movement but ceded power at some point. Examples of such responses include the response of the Philippine government to the People Power movement of 1986: Despite earlier repressive actions and attempts to manipulate the election process, President Marcos eventually ceded power. This category also includes cases in which sectors of the government were split between repressive and conciliatory factions. This was the case in Thailand in 1973, where the regime responded to widespread demonstrations with force, leading the monarchy to question the regime's ability to maintain control in the country; the monarchy then joined forces with the protesters, advocating democratic reforms. By creating a separate category for these cases, I do not have to decide whether repression or conciliation was the dominant factor in each; they are included in a group that experiences both repression and concessions.

In theory, a fourth alternative exists: a government could ignore the movement entirely. The movements in this study were all large enough that this was not feasible; governments were forced to either make some concessions or repress the movement. Of the 30 movements included in this study, the government responses are classified as 18 repressions, 7 reluctant conciliatory responses, and 5 conciliatory responses. An interesting time

variation emerges in the responses of governments to democratic movements. Nearly all of the movements that took place during the 1960s and 1970s were repressed, whereas most democratic movements that occurred during the 1980s were met with less determined force. Unfortunately, this correlation makes analysis of the determinants of repression difficult.

The data set of democratic transitions that occurred without a movement is also included in Appendix A. There are three criteria for inclusion: (1) There must be a substantial, identifiable increase in democracy; (2) the change must be reflected in the Gastil/Freedom House political rights index, if the time period is covered by the index; and (3) the transition must not be the direct result of a democratic movement, as already classified (in particular, there cannot have been sizable physical expressions of the desire for democracy). These transitions are described in more detail in Minier (1998).

IV. EMPIRICAL RESULTS

Ceteris paribus, the existence of a democratic movement is expected to decrease growth rates, and the duration of the movement is expected to be negatively correlated with economic growth. The relationship between repression of a movement and economic growth is unclear: Although repression indicates a strong government that will not tolerate dissent, it may also decrease legitimacy to citizens, provoking further political instability and decreasing economic growth.

Two specifications of growth regressions are presented in Tables 1 and 2. The sample is limited to countries with initial democracy levels of less than 0.83, which corresponds to countries ranked “not free” or “partly free” on the Freedom House index (see Freedom House, 1998). Of these observations, some experienced democratic movements, some experienced democratic transitions without movements, and the majority remained authoritarian with neither a democratic movement nor a transition. The regression equation estimated in Table 1 is

$$(1) \quad GR_{i,t} = \mu_t + \beta_1 \cdot X_{i,t} + \beta_2 \cdot I_{i,t} + \beta_3 \cdot D_{i,t} + \eta_{i,t},$$

where GR is the (log annualized) growth rate over the period; μ_t allows for time fixed

effects; $X_{i,t}$ is the vector of control variables (described later); $I_{i,t}$ is the vector of dummy variables indicating that a democratic movement, a democratic transition, repression of a movement, or a reluctant conciliatory response to a movement has taken place; $D_{i,t}$ is a variable indicating the duration of the movement in months; i indexes observations; and t indexes five-year periods from 1965–69 through 1985–89. The regression estimated in Table 2 is the cross-sectional equivalent:

$$(2) \quad GR_{i,1970-89} = \beta_0 + \beta_1 \cdot X_i + \beta_2 \cdot I_i + \beta_3 \cdot D_i + \varepsilon_i,$$

where variables are defined analogously.

The first regression is a parsimonious specification, including only the variables most commonly included in growth regressions (initial income, education, and investment), in addition to the political variables. The second regression is expanded to include other variables frequently included in growth regressions, following Barro (1996).⁹

Table 1 presents estimates from five-year panel regressions estimated with time fixed effects, and Table 2 presents estimates from a 20-year cross-sectional regression (each specification is otherwise identical in the two tables).¹⁰ The variables related to democratic movements appear in the bottom panel of the table and include dummy variables indicating democratic transitions (without democratic movements) and democratic movements, dummy variables indicating repressive and reluctant conciliatory responses by the government, and a variable that measures the duration (in months) that the movement was a significant factor in the country.

The nonpolitical variables are included as controls; the estimates are generally in line with theoretical predictions and other empirical growth research. The bottom panel provides the number of observations in each category: for example, of the 372 observations in regression 1 of Table 1, 6 experienced

9. Barro (1996) also includes democracy squared, but because the highest-democracy countries are omitted from this sample, the squared term is not included here.

10. When the regressions of Table 1 are estimated with country fixed effects—in addition to or in place of time fixed effects—the magnitudes of the coefficient estimates on the democratic movement variables decrease, as does statistical significance, although the signs of the estimates remain the same.

TABLE 1
Five-Year Panel Regressions

	(1)		(2)	
Log initial GDP	-0.013	(0.004)***	-0.017	(0.006)***
Log investment	0.015	(0.003)***	0.010	(0.003)***
Education	0.035	(0.014)***	-0.022	(0.019)
Democracy	0.025	(0.009)***	0.004	(0.012)
Fertility			-0.003	(0.002)
Life expectancy			0.001	(0.0005)*
Educ spending			-0.006	(0.179)
Govt consumption			-0.037	(0.032)
Civil liberties			0.011	(0.013)
Terms of trade			0.003	(0.039)
Black market premium			0.001	(0.002)
Southern Africa			-0.026	(0.006)***
Latin America			-0.020	(0.006)***
East Asia			0.015	(0.006)**
Democratic movement	-0.036	(0.005)***	-0.033	(0.014)**
Repressed	0.039	(0.007)***	0.037	(0.011)***
Reluctant conciliatory	0.029	(0.012)**	0.022	(0.016)
Duration (months)	-0.0002	(0.0002)	-0.00003	(0.001)
Democratic transition	-0.007	(0.008)	-0.016	(0.007)**
R ²		0.277		0.411
Observations		372		251
Of which, democratic transitions		6		5
Of which, democratic movements		25		15
Of which, repressed		15		6
Of which, reluctant conciliatory		7		7

Notes: The dependent variable is the log of annualized growth of GDP per capita over the periods 1965–70 through 1985–90. Observations for which the initial value of the democracy index is over 0.83 are omitted. Constant terms vary by time period in both regressions. All explanatory variables in the upper panel are lagged five years. Heteroscedasticity-consistent standard errors, adjusted for dependency in error terms over time across countries, appear in parentheses after each estimate. See Appendix B for data definitions.

*Significant at 90%.

**Significant at 95%.

***Significant at 99%.

a democratic transition without a movement; 25 experienced a democratic movement (of those, 15 were repressed); and the remaining 341 experienced neither a democratic movement nor a transition to democracy.

In the five-year panel regressions of Table 1, the coefficient estimate on the duration of the movement is negative and very small in magnitude in both regressions. This suggests that the duration of a movement is not significantly (linearly) correlated with growth, controlling for other factors.¹¹

The dummy variable indicating a democratic movement is equal to one for all countries that experienced a movement, regardless

of the government's response. Dummy variables for repression and reluctant conciliatory responses are also included. The omitted category is that of a democratic movement with a conciliatory response; for these cases, growth could be expected to decrease by over three percentage points *per year* over the relevant five-year period, and these estimates are statistically significant.

In both regressions, the coefficient estimates on the dummy variable associated with repression of a democratic movement are positive and statistically significant. This does not necessarily suggest that repression increases growth, only that growth is higher in the cases that were repressed than in those where the government responded with conciliatory measures. In addition, the estimates on

11. This could also be due to the difficulties with measuring the duration of movements.

TABLE 2
Twenty-Year Cross-Sectional Regressions

	(1)		(2)	
Log initial GDP	-0.019	(0.005)***	-0.025	(0.005)***
Log investment	0.012	(0.003)***	0.009	(0.003)***
Education	0.054	(0.021)***	-0.017	(0.025)
Democracy	0.034	(0.011)***	0.018	(0.019)
Fertility			-0.003	(0.002)
Life expectancy			0.001	(0.0004)***
Educ spending			0.521	(0.170)***
Govt consumption			-0.049	(0.045)
Civil liberties			-0.002	(0.018)
Terms of trade			-0.002	(0.058)
Black market premium			-0.006	(0.007)
Southern Africa			-0.019	(0.006)***
Latin America			-0.011	(0.005)*
East Asia			0.013	(0.008)
Constant	0.095	(0.031)***	0.123	(0.043)***
Democratic movement	-0.022	(0.013)*	-0.015	(0.010)
Repressed	0.018	(0.014)	0.018	(0.010)*
Reluctant conciliatory	0.021	(0.016)	0.009	(0.011)
Duration (months)	0.00001	(0.00003)	0.00002	(0.00003)
Democratic transition	-0.004	(0.007)	0.003	(0.007)
R ²		0.466		0.786
Observations		73		63
Of which, democratic transitions		4		4
Of which, democratic movements		14		12
Of which, repressed		6		4
Of which, reluctant conciliatory		6		6

Notes: The dependent variable is the log of annualized growth of GDP per capita 1970–89. Observations for which the initial value of the democracy index is over 0.83 are omitted. All explanatory variables cover the period 1965–80, except the democracy and civil liberties variables (available beginning in 1972), and the democratic movement and government response variables, which cover the period 1965–89. Heteroscedasticity-consistent standard errors appear in parentheses after each estimate. See Appendix B for data definitions.

*Significant at 90%.

**Significant at 95%.

***Significant at 99%.

repression are nearly identical in magnitude to the estimates on the democratic movement variable, suggesting that repressing a movement cancels out the negative effect of the movement on growth (i.e., the net effect on growth of a repressed movement is zero). Higher growth rates in countries where democratic movements were repressed could be because repression reduces political instability and uncertainty (at least temporarily), and allows the economy to function relatively normally.

The coefficient estimate on the dummy variable indicating a reluctant conciliatory response is positive in each regression and statistically significant in regression 1. The magnitude of the estimate in regression 1 is

three-fourths as large as the magnitude of the repression variable. This suggests that among the democratic movements that are successful, some initial repression by the government may actually be correlated with higher growth, relative to the case where the government grants concessions immediately. This could be due to reverse causality: Governments that collapse as soon as a movement threatens are probably fairly weak regimes governing struggling economies, whereas governments that are able to mount some defense (even when ultimately unsuccessful) may be stronger. It is also possible that a prolonged period of negotiation between a government and protesters may result in a more stable regime following the transition

than would quick concessions by the government. For example, democratic activists may demand complete turnover, throwing out everyone linked to the regime; the successor regime may then include only less experienced individuals and could lack legitimacy among groups who had supported the previous regime.

Democratic transitions that occur without a movement are also expected to decrease growth rates, although by less (political stability is higher than when widespread movements occur). The coefficient estimate on the democratic transition variable (i.e., no movement) is approximately half the magnitude of that on the democratic movement with conciliatory response in regression 2, and statistically significant (in regression 1, it is also negative, although smaller and not statistically significant).

In the longer run, as shown in Table 2, estimates are comparable but somewhat smaller in magnitude (because growth is annualized in both tables, the estimates are directly comparable) and less statistically significant. The estimate on the democratic movement dummy variable remains negative in both regressions and is statistically significant in regression 1, suggesting that the occurrence of a democratic movement is correlated with a decrease in economic growth, on average, of between 1.5 and 2 percentage points per year. In both regressions, repression negates approximately all of this decrease; in regression 1, a reluctant conciliatory response does so. A democratic transition that occurs without a democratic movement does not appear to be conclusively correlated with growth; the estimate is negative in regression 1, positive in regression 2, and very small in magnitude in both cases.

The smaller coefficient estimate on repression in Table 2 may be due partly to the fact that the probability of a movement occurring is positively correlated with past repression, as shown in Minier (2001).¹² Democratic movements took place in 11 countries between 1960 and 1980; subsequently, democratic movements were repeated in eight of those countries, whereas democratic

transitions took place in the other three. Repression might gain an autocratic regime some time, but it is not likely to prevent movements from developing in the (near) future.

The positive correlation between repression and subsequent economic growth may be partially due to simultaneity; governments may be more likely to repress a democratic movement that threatens their hold on power when the economic prognosis is good. Assuming that spoils to the regime are positively correlated with income levels, anticipated high growth increases the future returns to the current government, adding to their incentives to retain power if at all possible.¹³ Furthermore, governments that are able to successfully repress democratic movements are likely to be strong governments with reliable support from the military and possibly other factions of society (suggesting a relatively weak opposition). The choice of repression may also indicate that the government anticipates a high future return to remaining in power, suggesting that the decision to repress may be affected by economic variables.

V. CONCLUDING REMARKS

Should democrats despair and dictators rejoice? On the face of it, perhaps. I find that democratic movements are negatively correlated with economic growth, and government repression of those movements appears, to some extent, to cancel out these effects on growth. I would argue that this conclusion is incomplete. Repressing a democratic movement is highly correlated with the development of a subsequent movement. Additionally, the results found may be due to non-random missing data: an authoritarian regime with a struggling economy will find it easier to suppress the release of economic data than will a struggling democracy.

The data set of democratic movements and classification of government responses to those movements provided in this article should allow for more thorough investigations of these results in future work. The 1990s have witnessed many widespread democratic movements. Once economic data

12. In Minier (2001), the variable measures political sanctions over the previous five years taken by the government against (perceived) threats to state security. Results were identical in a previous version of the article that used past repression of a democratic movement.

13. Logit analysis suggests that high recent growth is correlated with the probability that a movement is repressed (given that a movement has occurred), controlling for levels of democracy and initial gross domestic product per capita, although the sample size is extremely small.

TABLE A-1
Democratic Movements 1960–90

Country	Dates	Response	Duration
South Africa ^a	June 1955–February 1990	R	60
Burma	July 1962	R	1
Poland	March 1968	R	1
Czechoslovakia	January–September 1968	R	9
Thailand	October 1973	RC	1
Burma	May–December 1974	R	8
Spain	May 1974	R	1
China ^b	November 1978–December 1979	R	14
Peru	June 1976–July 1977	RC	14
Thailand	September–October 1976	R	1
Brazil	June–August 1977	R	3
Bolivia	December 1977–July 1978	R	8
South Korea	October 1979–May 1980	R	8
Poland	September 1980–December 1981	R	16
Argentina	March–June 1982	RC	4
Suriname	October–December 1982	R	3
Chile	March 1983–November 1984	R	21
Uruguay	May 1983–June 1984	C	14
Brazil	January–April 1984	RC	3
Sudan	March–April 1985	RC	2
Liberia	October–November 1985	R	1
Philippines ^c	February 1986	RC	1
South Korea	April–October 1987	RC	7
Burma/Myanmar ^a	June 1988–present	R	22
China	April–June 1989	R	3
Poland	August 1988–February 1989	C	7
East Germany	September–November 1989	C	2
Czechoslovakia	November–December 1989	C	1
Romania	December 1989–May 1990	R	6
Zambia	December 1989–January 1991	C	12

Source: Author's construction.

Note: Duration is the duration of the democratic movement in months.

^aDuration is limited to the period under examination, which affects South Africa (classified as experiencing a democratic movement of 60 months in each 5-year period examined), and Burma/Myanmar, whose democratic movement has continued sporadically since 1988, but the duration variable is limited to the 1985–90 period.

^bResults are robust to considering China's 1978 movement to have started in November 1974 (when the first democracy poster appeared in Guangzhou Province).

^cResults are robust to considering the Philippines' 1986 movement to have started in November 1983 with the assassination of Senator Benigno Aquino.

become available for this period, the inclusion of these events and the extension of the time period for the events already included should strengthen the conclusions that can be drawn from this line of research.

APPENDIX A: SELECTION OF DEMOCRATIC MOVEMENTS

Table A-1 lists the democratic movements included in this analysis,¹⁴ along with the classification of the

14. A number of democratic movements are excluded due to missing data. Countries experiencing democratic movements but missing data on gross domestic product include East Germany (1989), Liberia (1985), and Poland (1968). Additionally, Suriname (1982) and China

government's response. Movements appear in chronological order. As discussed in section III, movements are included if they satisfy three criteria: (1) the movement must be large in scale, relative to the population of the country; (2) the demand for democracy must be expressed physically, through demonstrations, protests, or strikes; (3) the movement must be explicitly prodemocracy (including calls for direct elections). More complete descriptions of the movements are included in Minier (2001).¹⁵

(1978–79, 1989) are excluded from these analyses due to missing educational data.

15. Two movements included in that study, Spain and Senegal in 1968, are omitted here because of difficulties in identifying the timing of the movements (duration was not included in the earlier article).

TABLE A-2
Democratic Transitions without
Movements

Country	Date
Gambia	1970
Portugal	1974
Greece	1975
Spain	1977
Senegal	1978
Ecuador	1979
Peru	1980
Thailand	1980
Nepal	1981
Bolivia	1982

Note: See Minier (1998) for more detailed descriptions of the transitions.

Classification of governments' responses is determined as follows. Repressive responses (R in table) are generally the most obvious; they include such actions as troops firing on unarmed protestors, declaration of martial law, and detainment of opposition leaders. Conciliatory responses (C) are those in which the government concedes power, generally by consenting to hold elections or transfer power to civilian rulers. Reluctant conciliatory responses (RC) fall somewhere between the other two classifications. Generally, these responses involve repression at first but an eventual surrender of power. Others include cases in which the democratic opposition had supporters within sectors of the government, despite attempted repression by other sectors.

The duration variable, measured in months, is measured as precisely as possible relying on the same sources as the identification procedure. Unfortunately, many accounts do not give exact dates of events. I have attempted to measure the duration from the beginning of a widespread call for democracy to the decisive governmental action. A movement that began as an economic strike and later turned to a democratic movement is judged to begin once it became explicitly pro-democracy. A government's commitment to hold free elections is considered a decisive action only if the government follows through. Some of the longer movements (e.g., South Africa, Chile) could reasonably be considered collections of movements of shorter duration. The democratic movements in South Africa (in every five-year period) and Burma/Myanmar (1988) are censored in that they continue beyond the end of the period; for these cases, the duration variable is coded to be no longer than the period under observation. For the 20-year growth regressions, duration is summed over all democratic movements during the period.

Sources are varied and include: newspapers (primarily the *New York Times*); newsmagazines (such as *The Economist*); general publications, such as Ravitch and Thernstrom (1992); and region- or country-specific books, such as Wiseman (1996) and Lintner (1990).

APPENDIX B: VARIABLE DEFINITIONS

Table B-1 defines variables used in the tables. The table notes identify data sources in more detail.

TABLE B-1
Variable Definitions

Variable	Definition	Source
<i>initial GDP growth</i>	Real GDP per capita (1985 international prices) Log of annualized GDP per capita growth (e.g., $\ln[(\text{GDP}_{70}/\text{GDP}_{65})^{0.2}]$)	S-H, v. 5.6 Calculated from S-H
<i>investment</i>	Ratio of real domestic investment (private and public) to real GDP	S-H, v. 5.6
<i>education</i>	Secondary school enrollment rate	B-L
<i>democracy</i>	Index of political rights	Gastil
<i>fertility</i>	Total fertility rate (children per woman)	B-L
<i>life expectancy</i>	Life expectancy at birth	B-L
<i>educ spending</i>	Ratio of total nominal government expenditure on education to nominal GDP	B-L
<i>govt consumption</i>	Ratio of government spending net of education and defense to GDP	B-L
<i>black market premium</i>	$[(\text{black market exchange rate}/\text{official rate}) - 1]$ (local currency per dollar = exchange rate)	B-L
<i>terms of trade</i>	Growth rate of export prices minus growth rate of import prices	B-L
<i>civil liberties</i>	Index of civil liberties	Gastil
<i>Democratic movement</i>	Dummy variable equal to one if country experienced a democratic movement during period under observation	Author
<i>Repressed</i>	Dummy variable equal to one if country experienced repression of a democratic movement during period under observation	Author

continued

Table B-1 continued

Variable	Definition	Source
<i>Reluctant conciliatory</i>	Dummy variable equal to one if country experienced reluctant conciliatory response to democratic movement	Author
<i>Duration</i>	Length of democratic movement in months	Author
<i>Democratic transition</i>	Dummy variable equal to one if country experienced a democratic transition without a democratic movement during period under observation	Author

Sources: B-L: Barro and Lee (1994), S-H: Summers and Heston (1994), Gastil: Freedom House (1998 and previous), Author: author's construction. See Barro and Lee (1994) for original sources of their data.

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