Democracy and Development

Political Institutions and Well-Being in the World, 1950–1990

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Introduction

Any casual glance at the world will show that poor countries tend to have authoritarian regimes, and wealthy countries democratic ones. The question is why. What are the conditions that determine whether democracy or dictatorship prevails? What causes political regimes to rise, endure, and fall? Can their transformations be explained generally, or are they caused by circumstances idiosyncratic to each country or period? Are they driven by economic development or by other factors, such as the preceding political history, cultural traditions, political institutions, or the international political climate?

We begin with the observation that the incidence of democracy is undoubtedly related to the level of economic development. Having established the central importance of development, we distinguish two causal mechanisms that may generate this relationship, asking whether democracies are more likely to *emerge* as countries develop economically under dictatorships or, having emerged for reasons other than economic development, are only more likely to *survive* in countries that are already developed. This analysis is extended first to the impact of economic performance and then to a panoply of social and political factors. A separate section is devoted to the impacts of different types of democratic institutions. A summary closes the chapter. The statistical models on which the analysis is based are presented in the appendixes.

Development and Democracy

First advanced in 1959, S. M. Lipset's observation that democracy is related to economic development has generated the largest body of

research on any topic in comparative politics. It has been supported and contested, revised and extended, buried and resuscitated. And yet, though several articles in the *Festschrift* honoring Lipset (Marks and Diamond 1992) proclaim conclusions, neither the theory nor the facts are clear.

Aggregate patterns, such as that in Figure 2.1, show that the relationship between the level of economic development and the incidence of democratic regimes is strong and tight. Indeed, one can correctly predict 77.5 percent of the 4,126 annual observations of regimes just by looking at per capita income.[1] What remains controversial, however, is the relative importance of the level of development as compared with other factors, such as the political legacy of a country, its past history, its social structure, its cultural traditions, the specific institutional framework, and, last but not least, the international political climate.

To compare the impacts of different factors, we proceed as follows: (1) We estimate the probability that the regime in a given country during a particular year will have been a dictatorship or a democracy, conditional on the value of each independent variable and their various combinations. (2) We take as the predicted regime the one for which this probability is higher, more than 0.50, and (3) We compare these predictions with the observations. Such predictions obviously are quite rough, because they do not distinguish whether the probability that a regime is, say, a dictatorship is 0.99 or 0.51. But because all we need is a yardstick with which to compare the influences of different factors, this simple procedure is sufficient. Hence, our criterion in comparing the effects of different variables is simply the number of correct predictions. Given the controversies about comparing the fit of non-linear models, we also provide, however, an alternative measure, the Zavoina-McKelvey (1975) pseudo-R^2.

[1] These predictions are derived from probit, a form of non-linear regression, in which the probability that a country i will have had a dictatorial (as opposed to democratic) regime at time t is modeled as $\Pr(\text{REG}_{it} = \text{Dictatorship}) = F(X_{it}\beta)$, where $F(\cdot)$ is the cumulative distribution function (c.d.f.) of the normal distribution. A fair amount of ink has been spilled over the issue whether or not the relationship between development and democracy is linear (Jackman 1973; Arat 1988). We now know better. Democracy, however it is measured, is a qualitative or limited variable (it assumes the value of 0 or 1 under our measurement, it ranges from 2 to 14 on the Freedom House scale, from 0 to 100 on the Bollen scale, and so on). Hence, no predicted index of democracy can become negative as the level of development tends to zero, and no predicted index of democracy can exceed whatever is the maximum value of a particular scale as the level gets very large. Only a non-linear function, such as the normal or logistic (as suggested by Dahl 1971), can satisfy these constraints. This is why we use probit throughout.

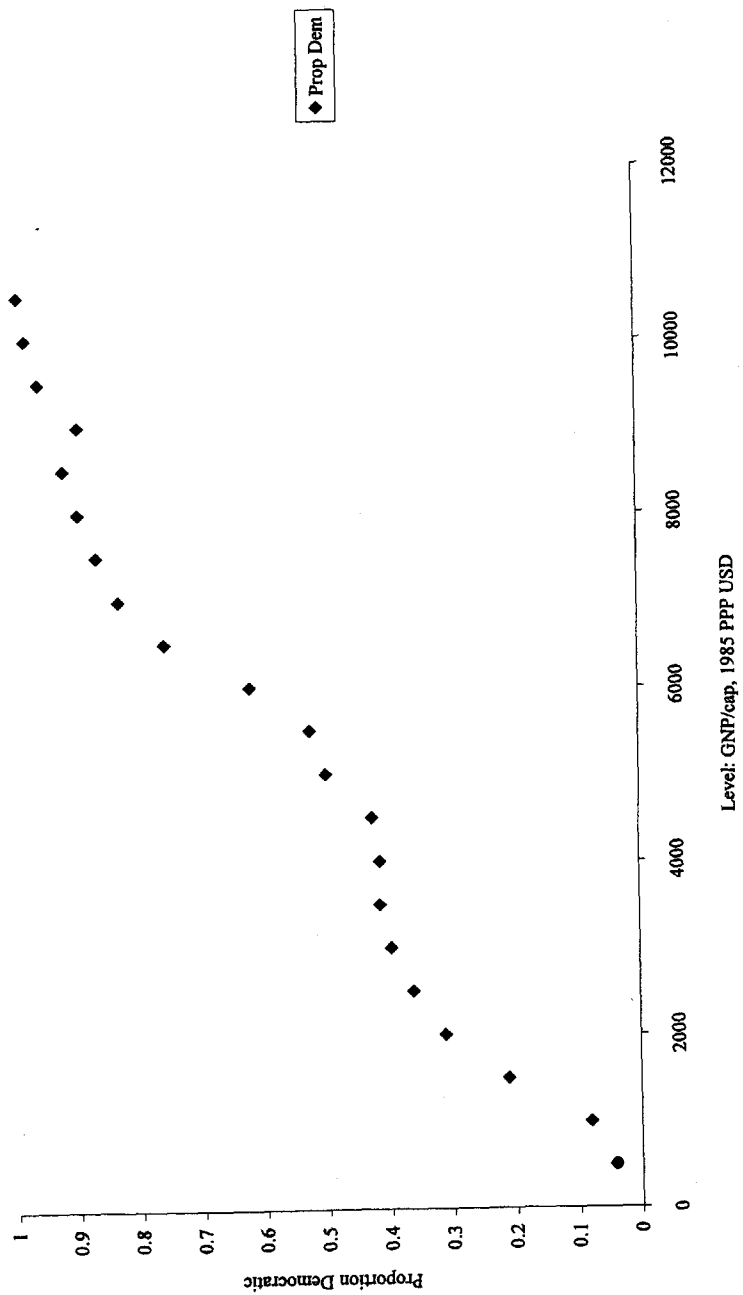

Figure 2.1. Probability that a regime will be democratic, by per capita income

Following the lead of extensive work reported by others, the factors we consider include the following:

1. The level of development (LEVEL), as measured by per capita income.[2]
2. The political legacies of a country, as summarized by two dummy variables that indicate whether or not the country became independent after 1945 (NEWC) and whether or not it was a British colony in 1919 (BRITCOL).
3. The political history of the country, as indicated by the number of past transitions to authoritarianism (STRA).[3]
4. The religious structure of the country, as indicated by proportions of Catholics (CATH), Protestants (PROT), and Moslems (MOSLEM) in the population.
5. The ethnolinguistic (ELF60) and religious (RELDIF) fractionalization of the country, measured as the probability that two randomly chosen individuals will not belong to the same group.
6. The international political environment, as measured by the proportion of other democracies in the world (ODWP) during the particular year. By "other" we mean in countries other than the one under consideration.

Table 2.1 shows the predictions based on different combinations of these variables. How one evaluates these results depends on the null model. If one knows absolutely nothing and is forced to think that a randomly chosen country has a fifty-fifty chance of having either regime, then correctly predicting more than half, 2,063 cases, is already an improvement. Because we do know, however, that there were more dictatorial years than democratic years, 60 versus 40 percent, one could correctly predict 2,481 country-years by guessing that all countries were dictatorships at all times. Except for ODWP, we list in Table 2.1 only those variables that considered alone or in thematic combinations at least match the random guess conditioned on the relative frequencies.

[2] All income figures are expressed in 1985 constant purchasing power parity (PPP) dollars, from the Penn World Tables (PWT 5.6). One might question that per capita income is an adequate indicator of the level of development. In some countries it clearly is not. That is why we excluded from our analysis six countries that derive most of their income from oil revenues. Even with this exclusion, income may not correspond perfectly to whatever one means by "development." Yet in our view it is the best indicator – better than energy consumption, literacy, industrialization, and other alternative measures.

[3] But to discount somewhat the distant past, we assign the value of 1 for all the transitions that occurred before 1950.

Table 2.1. Predictions of probit models of regimes

Variables	Number of correct predictions of: Democracies $N = 1,645$ (40.0%)	Dictatorships $N = 2,481$ (60.0%)	Total $N = 4,126$ (100.0%)	Proportion correct	ZM[a]
LEVEL	973	2,226	3,199	77.5	0.63
Legacies: NEWC + BRITCOL	1,264	1,501	2,765	67.0	0.47
Religion: CATH + PROT + MOSLEM	1,074	1,697	2,771	67.2	0.49
ELF60	0	2,481	2,481	60.0	0.40
RELDIF	0	2,481	2,481	60.0	0.39
History: STRA	19	2,459	2,478	60.0	0.39
ODWP	68	2,376	2,444	59.2	0.39
LEVEL + legacies	1,003	2,201	3,204	77.7	0.63
LEVEL + religion	1,028	2,216	3,244	78.6	0.65
LEVEL + ELF60	1,020	2,279	3,299	80.0	0.66
LEVEL + RELDIF	969	2,225	3,194	77.4	0.63
LEVEL + history	974	2,227	3,201	77.6	0.63
LEVEL + ODWP	1,005	2,233	3,238	78.5	0.64
Everything	1,136	2,241	3,377	81.4	0.70

[a] ZM stands for the Zavoina and McKelvey (1975) pseudo-R^2.

Per capita income (LEVEL) clearly outperforms a random guess. "Legacies," the colonial experience, can improve on a random guess by 7 percent, as can the distribution of religions. Ethnic and religious heterogeneity, as well as the number of past transitions to dictatorship, can correctly predict only as many cases as one would guess by knowing the marginal distribution. The proportion of other democracies in the world (ODWP) predicts poorly when considered alone.[4]

When considered along with LEVEL, no other variables, alone or in their thematic combinations, can contribute much to the prediction. Adding to LEVEL all the other variables can improve the guess by only 4 percent.[5] Hence, all the evidence indicates that it is the level of development that can best predict the incidences of various political regimes.

Whereas these variables accurately predicted 81.4 percent of the regimes that countries had at any given time, there were 749 cases in which the regime expected was not the observed one. Can we learn anything from these mistakes? Table 2.2 lists the incorrect predictions by country and period and also shows the predicted probability that the regime would be a dictatorship. Several features of this list merit comment:

1. In many countries, democracy was a colonial legacy, left to fend for itself against all odds. That was true for the Congo, Nigeria, Sierra Leone, Somalia, Suriname, Burma (Myanmar), Pakistan, the Philippines, and Ceylon (Sri Lanka), where democracy did not survive. Yet democracies that emerged from decolonialization survived in Mauritius (which by our prediction should have become a democracy only 14 years after independence, in 1982), in India (which was

[4] We also examined another variable not reported in the table, namely, the proportion of other democracies in the region (ODRP). This variable generates the best overall prediction, which would seem to indicate that international factors operate through a process of geographically based contagion, rather than via a worldwide political climate. We rush to emphasize, however, that this results should be interpreted with skepticism, because we estimated the model as if all the observations were independent or at least as if the number of countries in each region were large, and in some regions it was not. Although international determinants of regimes have been subjects of some speculation (Whitehead 1991; Schmitter 1991), as well as of statistical analysis (Starr 1991), a model that can distinguish different mechanisms through which international influences operate has yet to be constructed and tested. Our findings suggest, at best, that the topic merits further study, and we decided not to include the regional variable in our final analysis.

[5] One could reasonably ask why we take LEVEL as the benchmark, asking by how much other variables improve the prediction with regard to LEVEL, rather than vice versa. The reason is the asymmetry: When "legacies" are added to LEVEL, the prediction improves by 0.2 percent, but when LEVEL is added to "legacies", the prediction improves by 10.7 percent. Similarly for other variables.

Table 2.2. Incorrect predictions, by country and period, and the probability that a regime is a dictatorship during the period

Democracies predicted as dictatorships				Dictatorships predicted as democracies			
Country	**Period**	**Pr(REG = Dic) highest**	**Democracy**	**Country**	**Period**	**Pr(REG = Dic) lowest**	**Dictatorship**
Congo	1961–62	0.89	Fell 1963	Botswona	1986–89	0.42	Survived
Ghana	1970–71	0.86	Fell 1972	Gabon	1976–77	0.37	Survived
	1979–80	0.82	Fell 1981		1990	0.49	Survived
Mauritius	1968–82	0.73	Survived	Seychelles	1976–90	0.31	Fell 1993
Nigeria	1960–65	0.91	Fell 1966	South Africa	1950–61	0.40	Fell 1995
	1979–82	0.87	Fell 1983		1974–76	0.48	Fell 1995
Sierra Leone	1962–66	0.86	Fell 1967		1979–90	0.31	Fell 1995
Somalia	1961–68	0.98	Fell 1969	El Salvador	1953	0.50	Fell 1984
Sudan	1986–88	0.87	Fell 1989	Mexico	1950–90	0.11	Survived
Belize	1981–90	0.75	Survived	Panama	1980–90	0.34	Fell 1994
Costa Rica	1950–90	0.65	Survived	Argentina	1955–57	0.19	Fell 1958
Dominican R.	1966–87	0.76	Survived		1962	0.26	Fell 1963
El Salvador	1984–89	0.61	Survived		1966–72	0.24	Fell 1973
Grenada	1985–90	0.80	Survived		1976–82	0.14	Fell 1983
Guatemala	1951–53	0.66	Fell 1954	Bolivia	1952	0.48	Fell 1979
	1958–62	0.71	Fell 1963	Chile	1981	0.48	Fell 1990
	1966–81	0.78	Fell 1982		1985–89	0.32	Fell 1990
	1986–90	0.63	Survived	Colombia	1950–57	0.44	Fell 1958
Honduras	1957–62	0.75	Fell 1963	Paraguay	1952	0.50	Fell 1991
	1971	0.82	Fell 1972		1955	0.50	Fell 1991
	1982–90	0.75	Survived		1988–90	0.43	Fell 1991
Jamaica	1962–83	0.58	Survived	Peru	1950–55	0.45	Fell 1956
Nicaragua	1984–90	0.65	Survived		1990	0.41	Survived
Panama	1952–67	0.65	Fell 1968	Uruguay	1979–81	0.45	Fell 1985
Bolivia	1979	0.63	Fell 1964	Venezuela	1951–58	0.05	Fell 1959
	1982–89	0.63	Survived	Iraq	1979–80	0.28	Survived
Brazil	1950–63	0.67	Fell 1964	South Korea	1986–87	0.37	Fell 1988
Chile	1951	0.52	Fell 1973	Malaysia	1988–90	0.31	Survived
	1960	0.50	Fell 1973	Singapore	1973–90	0.02	Survived
	1962–72	0.63	Fell 1973	Taiwan	1984–90	0.11	Fell 1995
Colombia	1960–82	0.69	Survived	Bulgaria	1988–89	0.48	Fell 1990
Ecuador	1950–62	0.64	Fell 1963	East Germany	1979–88	0.10	Collapsed
	1979–83	0.51	Survived	Greece	1967–73	0.29	Fell 1974
Peru	1960	0.51	Fell 1962	Poland	1988	0.49	Fell 1989
	1963–67	0.58	Fell 1968	Portugal	1952–75	0.37	Fell 1976
	1980–83	0.53	Fell 1990	Spain	1951–76	0.11	Fell 1977
Suriname	1975–89	0.99	Fell 1990	Soviet Union	1988–89	0.45	Collapsed
Uruguay	1962–72	0.69	Fell 1973	Fiji	1990	0.47	Survived
	1985	0.54	Survived				
Bangladesh	1986–90	0.99	Survived				
India	1950–83	0.83	Survived				
Japan	1952–65	0.66	Survived				
South Korea	1960	0.81	Fell 1961				
Myanmar	1950–57	0.65	Fell 1958				
	1960–61	0.66	Fell 1962				
Pakistan	1950–55	0.79	Fell 1956				

(continued)

Table 2.2 (continued)

Country	Democracies predicted as dictatorships			Country	Dictatorships predicted as democracies		
	Period	Pr(REG = Dic) highest	Democracy		Period	Pr(REG = Dic) lowest	Dictatorship
	1972–76	0.91	Fell 1977				
	1988–90	0.74	Survived				
Philippines	1950–64	0.84	Fell 1965				
	1986–90	0.75	Survived				
Sri Lanka	1950–76	0.94	Fell 1977				
Thailand	1975	0.86	Fell 1976				
	1983–89	0.75	Survived				
Bulgaria	1990	0.52	Survived				
Czechoslovakia	1990	0.75	Survived				
West Germany	1951	0.52	Survived				
Greece	1963	0.50	Fell 1967				
Hungary	1990	0.57	Survived				
Poland	1989–90	0.54	Survived				
Turkey	1961–79	0.95	Fell 1980				
	1983–90	0.87	Survived				
Papua New Guinea	1975–85	0.64	Survived				
Solomon Islands	1981–88	0.78	Survived				
Vanuatu	1984–90	0.96	Survived				

predicted as a dictatorship during the entire period), in Belize, in Jamaica (which was predicted as a dictatorship until 1983), in Papua New Guinea (until 1985), in the Solomon Islands (until 1988), and in Vanuatu (not by 1990). The odds against democracy in India were extremely high.

2. Some countries succeeded in living under democracy when all the observable conditions conspired against it. These attempts succeeded in Bangladesh after 1986, Thailand after 1983, and Turkey after 1983. They failed in Ghana (twice), in Sudan, and in South Korea in 1960.
3. In some countries democracy was imposed by the Allies in the aftermath of World War II. These countries include West Germany, which by our prediction should have become a democracy only by 1952, and Japan, which should have become democratic only by 1965.
4. Some countries experienced dictatorships that should not have been warranted by their observed conditions. That was true notably of the four military dictatorships in Argentina, the Fujimori *autogolpe* in Peru, the Perez Jimenez dictatorship in Venezuela between 1948 and 1958, and the military rule in Greece between 1967 and 1973.
5. Several countries have waited much longer to make the transit to democracy than their conditions would predict. They include Seychelles, South Africa, Taiwan, Chile, Portugal, and Spain. Other countries have remained in the grip of authoritarianism even though all the observable factors indicate that they should have had democratic regimes: Mexico, which we would have predicted as a democracy already by 1951 and which had a probability of 0.11 of being a dictatorship in 1990; Singapore, which had a 0.02 probability of being a dictatorship in 1990, and Malaysia. Communist countries are a topic apart, and we shall return to it.
6. Finally, these results cast a new light on the instability of political regimes in many Latin American countries. It is often observed that democracy is particularly unstable in Latin America. Yet that may be a wrong conclusion: What is unstable in Latin America is dictatorship. If we take all countries in the world that fall in the Latin American income range per capita, from $971 to $8,233, we discover that democracies are more likely in Latin America than in other regions: Being in Latin America makes democracy 12 percent more likely (t value of the dummy is 3.470) than elsewhere. It thus appears that several Latin American countries experimented with democracy in the face of adverse conditions under which countries elsewhere in the world tended to remain in the grip of dictatorships, and under those conditions, democracies had little chance for survival.

To summarize, the level of economic development, as measured by per capita income, is by far the best predictor of political regimes. Yet there are countries in which dictatorships persist when all the observable conditions indicate they should not; there are others in which democracies flourish in spite of all the odds. Thus some factors influencing the incidence of the different kinds of regimes are not identified by this analysis.

Regime Dynamics

There are two distinct reasons that the incidence of democracy may be related to the level of economic development: Democracies may be more likely to emerge as countries develop economically, or, having been established for whatever reasons, democracies may be more likely to survive in developed countries. We call the first explanation "endogenous" and the second "exogenous."

Because we are dealing with only two kinds of regimes, democracies emerge whenever dictatorships die.[6] Hence, to assert that democracies emerge as a result of economic development is the same as saying that dictatorships die as countries ruled by them become economically developed. Democracy thus is said to be secreted out of dictatorships by economic development. A story told about country after country is that as a country develops, its social structure becomes complex, new groups emerge and organize, labor processes require the active cooperation of employees, and, as a result, the system can no longer be effectively run by command: The society is too complex, technological change endows the direct producers with autonomy and private information, civil society emerges, and dictatorial forms of control lose their effectiveness. Various groups, whether the bourgeoisie, workers, or just the amorphous "civil society," rise against the dictatorial regime, and it falls.

The endogenous explanation is a "modernization" theory. The basic assumption of this theory is that there is one general process, of which democratization is but the final facet. Modernization consists of a gradual differentiation and specialization of social structures culminating in a separation of the political from other structures, and making democracy possible. The specific causal chains consist in sequences of

[6] This is not quite true of our data set, because different countries enter and exit the sample at different moments. For the moment, we consider the population of countries as fixed.

industrialization, urbanization, education, communication, mobilization, political incorporation, and innumerable other "-ations": a progressive accumulation of social changes that make a society ready to proceed to the final one, democratization.

Modernization may be one reason that the incidence of democracy is related to economic development, and this is the reading imputed to Lipset by most commentators (Diamond 1992: 125; Huber, Rueschemeyer, and Stephens 1993: 711). His most influential critic, O'Donnell (1973: 3), paraphrases Lipset's thesis as saying that "if other countries become as rich as the economically advanced nations, it is highly probable that they will become political democracies." Democracy is endogenous, because it results from economic development under authoritarianism. The hypothesis is that if authoritarian countries develop, they become democratic. The sequence of events we would thus expect to observe is one of poor authoritarian countries developing and becoming democratic once they reach some level of development, a "threshold."

Yet suppose, just suppose, that dictatorships are equally likely to die, and democracies to emerge, at any level of development. They may die for so many different reasons that development, with all its modernizing consequences, plays no privileged role. After all, as Therborn (1977) emphasized, many European countries became democratized because of wars, not because of "modernization," a story repeated by the Argentine defeat in the Malvinas and elsewhere. Some dictatorships have fallen in the aftermath of the death of the founding dictator, such as a Franco, uniquely capable of maintaining the authoritarian order. Some have collapsed because of economic crises, some because of foreign pressures, and perhaps some for purely idiosyncratic reasons.

If dictatorships die and democracies emerge randomly with regard to economic development, is it still possible that there should be more democracies among wealthy countries than among poor countries? If one is to judge Lipset (1959: 56) by his own words – "The more well-to-do a nation, the greater the chances it will sustain democracy" – then even if the emergence of a democracy is independent of the level of development, the chance that this regime will survive will be greater if it is established in an affluent country. We would thus expect democracies to appear randomly with regard to levels of development, and then to die in the poorer countries and to survive in the wealthier countries. And because every time a dictatorship happened to die in an affluent country democracy would be there to stay, history should grad-

ually accumulate wealthy democracies. This is no longer a modernization theory, because the emergence of democracy is not brought about by development. Democracy appears exogenously, deus ex machina. It tends to survive if a country is "modern," but it is not a product of "modernization."

Some algebra may help elucidate what is entailed. Let the probability that a country, $i = 1, \ldots, N$, will have an authoritarian regime during a particular year, $t = 1, \ldots, T$, be $p_A(it)$, where the subscript "A" stands for "authoritarian," and let the probability that it will have a democratic regime be $p_D(it) = 1 - p_A(it)$. Let the probability that a dictatorship will die from one year to another be $p_{AD}(it)$, so that the probability that it will survive is $p_{AA}(it) = 1 - p_{AD}(it)$. Similarly, let the probability that a democracy will die be $p_{DA}(it) = 1 - p_{DD}(it)$. If we assume for the time being that these "transition probabilities," p_{jk}, j = A, D, k = A, D, are constant each year and are the same for all countries, then we can describe the evolution of regimes by

$$p_D(t) = p_{DD}p_D(t-1) + p_{AD}p_A(t-1)$$

$$p_A(t) = p_{DA}p_D(t-1) + p_{AA}p_A(t-1).$$

Therefore the proportion of regimes that will be democracies next year will depend on the proportion of democracies that survive from the current year, p_{DD}, and the proportion of dictatorships that will die, that is, become democracies, p_{AD}. Similarly for dictatorships. In matrix form,

$$\begin{bmatrix} p_D(t) \\ p_A(t) \end{bmatrix} = \begin{bmatrix} p_{DD} & p_{AD} \\ p_{DA} & p_{AA} \end{bmatrix} \begin{bmatrix} p_D(t-1) \\ p_A(t-1) \end{bmatrix}.$$

Given the transition rates, there exists a distribution of regimes that, if reached, will remain stable in the absence of exogenous disturbances. These equilibrium probabilities are

$$p_D^* = \frac{p_{AD}}{p_{DA} + p_{AD}} \quad \text{and} \quad p_A^* = \frac{p_{DA}}{p_{DA} + p_{AD}}.$$

This long-run distribution of regimes depends only on the relative rates at which they die each year, not on their initial distribution. If $p_{AD} > p_{DA}$, then in the long run there will be more democracies than dictatorships in the world. Moreover, whatever the initial distribution of regimes, their proportions will over time tend to these equilibrium values. And because the probabilities that regimes will die during any particular year are likely to be low – in fact they are low – this convergence will be monotonic, that is, the proportion of one regime will continue to increase, and that of the other to decline.[7] If at the beginning the proportion of democracies was lower than p_D^*, this proportion will continually increase over time, and the proportion of dictatorships will decline.

Suppose now that whereas dictatorships die at some constant annual rate, democracies never die, so that $p_{DA} = 0$. Then in the long run all countries will be democracies. Every time a dictatorship dies, a democracy is established, and, once it is established, it survives forever. The speed of this process will depend on the rate at which dictatorships die, but the accumulation of democracies is inexorable.

Now, to return to the issue at stake, imagine that these transition probabilities are not constant, but depend on the level of development. To keep matters simple, suppose that there are only two levels: low (L) and high (H). At the low level, both regimes have some probability of dying that is more than zero and less than one. Now consider two possibilities: One is that while $p_{AD}(L) < 1$, once dictatorships pass the threshold that defines the high level, they are certain to die, so that $p_{AD}(H) = 1$, whereas democracies die at the same rate, $p_{DA} = p_{DA}(L) = p_{DA}(H)$, at either level. The transition probabilities are thus

Level = low		Level = high	
p_{DD}	p_{AD}	p_{DD}	1.00
p_{DA}	p_{AA}	p_{DA}	0.00

Whereas the long-run proportion of democracies at the low level will be $p_D^*(L) = p_{AD}/(p_{AD} + p_{DA})$, at the high level it will be $p_D^*(H) = 1/(1 + p_{DA})$, so that the equilibrium proportion of democracies will be higher at the higher level, $p_D^*(L) < p_D^*(H)$. Thus, the proportion of democracies will be higher at the high level of development because democracies are more likely to emerge as a result of development. This is the "endogenous" (modernization) version of the explanation.

But suppose, alternatively, that authoritarian regimes die at exactly the same rate whether in poor countries or developed ones, so that $p_{AD}(L) = p_{AD}(H) = p_{AD}$, and in turn democratic regimes never die once they are established in affluent countries, so that $p_{DA}(H) = 0.00$. The transition probabilities are then

[7] Convergence will be monotonic if $p_{AD} + p_{DA} < 1$; otherwise, the proportions of regimes will oscillate around the equilibrium.

$$\text{Level} = \text{low} \qquad \text{Level} = \text{high}$$
$$\begin{bmatrix} p_{DD} & p_{AD} \\ p_{DA} & p_{AA} \end{bmatrix} \qquad \begin{bmatrix} 1.00 & p_{AD} \\ 0.00 & p_{AA} \end{bmatrix}$$

and we already know that whereas the long-run proportion of democracies at the low level will be $p_D^*(L) < 1$, at the high level all countries will become democracies in the long run. Hence, we will observe an aggregate relationship between the level of development and the incidence of democracies even though democracies are equally likely to emerge at any level, that is, even if development under authoritarianism does not increase the probability that a country will become democratic. This is then the "exogenous" version.

Thus, to decide which mechanism generates the relationship between development and democracy, we need to determine how the respective transition probabilities change with the level of development. Appendix 2.1 describes how we do it.

Level of Economic Development and Regime Dynamics

Examine first some descriptive patterns, presented in column 5 of Table 2.3. If the theory according to which the emergence of democracy is a result of economic development is true, transitions to democracy should be more likely when authoritarian regimes reach higher levels of development. In fact, dictatorships survive almost invariably in the very poor countries, those whose per capita incomes are under $1,000, or at least they succeed one another and the regime remains the same.[8] They are less stable in countries with incomes between $1,001 and $4,000, and even less so between $4,001 and $7,000. But if income reaches the level of $7,000, the trend reverses and they become more likely to survive. As the lower panel of Table 2.3 shows, transitions to democracy are less likely in poor countries and in rich ones, but they are more likely at the intermediate income levels. If we take all the dictatorships, their probability of dying during any year is 0.0198; for those with incomes over $1,000, this probability is 0.0280, over $5,000 it is 0.0526, over $6,000 it is 0.0441, and over $7,000 it is 0.0286; the two very wealthy dictatorships with incomes above $8,000 still survived in 1990. Hence, it appears that Huntington was correct, albeit only with regard to authoritarian regimes, when he argued that one should expect to observe "a bell-shaped pattern of instability" (1968: 43). Economic development seems to destabilize dictatorships in countries at interme-

[8] Remember that we treat dictatorships that succeed one another as a single spell.

Table 2.3. Transitions, by lagged per capita income (LEVLAG)

Low–high	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
0–1,000	0.0147	15	1,019	0.0063	6	945	0.1216	9	74
1,001–2,000	0.0321	32	997	0.0242	18	745	0.0556	14	252
2,001–3,000	0.0325	16	493	0.0261	8	306	0.0428	8	187
3,001–4,000	0.0201	7	349	0.0146	3	205	0.0278	4	144
4,001–5,000	0.0339	8	236	0.0469	6	128	0.0185	2	108
5,001–6,000	0.0308	6	195	0.0595	5	84	0.0090	1	111
6,001–7,000	0.0190	3	158	0.0606	2	33	0.0080	1	125
7,001–	0.0015	1	679	0.0286	1	35	0.0000	0	644
Total	0.0213	88	4,126	0.0198	49	2,481	0.0237	39	1,645
Above	**PJK**	**TJK**	**TOT**	**PAD**	**TAD**	**TA**	**PDA**	**TDA**	**TD**
0	0.0213	88	4,126	0.0198	49	2,481	0.0237	39	1,645
1,000	0.0235	73	3,105	0.0280	43	1,535	0.0191	30	1,570
2,000	0.0194	41	2,110	0.0316	25	791	0.0121	16	1,319
3,000	0.0155	25	1,616	0.0351	17	484	0.0071	8	1,132
4,000	0.0142	18	1,268	0.0500	14	280	0.0040	4	988
5,000	0.0097	10	1,032	0.0526	8	152	0.0023	2	880
6,000	0.0048	4	837	0.0441	3	68	0.0013	1	769
7,000	0.0015	1	679	0.0286	1	35	0.0000	0	644

Notes: PJK stands for the probability of any regime transition; TJK is their number. TOT is the total number of annual observations. PAD stands for the probability of transition from authoritarianism to democracy; TAD is their number. TA is the total number of annual observations of authoritarianism to PDA stands for the probability of transition from democracy to authoritarianism; TDA is their number. TD is the total number of annual observations of democracy.

diate levels of income, but not in those that are poor nor in those that are wealthy.

Indeed, dictatorships survived for years in countries that were wealthy by comparative standards. Whatever the threshold at which development is supposed to dig the grave for an authoritarian regime, it is clear that many dictatorships must have passed it in good health. Note that we have already excluded six wealthy countries that derive large proportions of their revenues from oil. Yet dictatorships flourished also in Singapore, East Germany, Taiwan, the Soviet Union, Spain, and Mexico for many years after those countries rose to incomes well above $5,000, an income that Austria, Belgium, France, West Germany, Iceland, Ireland, Italy, the Netherlands, and Norway did not have by 1951. Table 2.4 lists the dictatorships that survived even though the probability that they should be democracies, as predicted by the level of development alone, was above 0.50, which corresponds to per capita income of $4,115.

Conversely, many dictatorships fell in countries with low income levels. Six fell in countries with incomes below $1,000, and eighteen in countries between $1,000 and $2,000, and altogether thirty-six collapsed when the probability that the regime should be democratic, as predicted by per capita income alone, was less than 0.50. Hence, with twenty-five dictatorships surviving in wealthy countries and thirty-six falling in poor ones, the causal power of development in generating democracies cannot be very strong. The distribution of levels at which transitions to democracy occur is highly scattered.

Yet this may not be a fair test of modernization theory. After all, this theory supposes that countries develop over a longer period, so that all the modernizing consequences have time to accumulate. Let us therefore examine more closely those countries that did develop under authoritarian regimes and that at some time became "modern," which we will take somewhat arbitrarily to mean that they had a per capita income of $4,115 (Table 2.5).

Twenty dictatorships (to remind, out of 123) did develop over longer periods of time and reached "modernity." Gabon, Mexico, Syria, and Yugoslavia developed continuously for at least a decade, reached the level at which democracy would be expected to be the more likely regime, and, having remained under dictatorships, experienced a series of economic crises. Singapore and Malaysia developed over a long period, became wealthy, and remained dictatorships. In East Germany, Taiwan, the Soviet Union, Spain, Bulgaria, and Hungary competitive elections eventually took place, but at very different levels of income.

Table 2.4. Highest levels of per capita income (LEVEL) under which dictatorships survived in different countries

Country	Year	Highest level	Pr(REG = Dem)[a]
Singapore	1990	11,698	0.992
East Germany	1988	10,433	0.977
Iraq	1979	8,598	0.923
Taiwan	1990	8,067	0.895
Soviet Union	1989	7,744	0.875
Spain	1976	7,390	0.851
Gabon	1976	6,969	0.818
Venezuela	1957	6,939	0.815
Bulgaria	1988	6,866	0.809
Argentina	1980	6,505	0.776
Mexico	1981	6,463	0.772
Iran	1976	6,434	0.769
Argentina	1972	5,815	0.705
Yugoslavia	1979	5,674	0.690
Hungary	1987	5,650	0.687
Greece	1973	5,218	0.637
Uruguay	1981	5,162	0.630
Malaysia	1990	5,117	0.625
Poland	1978	5,102	0.623
South Korea	1987	5,080	0.620
Syria	1981	4,668	0.569
Portugal	1974	4,657	0.568
Argentina	1962	4,541	0.553
Argentina	1957	4,355	0.530
Suriname	1981	4,220	0.513

[a] Pr(REG = Dem) is the probability that a regime will be democratic given the level of income. It is calculated as $1 - F(\alpha + \beta^* \text{LEVEL})$, where $F(\cdot)$ is the c.d.f. of the normal distribution.

Given its 1974 income level, Uruguay should have never been a dictatorship. The economic history of the Chilean dictatorship is convoluted: Its income in 1974 was $3,561; it climbed with downs and ups to $4,130 by 1981, collapsed to $3,199 by 1983, recovered to surpass the 1974 level only by 1986, and passed the threshold of $4,115 in 1989, exactly

Table 2.5. Countries that developed over long periods under dictatorships and reached incomes above $4,115

	Entry			Peak			Transition	
Country	Year	LEVEL	Passes Pr = 0.50	Year	LEVEL	Pr	year at Pr	
Gabon	1961	1,969	1973	1976	6,969	0.82	Never	
Mexico	1951	2,317	1971	1981	6,463	0.77	Never	
Brazil	1965	1,864	1980	1978	3,881	0.47	1978	0.47
Chile	1974	3,561	1981	1981	4,130	0.50	No	
			1989	1989	4,355	0.53	1989	0.53
Uruguay	1974	4,148	1974	1981	5,162	0.63	1985	0.48
South Korea	1961	911	1985	1988	5,606	0.68	1988	0.68
Malaysia	1957	1,282	1982	1990	5,117	0.63	Never	
Singapore	1965	1,845	1972	1990	11,698	0.99	Never	
Syria	1961	1,607	1978	1981	4,668	0.57	Never	
Taiwan	1952	968	1979	1990	8,067	0.90	Post-1990	
Bulgaria	1981	4,216	????	1989	6,739	0.80	1990	0.80
Czechoslovakia	1961	1,709	1989	1990	4,094	0.49	1990	0.49
East Germany	1971	4,995	????	1988	10,433	0.98	1990	????
Greece	1967	3,308	1970	1974	4,966	0.61	1974	0.61
Hungary	1971	3,657	1974	1987	5,650	0.69	1989	0.68
Poland	1971	3,109	1974	1978	5,102	0.62	No	
			1985	1988	4,529	0.55	1989	0.55
Portugal	1951	1,314	1973	1974	4,657	0.57	1975	0.52
Spain	1951	2,205	1964	1976	7,390	0.85	1976	0.85
Soviet Union	1961	2,536	1971	1989	7,744	0.88	Collapsed	
Yugoslavia	1961	2,073	1974	1979	5,674	0.69	Collapsed	

Note: This table lists countries that grew over a period of at least seven years and at some time reached a per capita income of $4,115. "Entry" is the first year of the dictatorship or 1951 or the year after the country became independent or the year after economic data became available. "Passes Pr = 0.50" is the year when the country reached a per capita income of $4,115. "Peak" gives the time when the country reached the highest income level under the particular dictatorship and the probability, as predicted by per capita income, that it would be a democracy. Finally, "Transition" gives the year the dictatorship fell, if ever, and the probability of democracy at that time.

the year of transition. The history of Poland is similar: By our criteria, it reached the threshold of democracy in 1974; it experienced an economic crisis in 1979 and a mass movement for democracy in 1980, passed the threshold again in 1985, and became a democracy in 1989. In turn, Brazil, Czechoslovakia, Portugal, and perhaps even South Korea and Greece are the dream cases for a modernization theorist. Those countries developed under dictatorships, became wealthy, and threw off

their dictatorships more or less when their levels of development would have predicted. But they are few.

This is not to say that democracy did not emerge in some countries when they became modern. Indeed, perhaps in those countries that did develop over a long period, the very thought of democracy appeared on the political agenda because they were too modern – not only in those countries that became democratic just when our model predicts but also those that waited much longer: Taiwan, the Soviet Union, Spain, and Bulgaria. Modernization may create the "prerequisites" for political conflict over the form of regime. But the manner in which these conflicts will develop remains unpredictable. When conflicts over regimes are examined at a micro level, by looking at the political actors involved, their motives and their beliefs, it becomes apparent that these are situations laden with uncertainty (O'Donnell and Schmitter 1986; Przeworski 1991). Game-theoretic analyses of transitions to democracy make it apparent that the actors involved often do not know each other's preferences, the relationships of physical forces, or the outcomes of eventual conflicts (Wantchekon 1996; Zielinski 1997). And under such conditions, various equilibria can prevail: Whereas transition to democracy is one feasible outcome, so is the perpetuation of the dictatorial status quo, or even a solidification of dictatorship. Hence, even if modernization may generate conflicts over democracy, the outcomes of such conflicts are open-ended.

But if modernization theory is to have any predictive power, there must be some level of income at which one can be relatively sure that the country will throw off its dictatorship. And one is hard put to find this level: Even among the countries that satisfy the premise of the modernization theory, those listed in Table 2.5, the range of incomes at which dictatorships survived is very wide. Few authoritarian regimes have developed over a long period, and even if most of them should eventually become democracies, no level of income can predict when that should occur.

Moreover, even if to predict is not the same as to explain, "explaining" can easily entail an ex-post fallacy. Take Taiwan, which in 1952 had a per capita income of $968. It developed rapidly, passing by 1979 our threshold of $4,115; it had a probability of 0.10 of being a dictatorship in 1990, and in 1995, for the first time, elected its president in contested elections. Suppose that during all that time the Taiwanese dictatorship had faced each year a probability of 0.02 of dying, for reasons not related to development. It thus would have had a cumulative chance of about 50 percent of not being around by 1995 even if it

had not developed at all. Thus we might erroneously attribute to development what may have been just a cumulation of random hazards.[9] And, indeed, the Taiwanese dictatorship most likely democratized to mobilize international support against the threat from China: for geopolitical reasons, not for economic reasons.

In sum, the causal power of economic development in bringing down dictatorships appears paltry. The level of development, at least as measured by per capita income, gives little information about the chances of transition to democracy.

On the other hand, per capita income has a strong impact on the survival of democracies. As column 8 of Table 2.3 shows, in countries with per capita incomes under $1,000, the probability that a democracy would die during a particular year was 0.1216, which implies that their expected life was about eight years. Between $1,001 and $2,000, this probability was 0.0556, for an expected duration of about eighteen years, and the probability that a democracy would die in a country with an income above $4,000 was almost zero. Indeed, no democracy has ever been subverted, not during the period we studied nor ever before nor after, regardless of everything else, in a country with a per capita income higher than that of Argentina in 1975: $6,055. There is no doubt that democracy is stable in affluent countries: The probability of it collapsing is almost zero; the coefficient on LEVEL in statistical analyses of survival (see Appendix 2.2) is positive and significant, and the stark fact is that up until 1990 thirty-one democracies had lived 742 years with incomes above that of Argentina in 1975, and not one had ever fallen.

A question that has been extensively debated is whether or not the stability of democracy is monotonic with regard to the level of development. Although there are important theoretical differences and even sharper political differences between Huntington (1968; Huntington and Nelson 1976) and O'Donnell (1973), both have claimed that there is a level beyond which further development decreases the probability that democracy will survive. Huntington has argued that both regime types become unstable when a country undergoes modernization, which occurs at some intermediate level of development. O'Donnell, in turn, has claimed that democracies tend to die when a country exhausts "the easy stage of import substitution," again at some intermediate level of economic development.

[9] An analogy may be useful. Suppose that a woman runs a risk of 0.01 of dying from accidental causes during each year of her life, and then at the age of 78 she gets hit by a falling brick. To attribute her death to development would be to conclude that she died of old age.

Huntington (1968: 1) was concerned with stability and did not care whether regimes were democratic or authoritarian. "The most important political distinction among countries," he thought, "concerns not their form of government but their degree of government." Hence, the United States, the United Kingdom, and the Soviet Union were all systems in which "the government governs." Whether it was the Politburo, the cabinet, or the president mattered little. "The problem," he insisted, "was not to hold elections but to create organizations." Indeed, we were told, "the primary problem is not liberty but the creation of a legitimate public order" (1968: 7). Though never explicitly referring to Lipset, Huntington (1968: 35–6) observed that "in actuality, only some of the tendencies encompassed in the concept of 'political modernization' characterized the 'modernizing' areas. Instead of a trend toward competitiveness and democracy, there was an 'erosion of democracy' and a tendency to autocratic military regimes and one-party regimes. Instead of stability, there were repeated coups and revolts." We should expect "a bell-shaped pattern of political instability" (p. 43) among democratic as well as authoritarian regimes.

O'Donnell dragged Lipset over the coals for various methodological transgressions. Reflecting on his criticisms in retrospect, he observed that "Chapter I is now an archeological remnant – testimony of a debate that in 1971 had recently begun and today is finished: it is no longer necessary to lead the reader through tedious series of data to demonstrate that 'socio-economic development' does not foster 'democracy and/or political stability' " (1979: 204). What the data show, O'Donnell asserted, is that "in contemporary South America, the higher and the lower levels of modernization are associated with non-democratic political systems, while political democracies are found at intermediate levels of modernization." Hence, at least within the range observed by O'Donnell, we should observe that democracies fall as economies develop.

Is there some level of development beyond which democracies are more likely to die than they were earlier? We have already seen in Table 2.3 that the probability of a democracy dying declines monotonically with per capita income. Although O'Donnell did cite a countercase against Lipset, his account of the rise of bureaucratic authoritarianism does not undermine Lipset's theory.[10] O'Donnell studied a country that turns out to be a distant outlier: As Table 2.6 shows, three of the four

[10] O'Donnell was careful not to make general claims: His purpose was to explain the downfall of democracies in the Southern Cone. But his theory of "bureaucratic authoritarianism" captured the imaginations of scholars all around the world, who treated it as applicable almost everywhere.

Table 2.6. Transitions to dictatorship, 1951–1990, by last full year of democracy, per capita income, and type of democracy

Country	Year	LEVEL	Type
Argentina	1975	6,055	Presidential
Argentina	1965	5,011	Presidential
Argentina	1965	4,790	Presidential
Uruguay	1972	4,034	Presidential
Argentina	1954	3,989	Presidential
Suriname	1979	3,923	Parliamentary
Chile	1972	3,857	Presidential
Greece	1966	3,176	Parliamentary
Turkey	1979	2,957	Parliamentary
Peru	1967	2,694	Presidential
Guatemala	1981	2,534	Presidential
Suriname	1989	2,491	Mixed
Peru	1989	2,247	Presidential
Panama	1967	2,227	Presidential
Peru	1961	2,148	Presidential
Bolivia	1979	2,037	Presidential
Brazil	1963	1,889	Presidential
Guatemala	1962	1,693	Presidential
Thailand	1975	1,686	Parliamentary
Guatemala	1953	1,509	Presidential
Ecuador	1962	1,451	Presidential
Nigeria	1982	1,419	Presidential
Sri Lanka	1976	1,336	Parliamentary
Honduras	1971	1,236	Presidential
Philippines	1964	1,217	Presidential
Congo	1962	1,120	Presidential
Sierra Leone	1966	1,097	Parliamentary
Ghana	1971	1,042	Parliamentary
Honduras	1962	1,042	Presidential
Somalia	1968	1,015	Mixed
Ghana	1980	978	Presidential
Pakistan	1976	943	Presidential
South Korea	1960	898	Parliamentary
Sudan	1988	765	Parliamentary
Nigeria	1965	621	Parliamentary
Pakistan	1955	577	Parliamentary
Uganda	1984	576	Presidential
Myanmar	1961	312	Parliamentary
Myanmar	1957	267	Parliamentary

transitions to authoritarianism at per capita incomes above $4,000 occurred in Argentina, and the fourth in Uruguay. Thus, Lipset was right in thinking that the richer the country, the more likely it is to sustain democracy.

Clearly, this fact cries for an explanation. One possible account for the durability of democracies in wealthy countries, proposed already by Lipset, is that, through various sociological mechanisms, wealth lowers the intensity of distributional conflicts. An alternative explanation is that income is just a proxy for education, and more highly educated people are more likely to embrace democratic values. Education, specifically accumulated years of education for an average member of the labor force, does increase the probability of survival of democracy at each level of income.[11] The probability that a democracy will die in a country where the average member of the labor force has fewer than three years of formal education is 0.1154; it is 0.0620 when the level of education is between three and six years, 0.0080 when it is six to nine years, and zero when the average worker has more than nine years of education. The highest level of education under which a country experienced a transition to dictatorship was 8.36 years in Sri Lanka in 1977, but that was an outlier. The next highest level of education when democracy fell was 6.85 years in Uruguay.

But income is not a proxy for education. Even though these two variables are highly correlated (0.78), their effects are to a large measure independent. As Table 2.7 shows, whereas at each income level the probability of democracy falling decreases with increasing education, the converse is also true: At each level of education, the probability of democracy dying decreases with income. Hence, for reasons that are not easy to identify, wealth does make democracies more stable, independently of education.

Finally, we find no evidence of "consolidation." Democracies become "consolidated" if the conditional probability that a democratic regime will die during a particular year given that it has survived thus far (the "hazard rate") declines with its age, so that, as Dahl (1990) has argued, democracies are more likely to survive if they have lasted for some time. Examining the ages at which democracies die indicates that this

[11] We have data only for 2,900 country-years of education. The mean is 4.85 years, and the standard deviation is 3.12, with a minimum of 0.03 (Guinea in 1966) and a maximum of 12.81 (United States in 1985); 27.6% of the sample had educational levels lower than three years, 64.4% lower than six years, and 90.8% lower than nine years. Only 13.0% of the sample had education levels higher than Sri Lanka in 1977, and 26.1% higher than Uruguay in 1973.

Table 2.7. Regime transitions, by lagged per capita income and average education

Income	Education (in years) 0–3			3–6			6–9			9–			Total		
0–4,000															
All	0.0208	20	961	0.0393	27	687	0.0198	5	252	0.0000	0	35	0.0269	52	1,936
Dic	0.0098	15	511	0.0294	15	511	0.0194	3	155	0.0000	0	28	0.0167	26	1,557
Dem	0.1212	12	99	0.0681	12	176	0.0206	2	97	0.0000	0	7	0.0686	26	379
4,001–8,000															
All	0.0000	0	36	0.0458	6	131	0.0172	4	233	0.0000	0	68	0.0214	10	468
Dic	0.0000	0	31	0.0434	3	69	0.0390	3	77	0.0000	0	7	0.0326	6	184
Dem	0.0000	0	5	0.0484	3	62	0.0064	1	156	0.0000	0	61	0.0141	4	284
8,001–															
All	0.0000	0	1	0.0000	0	3	0.0000	0	129	0.0000	0	251	0.0000	0	384
Dic	0.0000	0	1	0.0000	0	0	0.0000	0	4	0.0000	0	0	0.0000	0	5
Dem	0.0000	0	0	0.0000	0	3	0.0000	0	125	0.0000	0	251	0.0000	0	379
Total															
All	0.0200	20	998	0.0401	33	822	0.0147	9	614	0.0000	0	353	0.0222	62	2,788
Dic	0.0089	8	894	0.0310	18	580	0.0253	6	237	0.0000	0	34	0.0183	32	1,746
Dem	0.1154	12	104	0.0620	15	242	0.0080	3	377	0.0000	0	319	0.0288	30	1,042

Note: The first number under each level of education is the probability of transition away from a given regime; the second number is the number of such transitions, and the third is the total number of annual observations of this regime at that level of education.

is true, but once the level of development is taken into account, the hazard rates become independent of age, meaning that for a given level of development, democracies are about equally likely to die at any age (see Appendix 2.2 for details). These findings indicate that the hazard rates uncorrected for the level of development decline because countries develop, not because a democracy that has long been around is more likely to continue.

The conclusion reached thus far is that whereas economic development under dictatorship has at most a non-linear relationship to the emergence of democracies, once they are established, democracies are much more likely to endure in more highly developed countries. Yet because our systematic observations begin in 1950, the question arises whether or not these patterns also characterize the earlier period. Studies in the Lipset tradition have assumed that they do: They have inferred the historical process from cross-sectional observations. Yet the validity of such inferences is contested by followers of Moore (1966), who claimed that the Western European route to democracy was unique, not to be repeated. Note that when Rustow (1970) pointed out that the levels of development at which different countries permanently established democratic institutions varied widely, Lipset's rejoinder (1981) was that the thresholds at which democracy was established were lower for the early democracies. Is that true?

Although economic data for the pre-war period are not comparable to those at our disposal after 1950, Maddison (1995) reconstructed per capita income series for several countries going back to the nineteenth century. Table 2.8 portrays the pre-1950 experiences with democracy. The levels at which democracies were established before 1950 vary as widely as they do for the later period; indeed, they cover almost the entire range of incomes observed. The poorest countries in which democracy was experimented with before 1950 were Pakistan, which became independent in 1947 when it had per capita income of 631 (1990 G-K dollars), and India, which in 1947 had income of 641. Yugoslavia had income of 1,064 in 1921; Bulgaria had income of 1,169 in 1926; Portugal had income around 1,354 in 1910 (1913 figure); Brazil had income of 1,460 in 1946. The United States in 1830 (interpolated from 1820 to 1850) and Norway in 1884 must have had about the same income as Brazil in 1946. In turn, New Zealand had an income of 5,367 when it became independent in 1907, Venezuela had 5,102 when it first experimented with democracy in 1945, and the United Kingdom had 5,052 in 1911. Hence, the levels at which transitions to democracy occurred before 1950 were highly dispersed. Again, there was no clear threshold.

Table 2.8. Countries (in our sample) that experienced democracy before 1950

	First democracy		Pre-1950 reversal		Last pre-1950 democacy		Situation in 1950	
Country	**Date**	**LEVEL**	**Date**	**LEVEL**	**Date**	**LEVEL**	**LEVEL**	**Regime**
Canada (1920)	1920	3,659	None		1920		7,047	Dem
Costa Rica	1919		1948		1948			Dem
Guatemala	1945		None		1945			Dem
United States	1830	1,464[a]	None		1830		9,573	Dem
Argentina	1912	3,904	1930	4,080	1946	4,665	4,987	Dem
Brazil	1946	1,460			1946	1,460	1,673	Dem
Chile	1891	1,949(1900)	1925	2,876	1932	2,274	3,827	Dem
Colombia	1910	1,236(1913)	1949	2,107			2,089	Dic
Ecuador	1947		None		1947			Dem
Peru	1939	1,884	1948	2,094			2,263	Dic
Uruguay	1942				1942			Dem
Venezuela	1945	5,102	1948	7,394			7,424	Dic
Israel (1948)	1948		None		1948			Dem
India (1947)	1947	641	None		1947		597	Dem
Myanmar (1948)	1948		None		1948		393	Dem
Pakistan (1947)	1947	631	None		1947		650	Dem
Philippines (1946)	1946		None		1946		1,293	Dem
Sri Lanka (1948)	1948		None		1948			Dem
Austria	1918	2,572	1934	2,871	1945		3,731	Dem
Belgium	1919	3,318	None		1919		5,346	Dem
Bulgaria (1908)	1926	1,169	1934	1,309			1,651	Dic
Czechoslovakia (1918)	1920	1,933	1948	3,088			3,501	Dic
Denmark	1901	2,986	None		1901		6,683	Dem
Finland (1917)	1919	1,610	1930	2,589	1944		4,131	Dem
France[b]	1875	2,198	None(?)		1875		5,221	Dem
Germany	1919	2,763	1933	3,591	1949		4,281	Dem
Greece	1926	2,368(1929)	1936	2,501	1946	1,412	1,951	Dem
Iceland (1918)	1920		None		1920			Dem
Ireland (1921)	1923	2,625(1926)	None		1923		3,518	Dem
Italy	1919	2,783	1922	2,574	1946		3,425	Dem
Luxembourg	1868		None				1,868	Dem
Netherlands	1868	2,640(1870)	None		1868		5,850	Dem
Norway (1905)	1884	1,466	None		1884		4,969	Dem
Poland (1918)	1919		1926	2,117(1929)			2,447	Dic
Portugal	1910	1,354(1913)	1926	1,536(1929)			2,132	Dic
Spain	1931	2,713	1936	2,304			2,397	Dic
Sweden	1918	2,533	None		1918		6,738	Dem
Switzerland	1870	2,172	None		1870		8,939	Dem
United Kingdom	1911	5,052	None		1911		6,847	Dem
Yugoslavia (1918)	1921	1,064	1929	1,376			1,546	Dic
Australia (1901)	1901	4,112	None		1901		7,218	Dem
New Zealnad (1907)	1907	5,367	None		1907		8,495	Dem

Notes: Income figures are not the same as in the rest of the text. They are expressed in 1990 Geary-Khamis dollars, as reported by Maddison (1995). Blanks indicate that income data are not available. Democratization is dated by (1) the occurrence of contested elections organized on a partisan basis and (2) legislative sovereignty of the lower house elected by broadest suffrage (rather than responsibility to the crown or a non-elected upper chamber), whichever came later, but not by the extent of franchise or participation, and (3) when relevant, the first victory of the opposition candidate in presidential elections. For countries that became independent after 1871, dates in parentheses are for the year of independence.

[a] Interpolated, based on 1820 and 1850.

[b] The question mark refers to the Vichy regime.

Reversals occurred in four out of ten countries. And, again, they were more likely to occur in countries where democracy was established when they were poor. Among the countries for which income data are available, eight democracies subsequently fell and four survived until 1950 (but in Pakistan democracy did fall soon after) where democracy was established with incomes under $2,000. In turn, six fell and twelve survived until 1950 (indeed, until today) in countries that had incomes above $2,000 when democracy was first established. The collapse of democracy in Chile, Colombia, Peru, Austria, Bulgaria, Germany, Greece, Finland, Italy, Poland, Portugal, Spain, and Yugoslavia occurred when these countries had incomes below 3,000 1990 G-K dollars, which means well below 3,000 1985 dollars, which we have been using. The highest level at which democracy collapsed was in Venezuela in 1948, but note that the 7,394 1990 G-K dollars corresponds to roughly 4,880 1985 PPP dollars, which we have been using throughout. Hence, the Argentine 1975 income of 6,055 still stands as the highest at which democracy was ever subverted.

To conclude, there is no doubt that democracies are more likely to be found in the more highly developed countries. Yet the reason is not that democracies are more likely to emerge when countries develop under authoritarianism, but that, however they do emerge, they are more likely to survive in countries that are already developed.

Economic Growth and Regime Dynamics

The conditions that countries inherit are not sufficient to explain why regimes survive or die. Dictatorships lasted in many countries that not only were wealthy but also enjoyed other conditions that should have predisposed them toward democracy. And, conversely, some democracies were established in countries that were poor and yet endured the passage of time.

Table 2.9 presents a list of democracies that lasted at least twenty years, organized by ascending levels of per capita income at the time when they were established or, when we could not determine their initial income, when data were first available. The income figures for the pre-1950 period are based on extrapolations and are at best approximative.[12] But the range of incomes at which lasting democracies were established is so large that all the inaccuracies do not change

[12] To compare the pre- and post-1950 incomes, in Table 2.9 we are extrapolating incomes expressed in 1985 PPP USD, rather than the 1990 G-K dollars used in Table 2.8.

Table 2.9. Democracies that lasted at least 20 years, by per capita income and by income distribution

Country	Established (year)	First observed		Lasted until	Income distribution					
		Year	LEVEL		Year	INEQ	GINI	Year	INEQ	GINI
India	1947	1947	556	Now	1951	6.14	35.56	1990	4.30	29.69
Philippines	1946	1946	697	1965	1957	7.42	46.14	1965	16.00	51.32
Brazil	1946	1946	917	1964	1960	18.72	53.00	1970	19.28	57.61
Netherlands	1868	1868	1,050	Now	1975	4.43	28.60	1989	5.11	29.60
Austria	1945	1945	1,093	Now						
Sri Lanka	1948	1951	1,107	1977	1953	10.35	47.80	1979	8.70	43.50
United States	1830	1830	1,119	Now	1947	8.20	34.28	1990	9.60	37.80
Norway	1884	1884	1,228	Now	1962	8.08	37.52	1991	7.69	33.31
Malta	1964	1964	1,377	Now						
Dominican R.	1966	1966	1,413	Now	1976		45.00	1989	13.26	50.46
Costa Rica	1948	1951	1,449	Now	1961	8.87	50.00	1989	12.67	46.07
Colombia	1958	1958	1,613	Now	1970	8.63	52.02	1988	15.11	51.20
Chile	1932	1932	1650	1973	1968	11.42	45.64	1971	12.16	46.00
Italy	1946	1946	1,708	Now	1974		41.00	1989	4.56	32.74
France	1875	1875	1,748	Now	1956		49.00	1984	6.38	34.91
Japan	1952	1952	1,768	Now	1962	7.71	37.20	1990		35.00
Jamaica	1962	1962	1,802	Now	1958		47.71	1990	8.09	41.79
Papua NG	1975	1975	1,870	Now						
Sweden	1918	1918	1,919	Now	1967	8.92	33.41	1990	5.16	32.52
Denmark	1901	1901	2,213	Now	1976	5.44	31.00	1992	6.90	33.20

(continued)

Table 2.9 (continued)

Country	Established (year)	First observed		Lasted until	Income distribution					
		Year	LEVEL		Year	INEQ	GINI	Year	INEQ	GINI
Switzerland	1870	1870	2,226	Now						
West Germany	1949	1949	2,567	Now	1963	3.58	28.13	1984	5.90	32.19
Israel	1947	1954	2,585	Now						
Finland	1944	1944	2,636	Now	1966	5.08	31.80	1991	4.34	26.11
Ireland	1922	1951	2,816	Now	1973	8.79	38.69	1987	9.05	34.60
Belgium	1919	1919	2,960	Now	1979	4.57	28.25	1992	4.31	26.92
United Kingdom	1911	1911	3,016	Now	1961	3.95	25.30	1990	5.27	32.30
Mauritius	1968	1968	3,074	Now	1980		39.10	1991	6.48	36.69
Barbados	1966	1966	3,353	Now	1951	12.45	45.49	1979	22.67	48.86
Uruguay	1937	1937	3,492	1973						
Iceland	1922	1951	3,675	Now						
Canada	1920	1920	3,838	Now	1951	5.72	32.56	1990	4.49	27.56
Portugal	1976	1976	4,471	Now	1973	4.61	30.63	1990	7.44	36.76
Greece	1974	1974	4,966	Now	1974	6.52	35.11	1988	6.65	35.19
Luxembourg	1868	1951	5,964	Now				1985	4.11	27.13
Trinidad & Tobago	1962	1962	6,006	Now	1958	14.29	46.02	1981	13.08	41.72
New Zealand	1907	1951	6,264	Now	1973	5.43	30.05	1990	9.77	40.21
Venezuela	1959	1959	6,718	Now	1971	14.44	47.65	1990	16.18	53.84
Spain	1977	1977	7,446	Now	1973		30.51	1989	4.20	25.91
Bahamas	1972	1978	8,740	Now						

Note: All the pre-1951-level figures are based on extrapolations and are expressed in 1985 PPP USD.
INEQ is the ratio of incomes of the top quintile to the bottom quintile, GINI is the Gini index.

the picture. The fact is that some democracies survived for long periods even in very poor countries, including notably the United States, which in 1830 must have had the same per capita income as many contemporary African nations, about the same as today's Nigeria.

Hence, though we already know that in affluent countries democracy is impregnable, wealth is not necessary for democracies to survive. Some democracies, like some dictatorships, appear to survive even when they face adverse conditions. The hypothesis to investigate is that the survival of regimes is due to their economic performance, that is, that they are subject to endogenous attrition.

Let us again examine some descriptive patterns. In Table 2.10, the hazard rates (the probability that a regime will die in a particular year) are calculated separately for different bands of the rates of growth of per capita income, lagged one year, at each income level. When we look at the entire sample, it is apparent that growth matters for regime survival: When per capita income has declined during the preceding year, the probability that either type of regime will die is 0.0324, but when income has grown, that probability is 0.0164, one-half. And if this difference appears small, think in terms of frequencies: One in thirty-one regimes will die when the economies are shrinking, and one in sixty-one when they are expanding.

Democracies appear to be more sensitive to growth performance. When they face a decline in income, they die at the rate of 0.0512, so that about one in twenty of them dies, but when incomes are growing, they die at the rate of 0.0152, one in sixty-six. Moreover, democracies that grow slowly, at rates of less than 5 percent per annum, die at the rate of 0.0173, whereas those that grow at rates faster than 5 percent die at the rate of 0.0132. Thus, Olson (1963) and Huntington (1968) could not have been more wrong when they thought that rapid growth destabilizes democracies.

Dictatorships are less sensitive to economic crises: Their respective probabilities of dying are 0.0240, one in forty-two, when the economy decays, and 0.0174, one in fifty-seven, when it grows.

The difference between the two regimes becomes even more pronounced when we examine the longer-term dynamics of growth. With some exceptions, the longer the economic crisis, the more likely it is that democracy will fall: The chance that a democracy will die is 1 in 135 when incomes grow during any three or more consecutive years, and 1 in 13 when incomes fall during any two consecutive years. Conversely, most deaths of democracy are accompanied by some economic crisis: In twenty-eight out of thirty-nine instances, deaths of democracies were

Table 2.10. Observed rates of transition, by lagged per capita income (LEVLAG) and lagged rate of economic growth (GLAG)

LEVLAG GLAG	All			Dictatorships			Democracies		
	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
0–1,000	0.0147	15	1,019	0.0063	6	945	0.1216	9	74
G ≤ 0	0.0193	9	467	0.0091	4	440	0.1852	5	27
G > 0	0.0109	6	552	0.0040	2	505	0.0851	4	47
1,001–2,000	0.0321	32	997	0.0242	18	745	0.0556	14	252
G ≤ 0	0.0447	14	313	0.0313	7	224	0.0787	7	89
G > 0	0.0263	18	684	0.0211	11	521	0.0429	7	163
2,001–3,000	0.0325	16	493	0.0261	8	306	0.0428	8	187
G ≤ 0	0.0522	7	134	0.0341	3	88	0.0870	4	46
G > 0	0.0251	9	359	0.0229	5	218	0.0284	4	141
3,001–4,000	0.0201	7	349	0.0146	3	205	0.0278	4	144
G ≤ 0	0.0303	3	99	0.0172	1	58	0.0488	2	41
G > 0	0.0160	4	250	0.0136	2	147	0.0194	2	103
4,001–5,000	0.0339	8	236	0.0469	6	128	0.0185	2	108
G ≤ 0	0.0500	3	60	0.0588	2	34	0.0385	1	26
G > 0	0.0284	5	176	0.0426	4	94	0.0122	1	82
5,001–6,000	0.0308	6	195	0.0595	5	84	0.0090	1	111
G ≤ 0	0.0541	2	37	0.0952	2	21	0.0000	0	16
G > 0	0.0253	4	158	0.0476	3	63	0.0105	1	95
6,001–7,000	0.0190	3	158	0.0606	2	33	0.0080	1	125
G ≤ 0	0.0857	3	35	0.3333	2	6	0.0345	1	29
G > 0	0.0000	0	123	0.0000	0	27	0.0000	0	96
7,001–	0.0015	1	679	0.0286	1	35	0.0000	0	644
G ≤ 0	0.0000	0	120	0.0000	0	3	0.0000	0	117
G > 0	0.0018	1	559	0.0313	1	32	0.0000	0	527
Total	0.0213	88	4,126	0.0198	49	2,481	0.0237	39	1,645
G ≤ 0	0.0324	41	1,265	0.0240	21	874	0.0512	20	391
G > 0	0.0164	47	2,861	0.0174	28	1,607	0.0152	19	1,254
Moving average (2)									
Total	0.0218	87	3,991	0.0200	48	2,396	0.0245	39	1,595
G ≤ 0	0.0293	31	1,059	0.0241	18	748	0.0418	13	311
G > 0	0.0191	56	2,932	0.0182	30	1,648	0.0202	26	1,284
Moving average (3)									
Total	0.0223	86	3,856	0.0208	48	2,312	0.0246	38	1,544
G ≤ 0	0.0286	26	910	0.0226	15	665	0.0449	11	245
G > 0	0.0204	60	2,946	0.0200	33	1,647	0.0208	27	1,299

Notes: G ≤ 0 means that per capita income declined or remained the same; G > 0 means that per capita income increased. PJK stands for the probability of any regime transition; TJK is their number. TOT is the total number of annual observations. PAD stands for the probability of transition from authoritarianism to democracy; TAD is their number. TA is the total number of annual observations of authoritarianism. PDA stands for the probability of transition from democracy to authoritarianism; TDA is their number. TD is the total number of annual observations of democracy.

Table 2.11. Regime transitions, by longer-term dynamics of per capita income

Incomes increased or decreased during these consecutive years	Dictatorships			Democracies		
	PAD	TAD	TA	PDA	TDA	TD
Increased						
3 or more years	0.0170	14	824	0.0074	6	807
2 years	0.0139	4	288	0.0265	5	189
1 year	0.0205	10	488	0.0315	8	254
Decreased						
1 year	0.0220	10	455	0.0549	13	237
2 years	0.0181	4	221	0.0778	7	90
3 years	0.0455	4	88	0.0000	0	31
4 or more years	0.0230	2	87	0.0000	0	27
Total		48	2,471		39	1,635

accompanied by a fall in income during at least one of the two preceding years. Dictatorships, in turn, die under all kinds of economic conditions. The probabilities of dictatorships falling are almost the same regardless whether the economy grew or declined during any number of consecutive years. And, conversely, whereas fourteen out of forty-eight transitions to democracy followed at least three years of consecutive growth, ten dictatorships fell after their countries experienced at least two consecutive years of economic decline, six after declines of three years, and two after declines of four or more years. Thus, albeit not without exceptions, deaths of democracies follow a clear pattern: They are more likely when a country experiences an economic crisis, and in most cases they are accompanied by one. But dictatorships die under the entire range of economic conditions (Table 2.11).

We know already that democracies never die in wealthy countries. Yet it is still striking how fragile poor democracies are. In countries with incomes under $2,000, of the 116 years during which declines in incomes occurred, twelve democracies fell the following year: about one in ten. Even among countries with incomes between $2,001 and

$5,000, declining incomes resulted in the fall of seven democracies in 113 years during which this happened: one in sixteen. And then, above $6,055 the miracle occurs. Longer-term patterns are the same: Among democracies with per capita incomes of less than $3,000, one in thirty-five died when incomes had grown during two or more consecutive years, but one in ten when incomes had declined during one or more consecutive years. Poor dictatorships, in turn, are impervious to economic crises, but wealthy dictatorships are more vulnerable when incomes decline. One in forty-two of them died when incomes increased during at least two consecutive years, but one in sixteen when incomes declined for at least one year.

These descriptive patterns are confirmed by statistical analyses. In Table 2.12 we show the effects of growth rates on the probabilities of regime transitions during the single preceding year, and of moving averages over two and three preceding years. Democracies turn out to be most sensitive to their growth performance during one single year; the average over two years matters less, and over three years not at all. Dictatorships as well are most sensitive to last year's growth, but longer crises still matter.

Is it then true that, to put it in the words of Diamond and Linz (1989: 17), "economic crisis represents one of the most common threats to democratic stability"? Do economic crises threaten regime stability, or does regime instability cause economic crises?

The question of what causes what is difficult, perhaps impossible, to answer. One can think of rival stories. Take democracies: It may happen that for some exogenous reason, say a jump in energy prices or international interest rates, an economy suffers a shock. No longer able to satisfy popular demands, democracy becomes vulnerable to political forces that put the blame on the "anarchy" of democratic competition; such forces promise to establish "order" and to sanitize the economy. But it is equally plausible that the shock could be political, say an electoral victory by a left-wing party: That party pursues a redistributive policy, investors are thrown into a panic, and the economy grinds to a halt. Similar stories can be told about dictatorships: Facing an economic shock, the regime can no longer legitimize itself by its economic performance, and forced to liberalize, it unleashes the forces for transition. But again, the shock might be political, say the imminent death of a founding dictator or a power struggle within the authoritarian bloc. Facing the imminent death of the regime, investors run away, and workers openly press their demands, causing economic decline. In either case, one has to be able to tell a rather

Table 2.12. Dynamic probit analysis of the impact of growth on regime survival

Lagged rate of growth

Log-likelihood	−372.9192
Restricted (slope = 0) log-likelihood	−2,685.421
Chi-squared (7)	4,625.003
Significance level	0.0000000

	Transitions to dictatorship			Transitions to democracy		
Variable	**Coefficient**	***t* ratio**	**Pr $\|t\| \geq x$**	**Coefficient**	***t* ratio**	**Pr $\|t\| \geq x$**
Constant	−1.1444	−5.288	0.00000	−2.5238	−13.704	0.00000
LEVLAG	−0.20098E-03	−1.399	0.16195	0.32883E-03	0.699	0.48446
LEVSQR	−0.29429E-05	−0.158	0.87411	−0.29161E-04	−1.309	0.19050
GLAG	−0.42345E-01	−2.988	0.00281	−0.21067E-01	−3.823	0.00013

Lagged moving average of growth over two years

Log-likelihood	−368.7513
Restricted (slope = 0) log-likelihood	−2,595.780
Chi-squared (7)	4,454.058
Significance level	0.0000000

	Transitions to dictatorship			Transitions to democracy		
Variable	**Coefficient**	***t* ratio**	**Pr $\|t\| \geq x$**	**Coefficient**	***t* ratio**	**Pr $\|t\| \geq x$**
Constant	−1.0673	−4.993	0.00000	−2.4135	−13.442	0.00000
LEVLAG	−0.22871E-03	−1.633	0.10249	0.33118E-03	0.569	0.56911
LEVSQR	−0.39442E-06	−0.022	0.98215	−0.28839E-04	−1.231	0.21821
MA2GL	−0.31652E-01	−1.675	0.09402	−0.26569E-01	−2.642	0.00823

Lagged moving average of growth over three years

Log-likelihood	−364.1207
Restricted (slope = 0) log-likelihood	−2,506.529
Chi-squared (7)	4,284.818
Significance level	0.0000000

	Transitions to dictatorship			Transitions to democracy		
Variable	**Coefficient**	***t* ratio**	**Pr $\|t\| \geq x$**	**Coefficient**	***t* ratio**	**Pr $\|t\| \geq x$**
Constant	−1.0418	−4.800	0.00000	−2.4894	−13.117	0.00000
LEVLAG	−0.24784E-03	−1.773	0.07627	0.33155E-03	0.466	0.64152
LEVSQR	0.10868E-05	0.063	0.95015	−0.28881E-04	−1.182	0.23730
MA3GL	−0.14568E-01	−0.648	0.51677	−0.30060E-01	−1.697	0.08977

Notes: LEVLAG, lagged per capita income; LEVSQR, lagged squared per capita income; GLAG, lagged rate of growth; MA2GL, lagged moving average of growth over two years; MA3GL, lagged moving average of growth over three years. The *t* ratios under "Transitions to democracy" refer to shift coefficients (α in Appendix I), not to the total coefficients ($\alpha + \beta$).

complex story in which political and economic events feed on each other in turn.

Ideally, we would like to be able to observe something like "pressures toward transition" and relate them to economic dynamics. But we cannot observe them. All we can see are visible manifestations of political mobilization: strikes (STRIKES), anti-government demonstrations (AGDEMONS), or riots (RIOTS). To draw inferences from these observations, we can reason as follows: If regimes fall when incomes decline and mobilization is not any higher than when they do not fall ("low"), then we can attribute the causal effect to economic crises. If regimes fall when incomes grow but mobilization is high, we can suspect that it is political mobilization that brings them down. If they fall when incomes decline and mobilization is high, we cannot tell which is the cause. Finally, if they fall when incomes are growing and mobilization is low, neither is the cause.

Before we follow this reasoning, note in Table 2.13 that the incidence of mobilization – the sum of the preceding three events (MOBILIZATION) – is independent of economic growth in democracies, but in dictatorships it is higher during economic crises.[13] Moreover, the incidence of mobilization is more or less the same whether or not a democracy is to fall next year, 2.47 as opposed to 1.87 during other years, but it is much higher in the years preceding deaths of dictatorships, 4.37 versus 1.01 (Table 2.14).

Given that in dictatorships political mobilization and economic crises coincide, there were only three dictatorships that fell following a year during which incomes declined but mobilization was not any higher than during other years. In turn, in eleven instances incomes were growing but mobilization was high. Hence, following our reasoning, we can attribute three deaths of dictatorships to economic crises alone and eleven to political mobilization alone. But in eighteen cases economic crises and political mobilization coincided, so that we cannot identify the cause. And in seventeen instances, dictatorships fell even though the economy was growing and political mobilization was low, and we have no way of telling what caused those dictatorships to die.

The number of cases in which democracies died while incomes fell and mobilization remained low is larger: twelve out of thirty-eight. In turn, eight democracies died while their economies were growing

[13] In addition to the analysis in Table 2.13, we conducted statistical analyses, which showed that the coefficient of growth on mobilization was negative and significant under dictatorships and almost zero under democracies.

Table 2.13. Incidence of political mobilization, by longer-term dynamics of per capita income

Incomes increased or decreased during these consecutive years	Dictatorships		Democracies	
	Surviving	Dying	Surviving	Dying
Increased				
3 or more years	1.05	5.79	1.97	2.00
2 years	0.94	1.25	1.83	2.60
1 year	0.71	2.30	1.65	1.13
Decreased				
1 year	1.09	5.60	1.79	2.00
2 years	1.34	5.50	1.91	5.14
3 years	1.56	5.50	1.77	—
4 or more years	0.77	1.00	1.78	—
Actions experienced				
STRIKES	0.08	0.53	0.24	0.34
AGDEMONS	0.46	2.18	0.77	0.71
RIOTS	0.46	1.65	0.86	1.42
MOBILIZATION	1.01	4.36	1.87	2.47
Total	2,354	49	1,548	38

Note: The cell entries measure average incidences of the respective variables.

yet mobilization was high. Yet again, seven deaths of democracies occurred when incomes declined while mobilization was high, and eleven when incomes grew while mobilization was low.

Because we can think of no other way to tell what causes what, all we can do is to conclude from what we can see. It is obvious that regime transitions, events that are quite rare, occur under a wide variety of circumstances. Economic crises are not sufficient to bring regimes down. Neither are waves of political mobilization. Indeed, eleven democracies and seventeen dictatorships fell when incomes were growing and mobilization was low. There are obviously other causes:

Table 2.14. Growth and mobilization during the year preceding regime transition

Regime and income trend	Mobilization		
	Low	High	Total
Dictatorships			
Income growth			
Negative	3	18	21
Positive	17	11	28
Total	20	29	49
Democracies			
Income growth			
Negative	12	7	19
Positive	11	8	19
Total	23	15	38

Note: "Low" mobilization is an incidence below the average for years other than that preceding a regime transition; "high" mobilization is above that average.

deaths of the founding dictator, institutional stalemates, external wars, foreign pressures – the list goes on.

Just consider the fall of communism. Most communist countries experienced a sharp economic downturn between 1978 and 1980. Czechoslovakia, Hungary, and Yugoslavia never recuperated from that crisis. Poland, Romania, and the Soviet Union recovered from that downturn by the early 1980s, but their growth slowed down again after 1985. Given that dictatorships are more vulnerable at income levels at which those countries found themselves, and given their economic slowdown, the chances that those regimes would die increased. But they were never large. We calculated them (using the model presented in Table 2.12) to be about one in twenty. It took an economic crisis, a wave of popular mobilization in Poland, the Soviet defeat in Afghanistan, a massive United States armament, and probably several strategic miscalculations (Kaminski 1997; Przeworski 1997) for one of them to fall. And then Henry Kissinger's dominoes tumbled, although in the direction opposite to the one he had so eloquently predicted.

We are thus not claiming that the economic factors are sufficient to account for the different fates of regimes. The chances of regimes surviving appear to depend somewhat on these conditions, but the chances are only the odds according to which dice are thrown. Obviously, other conditions matter, as do the actions of the people living under these conditions and, perhaps, sheer luck. Thus, regime selection is in part due to observable factors, such as level of income and its growth, but in part to factors that we cannot or at least did not systematically observe.

Yet there are some things we do know. Foremost among them is that democracies never die in wealthy countries. But all the evidence we have examined also indicates that democracies in poorer countries are more likely to die when they experience economic crises than when their economies grow. In turn, dictatorships die under much more varied economic circumstances: Indeed, it appears that economic circumstances have little to do with the deaths of dictatorships.

Income Inequality

The entire analysis thus far has concerned only average or total indicators for each country. But there are good reasons to think that a factor that matters for regime stability is also the distribution of income among different groups. Under dictatorships, high income inequality may stimulate movements attracted by the egalitarian promise of democracy. Under democracy, dominant social groups may seek recourse to authoritarianism when the exercise of political rights by the poor – whether in the form of suffrage or freedom of association – results in egalitarian pressures.

Unfortunately, these hypotheses are almost impossible to test. The best available data set on income distribution (Deininger and Squire 1996) is still far from complete and combines numbers collected by different methods. For many countries, information is not available at all, and for many others it is available only for irregularly scattered years. In the end, we thus have only 542 annual observations that match our period. Moreover, some of the numbers are on an income basis, and others on an expenditure basis; some are pre- and others post-fisc. Hence, there is little to go on.

An additional complication is that the data show somewhat of a Kuznets effect, that is, the degree of inequality, as measured by the Gini index, increases and then falls with per capita income. The top panel of Table 2.15 shows Gini indices by per capita income and by regime.

Table 2.15. Income inequality and regime dynamics

A: Inequality (Gini indices) by per capita income

	Average Gini indices					
LEVEL	All		Dictatorships		Democracies	
0–1,000	34.2806	(47)	35.7348	(23)	32.8871	(24)
1,001–2,000	38.6957	(74)	37.6443	(53)	41.3490	(21)
2,001–3,000	45.5331	(52)	43.1266	(29)	48.5674	(23)
3,001–4,000	39.0088	(49)	34.7779	(29)	45.1435	(20)
4,001–5,000	36.1776	(45)	32.4200	(33)	46.5108	(12)
5,001–6,000	35.0812	(24)	33.7861	(18)	38.9667	(6)
6001–	33.0105	(251)	32.2900	(18)	33.0662	(233)
Total	35.9952	(542)	36.1355	(203)	35.9112	(339)

B1: Regime transitions by Gini indices

	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
All	0.0188	25	1,327	0.0322	19	590	0.0081	6	737
<35	0.0167	10	597	0.0376	9	239	0.0028	1	358
≥35	0.0205	15	730	0.0285	10	351	0.0132	5	379

B2: Regime transitions by ratios of top 20% to bottom 20%

	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
All	0.0192	22	1,133	0.0364	17	467	0.0075	5	666
<9	0.0146	10	685	0.0347	10	288	0.0000	0	397
≥9	0.0268	12	448	0.0391	7	179	0.0187	5	269

C1: Regime transitions by changes of Gini indices

	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
All	0.0240	29	1,209	0.0371	19	512	0.0143	10	697
<0	0.0272	17	626	0.0542	13	240	0.0104	4	386
>0	0.0206	12	583	0.0221	6	272	0.0193	6	311

C2: Regime transitions by changes in ratios of top 20% to bottom 20%

	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
All	0.0224	23	1,027	0.0361	15	416	0.0131	8	611
<0	0.0208	11	528	0.0323	7	217	0.0129	4	311
>0	0.0240	12	499	0.0402	8	199	0.0133	4	300

(continued)

Table 2.15 (continued)

C3: Regime transitions by changes in the share of the bottom 40%

	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
All	0.0222	23	1,036	0.0356	15	421	0.0130	8	615
<0	0.0246	14	568	0.0352	8	227	0.0176	6	341
>0	0.0192	9	468	0.0361	7	194	0.0073	2	274

C4: Regime transitions by changes in the share of the top 20%

	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
All	0.0222	23	1,036	0.0356	15	421	0.0130	8	615
<0	0.0163	9	551	0.0287	6	209	0.0088	3	342
>0	0.0289	14	485	0.0424	9	212	0.0183	5	273

D1: Regime transitions by changes in the income of the bottom 40%

	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
All	0.0224	23	1,027	0.0361	15	416	0.0131	8	611
<0	0.0367	11	300	0.0636	7	110	0.0211	4	190
>0	0.0165	12	727	0.0261	8	306	0.0095	4	421

D2: Regime transitions by changes in the income of the top 20%

	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
All	0.0224	23	1,027	0.0361	15	416	0.0131	8	611
<0	0.0412	10	243	0.0761	7	92	0.0199	3	151
>0	0.0166	13	784	0.0247	8	324	0.0109	5	460

E1: Regime transitions by changes in average welfare

	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
All	0.0224	23	1,027	0.0361	15	416	0.0131	8	611
<0	0.0494	12	243	0.0745	7	94	0.0336	5	149
>0	0.0140	11	784	0.0248	8	322	0.0065	3	462

Notes: PJK stands for the probability of any regime transition; TJK is their number. TOT is the total number of annual observations. PAD stands for the probability of transition from authoritarianism to democracy; TAD is their number. TA is the total number of annual observations of authoritarianism. PDA stands for the probability of transition from democracy to authoritarianism; TDA is their number. TD is the total number of annual observations of democracy.

As we see, the average index increases from 34.28 for all countries with incomes under $1,000 to 45.53 for all countries between $2,001 and $3,000 and then falls to 33.01 for all countries with incomes above $6,000. Dictatorships and democracies show similar patterns and have the same average income inequality, as measured by the Gini index.

Yet with all these caveats, some suggestive patterns do emerge. To test whether or not the level of income inequality destabilizes regimes, we considered five years (two before and two after, unless another observation was available during these years or the regime changed) around each observation of income distribution, thus obtaining 1,327 years for Gini indices and 1,133 for ratios of incomes of top and bottom quintiles. This data set still contains only six (for Gini) and five (for the ratio) transitions to dictatorship; hence the caveats should be kept in mind. Nevertheless, dichotomizing the Gini index approximately at the observed mean, that is, 35 (the actual mean is 38.3), shows that only one democracy fell during the 358 years when the Gini index was below this threshold, whereas five fell during the 379 years when inequality was higher (panel B1 of Table 2.15). The effect of inequality on dictatorships, for which we observe 19 transitions, was less pronounced. The ratio of top to bottom incomes shows the same: When this ratio was less than nine, no democracy fell during 397 years, but when it was higher, five fell during 269 years (panel B2). And, again, the effect on dictatorships was negligible. Hence, whatever these numbers are worth, they do suggest that democracy is more stable in more egalitarian societies, and the durability of dictatorships is unaffected by income distribution.

To test whether or not increasing or decreasing inequality has an effect on the stability of regimes, we took all cases in which more than one observation was available for a country, observed how income distribution changed, and calculated the rates of transition during these periods.[14] The numbers are again small, and they tend to be disproportionately drawn from the more developed countries. Not much can be learned from them. Changes in absolute income levels (see panels D of Table 2.15) matter more for the stability of both regimes than do

[14] Note that some of these data were presented in Table 2.9, which lists democracies that lasted at least twenty years. If we consider only poorer countries, we see that democracy survived in the Dominican Republic even though income inequality increased, but it fell in the three other poor countries where inequality increased: the Philippines, Brazil, and Chile. In turn, among countries where income inequality was reduced, democracy survived in India, Japan, Finland, and Mauritius, and fell only in Sri Lanka.

changes in the overall distribution or the income shares of particular groups (panels C). Both regimes are less stable when absolute incomes, whether of the top 20 percent or the bottom 40 percent of earners, decline.

In turn, changes in the overall distribution, whether measured by the Gini index or by the ratio, have no clear effect on the stability of regimes. Yet both regimes are slightly less stable when the share of the top 20 percent increases. Democracies, and only democracies, are somewhat less stable when the income share of the bottom 40 percent declines. Thus, with all the caveats, it appears that both regimes are threatened when the rich get relatively richer, but only democracy is vulnerable when the poor get relatively poorer.

We also calculated changes in average welfare, attaching lower weights to increases of incomes that were already higher (Atkinson 1970; logarithmic utility function). This transformation allows us to distinguish the effect of growth of the average income from the effect of changes in its distribution: There are some cases in which the average income grows but inequality increases to such an extent that the average welfare declines. Both regimes appear to be more likely to die when the average welfare falls. Moreover, comparison with Table 2.10 shows that both regimes are more sensitive to changes of welfare than of income alone, implying that when the average income declines and inequality increases – income declines at the cost of the poor – both regimes are much more vulnerable than when the average income increases and inequality is reduced.

The functional distribution of income, for which data are more extensive, shows a much stronger impact of inequality for both regimes. The data for labor share of value added in manufacturing (LS) include 2,061 annual observations, as always drawn disproportionately from poor dictatorships and rich democracies. The overall effect of the functional distribution of income is very strong: Both regimes are several times more likely to fall when labor receives less than 25 percent of value added in manufacturing. Dictatorships in countries with incomes below $4,000 are particularly vulnerable when inequality is high, but dictatorships in wealthier countries survive at somewhat higher rates when the labor share is smaller. Democracies in poor countries are less likely to survive when labor gets a lower share, whereas in wealthier countries labor almost always gets more than 25 percent, and they almost always survive (Table 2.16).

Thus, at the very least, there is no evidence that egalitarian pressures threaten the survival of democracy. Indeed, it appears that

Table 2.16. Regime transitions, by level and labor share

LEVLAG LSLAG	PJK	TJK	TOT	PAD	TAD	TA	PDA	TDA	TD
0–1,000	0.0162	5	308	0.0072	2	277	0.0967	3	31
LS ≤ 25	0.0470	4	85	0.0259	2	77	0.2500	2	8
LS > 25	0.0044	1	223	0.0000	0	200	0.0434	1	23
1,001–2,000	0.0373	16	429	0.0271	9	332	0.0721	7	97
LS ≤ 25	0.0847	10	118	0.0752	7	93	0.1200	3	25
LS > 25	0.0192	6	311	0.0083	2	239	0.0555	4	72
2,001–3,000	0.0390	11	282	0.0379	6	158	0.0403	5	124
LS ≤ 25	0.0792	8	101	0.1154	6	52	0.0408	2	49
LS > 25	0.0165	3	181	0.0000	0	106	0.0400	3	75
3,001–4,000	0.0229	5	218	0.0217	3	138	0.0250	2	80
LS ≤ 25	0.0468	3	64	0.0882	3	34	0.0000	0	30
LS > 25	0.0129	2	154	0.0000	0	104	0.0400	2	50
4,001–5,000	0.0229	3	131	0.0370	3	81	0.0000	0	50
LS ≤ 25	0.0555	2	36	0.0909	2	22	0.0000	0	14
LS > 25	0.0105	1	95	0.0169	1	59	0.0000	0	36
5,001–	0.0101	7	693	0.0779	6	77	0.0016	1	616
LS ≤ 25	0.0385	1	26	0.0588	1	17	0.0000	0	9
LS > 25	0.0090	6	667	0.0833	5	60	0.0016	1	609
Total	0.0228	47	2,061	0.0272	29	1,063	0.0180	18	998
LS ≤ 25	0.0651	28	430	0.0711	21	295	0.0518	7	135
LS > 25	0.0116	19	1,631	0.0104	8	768	0.0127	11	863

Notes: LEVLAG is lagged per capita income; LSLAG is lagged labor share of output in manufacturing.

democracies are less stable in societies that are more unequal to begin with, in societies in which household income inequality increases, and in societies in which labor receives a lower share of value added in manufacturing. Dictatorships, in turn, particularly in poorer countries, are much more vulnerable when the functional distribution of income is more unequal.

Economic Factors in Context

Two questions still remain open. Are the economic factors still important when one takes into account the cultural, social, and political context in which they operate? And even if they do remain important, do cultural, social, and political conditions affect the rise and decline of political regimes independently of the economy?

To move beyond economic factors, we examine the impact of an entire panoply of variables considered simultaneously. How do the political, social, and cultural conditions in which regimes find themselves affect the probability of transitions from democracy to dictatorship and from dictatorship to democracy? The data show the following (Table 2.17):

1. The impact of per capita income (lagged, LEVLAG), treated linearly, is apparent for both regimes, but it is orders of magnitude larger for democracies.
2. The rate of economic growth (lagged, GLAG) matters for the stability of both regimes, but less so for democracies. Both are less likely to die when growth is faster.
3. Intra-regime instability, accumulated turnover of chief executives (lagged, TLAG), has an important impact on the stability of both regimes when it is introduced linearly into the analysis. Both regimes are more likely to die when they experience frequent changes of heads of government.

There is, however, a fundamental difference between democracies and dictatorships. A moderate frequency of alternation in office increases the stability of democracies, but any changes of the heads of dictatorships shorten their lives. Table 2.18 shows the observed probabilities of both regimes dying in a year that follows a particular frequency of accumulated turnover. Democracies that change their chief executives less frequently than once in five years die at the rate of 0.0249, with an expected life of forty years. But democracies that change their heads of governments once between five and four years, or even more frequently, down to once in two years, have a lower probability of dying. Only very frequent changes, more frequent that once in two years, constitute "instability" in the sense of increasing the chances of democracies dying. Dictatorships, in turn, are most durable when changes are very infrequent: Their expected life when changes occur less frequently than once in every five years is seventy-four years. But when changes occur only somewhat more frequently, once between five and four years, their expected duration is reduced to thirty years. As turnover becomes higher, the expected life of dictatorship dwindles, all the way down to eight years.

Hence, a moderate frequency of alternation in office increases the stability of democratic regimes. After all, this is the essence of democ-

Table 2.17. Dynamic probit analysis of regime transitions

Number of observations	3,942
Log-likelihood function	−291.0939
Restricted log-likelihood	−2,644.349
Chi-squared	4,706.511
Degrees of freedom	23
Significance level	0.0000000

	Transitions to dictatorship			Transitions to democracy		
Variable	**Coefficient**	***t* ratio**	**Pr $\|t\| \geq x$**	**Coefficient**	***t* ratio**	**Pr $\|t\| \geq x$**
Constant	0.12535	0.139	0.88954	−3.407	−3.119	0.00182
LEVLAG	−0.54617E-03	−4.467	0.00001	0.3356E-04	3.953	0.00008
GLAG	−0.23844E-01	−1.410	0.15858	−0.1997E-01	−2.215	0.02678
TLAG	0.97218	3.459	0.00054	0.5415	4.437	0.00001
RELDIF	2.5568	2.581	0.00984	0.1096	2.442	0.01459
CATH	−1.1295	−2.089	0.03672	0.1535	1.624	0.10427
PROT	−2.4463	−1.506	0.13213	−0.2615	−1.565	0.11765
MOSLEM	0.22024E-01	0.044	0.96497	−0.7248E-01	−0.085	0.93196
NEWC	−0.16120E-01	−0.036	0.97151	−0.4348	−0.906	0.36489
BRITCOL	−0.83942	−1.974	0.04837	0.1645	1.430	0.15260
STRA	0.89495	7.403	0.00000	0.3612	8.992	0.00000
ODWP	−3.7446	−1.992	0.04633	3.033	−0.319	0.74958

Frequencies of actual and predicted outcomes; predicted outcome has maximum probability

	Predicted		
Actual	**0**	**1**	**Total**
0	1,503	53	1,556
1	32	2,354	2,386
Total	1,535	2,407	3,942

Note: LEVLAG, lagged per capita income; GLAG, lagged rate of growth; TLAG, lagged cumulative rate of leadership turnover; RELDIF, religious fractionalization; CATH, proportion of Catholics in the population; PROT, proportion of Protestants in the population; MOSLEM, proportion of Moslems in the population; NEWC, dummy variable indicating that the country did not exist in 1945; BRITCOL, dummy variable indicating a former British colony; STRA, cumulative number of past transitions to authoritarianism; ODWP, proportion of other democracies in the world. The standard errors and the *t* ratios (including their signs) under "Transitions to democracy" refer to shift coefficients (α in Appendix I), not to the total coefficients ($\alpha + \beta$).

Table 2.18. Impact of intra-regime instability (turnover of heads of governments) on regime transition rates

Frequency: one change in:	**PJK**	**TJK**	**TOT**	**PAD**	**TAD**	**TA**	**PDA**	**TDA**	**TD**
>5 years	0.0162	45	2,777	0.0129	26	2,014	0.0249	19	763
5–4 years	0.0222	10	450	0.0292	5	171	0.0179	5	279
4–2 years	0.0351	21	597	0.0619	13	210	0.0206	8	387
2–1 years	0.0442	10	226	0.0588	4	68	0.0379	6	158
<1 year	0.0769	2	26	0.1250	1	8	0.0555	1	18
Total	0.0215	88	4,076	0.0198	49	2,471	0.0243	39	1,605

Notes: PJK stands for the probability of any regime transition; TJK is their number. TOT is the total number of annual observations. PAD stands for the probability of transition from authoritarianism to democracy; TAD is their number. TA is the total number of annual observations of authoritarianism. PDA stands for the probability of transition from democracy to authoritarianism; TDA is their number. TD is the total number of annual observations of democracy.

racy: alternating in office as a result of application of rules. Dictatorship, however, is a system whose stability depends on personal rule. Any change in the head of government is a threat to its survival.

4. As is frequently claimed, democracies are less stable in countries that are religiously heterogeneous (RELDIF). We have also experimented with another variable, "ethnolinguistic fractionalization," which measures ethnic, rather than religious, heterogeneity. This variable is statistically significant when considered alone, but plays no role once religious fractionalization is introduced.

What is striking, however, is that dictatorships are also less stable in religiously or ethnolinguistically heterogeneous societies. Note that the standard explanation for the instability of democracies in heterogeneous societies, one that goes back to J. S. Mill (1991 [1861]), is that for democracy to endure there must be some shared values, a "consensus." Yet because dictatorships are also less likely to endure in heterogeneous societies, the claim that common values are needed to support democracy reduces to the observation that regime transitions are more frequent in heterogeneous countries. Religious or ethnolinguistic heterogeneity simply makes all political regimes less stable.

5. Since Montesquieu (1995 [1748]), much has been said about the importance of culture for the emergence and durability of democracies. Recent discussions of this topic have revolved mainly around cultures identified by dominant religions. Even if Weber (1958 [1904]) himself said almost nothing about political institutions (Przeworski, Cheibub, and Limongi 1997), the idea that he saw in Protestantism the wellspring of modern democracy is widespread among contemporary political scientists. Lipset (1959: 165) claimed that "it has been argued by Max Weber among others that the factors making for democracy in this area [north-west Europe and their English-speaking offsprings in America and Australasia] are a historically unique concatenation of elements, part of the complex which also produced capitalism in this area," because "the emphasis within Protestantism on individual responsibility furthered the emergence of democratic values."[15] In turn, Catholicism, in Lipset's view (1960: 72–3), was antithetical to democracy in pre–World War II Europe and Latin America. Yet even Catholicism is not the worst enemy of democracy: Islam and Confucianism hold the palm (Eisenstadt 1968: 25–7). Thus, Huntington (1993: 15) reported that "no scholarly disagreement exists regarding the proposition that traditional Confucianism was either undemocratic or antidemocratic." Similar views about Islam abound (Gellner 1991: 506; Lewis 1993: 96–8).

According to our analysis, none of those assertions can withstand scrutiny. Indeed, the only effect of religions that emerges from the statistical examination is that democracies are more likely to survive in countries in which there are more Catholics. Neither Protestantism nor Islam seems to have an effect on the emergence or the durability of democracy.

6. A colonial legacy has little effect on regime stability once all the other factors are considered. Democracies are somewhat more likely to survive in countries that were British colonies (BRITCOL), but having been a colony at all (NEWC) has no effect. Note that the rates of democratic failure observed between 1950 and 1990 were much higher among democracies that were established after 1950 (0.0620, with an expected life of 16.8 years) than in the entire set of democracies (0.0237, with an expected life of 42.2). Yet this effect vanishes in the statistical analysis, indicating that the observed difference was due to the low incomes of these countries, not the timing of independence.
7. The political history of regimes, their past instability, has an important role in affecting the chances that the current regime will survive or die. In countries that experienced more transitions to dictatorship (STRA) in the past, both types of regimes are less stable, and the effect is about three times larger for democracies.

[15] Lipset does not point to any specific text of Weber. Neither do Almond and Verba (1963: 10), who assert that "the development of Protestantism, and in particular the nonconformist sects, *have been considered* vital to the development of stable political institutions in Britain, the Old Commonwealth, and the United States" (italics added).

This last finding suggests that political learning is a complex matter. It is frequently argued – Russia is a good example – that the absence of democratic traditions is an impediment to consolidating new democratic institutions and, conversely, that democracy is more stable in the countries that have enjoyed it in the past – here Chile is the paradigmatic case. Yet what that argument misses is that if a country has had a democratic regime in its past, it also has experienced subversion of democracy. Political learning thus cuts both ways. Perhaps democrats find consolidation easier when they can rely on past traditions, but anti-democratic forces also have an experience from which they can draw lessons: People know that an overthrow of democracy is possible, how it happens, and how to bring it about. If the Russian coup of 1991 was more of a coup de theatre than a coup d'état, it was perhaps because the Russian *golpistas* simply did not know how to do it and were justly ridiculed by their experienced Latin American soulmates.

8. Finally, whereas the international political climate (ODWP) has an impact on the stability of democracies, it has no effect whatever on transitions to democracy. The probability that once established a democracy will die is lower when many countries in the world are democratic. But the probability that a democracy will be established does not depend on the proportion of countries in the world that have democratic regimes. This finding casts doubts on the notion that democratization comes in waves, a topic we discussed earlier.

To put these findings in perspective, it is necessary to remember that regime transitions are relatively rare. Although we have seen that some countries experience a fair amount of regime instability, in most countries a single regime will continue for long periods. This heterogeneity appears to be due to the factors that we analyzed earlier, particularly to past history: Once these factors are considered, the sample is no longer heterogeneous in the statistical sense. But inertia remains high: In each year, most countries have the same regimes they had in the preceding year.

Yet regimes do die, and the transitions can be explained. When the impacts of different factors are taken one by one, it again becomes clear that the level of economic development is crucial for the stability of democracies, whereas both regimes are affected by their economic performance and by the frequency of turnover of heads of government. Of all the other variables, past regime instability plays the greatest role. Religious or ethnolinguistic heterogeneity also affects the stability of both regimes. In turn, the colonial heritage and cultural patterns, at least as indicated by the frequency of major religions, play almost no role.

The impact of the level of development, of leadership turnover, and of past regime instability is robust, in the (Leamer) sense that these variables are highly significant regardless which other factors are introduced into the analysis. Economic performance variables always matter, but their statistical significance is somewhat affected by the presence of other variables. The impact of all the other variables is not robust: In some specifications, they appear as statistically significant, but in others they do not. When per capita income is not considered, Protestantism becomes somewhat important, and ethnolinguistic fractionalization dominates religious heterogeneity. In some other specifications, having been a colony appears to have an impact independent of the British colonial heritage. One should not be surprised, therefore, that the determinants of regimes have been the subjects of such extensive debates. Yet we think that the basic patterns are clear and robust: The level of economic development, economic performance, past regime instability, and leadership turnover tell almost all of the story.

Democratic Institutions and the Sustainability of Democracy

Democracies are not all the same. Systems of representation, divisions of powers, legal doctrines, and the bundles of rights and obligations associated with citizenship all differ significantly among regimes that are generally recognized as democratic. And these institutional arrangements may have an impact on the sustainability of democracy. The durability of democracies may not be simply a matter of economic, social, or cultural conditions, because their institutional frameworks may differ in their capacity to process conflicts, particularly when these conditions become so adverse that democratic performance is considered to be inadequate.[16] Democracy is sustainable when its institutional

[16] Seminal studies along this line are those by Zimmerman (1987, 1988), who found that the timing and the depth of the recession of 1929–1932 could not predict whether or not a democracy would survive that crisis.

framework promotes normatively desirable and politically desired objectives, but also when these institutions are adept at handling crises that occur when such objectives are not being fulfilled.

The institutional distinction that appears particularly important is that between presidential and parliamentary systems. We discussed this distinction in Chapter 1. Now we must examine whether or not it makes a difference for the durability of democracies.

A glance at the descriptive patterns shows immediately that Linz (1990a,b) was right about the durability of these respective institutional systems. During the period under consideration there were sixteen (28 percent of 57 spells) democracies that died under a parliamentary system and twenty-three (54 percent of 42 spells) that died under a presidential one.[17] Among those democracies that died, parliamentary systems lasted on the average two years less than presidential ones: 7.6 years as opposed to 9.6. But the parliamentary democracies that were still around as of 1990 were much older: on the average about forty-one years, as compared with twenty-four for presidential regimes. The probability that a presidential democracy will die during any particular year is 0.0477, and the probability that a parliamentary democracy will die is 0.0138. Thus, the expected life of democracy under presidentialism is approximately twenty-one years, whereas under parliamentarism it is seventy-three years. The oldest democracy in the world is presidential, but this is a distant exception. Moreover, to dispel the view that instability of presidential democracies is due to the fact that they exist primarily in Latin America, it is worth noting that the completed spells of presidentialism were on the average longer on that continent (10.6 years) than elsewhere (6.5 years), that is, in the Congo (1960–1962), Ghana (1979–1980), Nigeria (1979–1982), Uganda (1980–1984), and the Philippines (1950–1964) (Table 2.19).

We have seen that democracies are more likely to survive in wealthy countries, and parliamentary democracies are found disproportionately often under such conditions: Whereas two-thirds of presidential systems were observed in countries with incomes under $4,000, only 30 percent of parliamentary democracies were in countries below that threshold. Hence, the immediate question is whether or not the durability of the parliamentary systems is due simply to wealth.

[17] Note that we lump mixed systems together with parliamentary ones (see Chapter 1). Mainwaring (1993) counted democratic breakdowns since 1945. He found nineteen under parliamentarism, twenty-seven under presidentialism, and four under other types.

Table 2.19. Observed rates of transition to dictatorship, by lagged per capita income (LEVLAG) and lagged rate of economic growth (GLAG), of parliamentary and presidential democracies and the hypothetical numbers of transitions if there had been as many presidential democracies as parliamentary democracies under all circumstances

LEVLAG GLAG	PLA	TLA	TL	PPA	TPA	TP	PPA	HTPA	TL
0–1,000	0.1094	7	64	0.2000	2	10	0.2000	12.8	64
G ≤ 0	0.1667	4	24	0.3333	1	3	0.3333	8	24
G > 0	0.0750	3	40	0.1429	1	7	0.1429	5.7	40
1,001–2,000	0.0467	5	107	0.0621	9	145	0.0621	6.6	107
G ≤ 0	0.0833	3	36	0.0755	4	53	0.0755	2.7	36
G > 0	0.0282	2	71	0.0543	5	92	0.0543	3.9	71
2,001–3,000	0.0233	2	86	0.0594	6	101	0.0594	5.1	86
G ≤ 0	0.1176	2	17	0.0690	2	29	0.0690	1.2	17
G > 0	0	0	69	0.0556	4	72	0.0556	3.8	69
3,001–4,000	0.0250	2	80	0.0313	2	64	0.0313	2.5	80
G ≤ 0	0.0526	1	19	0.0455	1	22	0.0455	0.9	19
G > 0	0.0164	1	61	0.0238	1	42	0.0238	1.5	61
4,001–5,000	0	0	72	0.0556	2	36	0.0556	4	72
G ≤ 0	0	0	13	0.0769	1	13	0.0769	1	13
G > 0	0	0	59	0.0435	1	23	0.0435	2.6	59
5,001–6,000	0	0	100	0.0909	1	11	0.0909	9.1	100
G ≤ 0	0	0	13	0	0	3	0	0	13
G > 0	0	0	87	0.125	1	8	0.1250	10.9	87
6,001–7,000	0	0	108	0.0588	1	17	0.0588	6.4	108
G ≤ 0	0	0	23	0.1667	1	6	0.1667	3.8	23
G > 0	0	0	85	0	0	11	0	0	85
7,001–	0	0	546	0	0	98	0	0	546
G ≤ 0	0	0	94	0	0	23	0	0	94
G > 0	0	0	452	0	0	75	0	0	452
Total	0.0138	16	1,163	0.0477	23	482	0.0400	46.5	1,163
G ≤ 0	0.0418	10	239	0.0658	10	152	0.0736	17.6	239
G > 0	0.0065	9	924	0.0394	13	330	0.0306	28.3	924

Notes: G ≤ 0 means that per capita income declined or remained the same; G > 0 means that per capita income increased. PLA stands for the probability of transition from parliamentarism to authoritarianism; TLA is their number. TL is the total number of annual observations of parliamentarism. PPA stands for the probability of transition from presidentialism to authoritarianism; TPA is their number. TP is the total number of annual observations of presidentialism. HTPA stands for the expected number of transitions from presidentialism if there were exactly as many presidential as parliamentary democracies.

Presidential democracies are more likely to die than parliamentary democracies at any level of development. Indeed, in countries with incomes above $4,000, no parliamentary democracy died during 826 years they enjoyed such incomes, whereas four presidential democracies died during 162 years (one in forty years) under the same conditions. The richest parliamentary democracy that died was Suriname, which had a per capita income of $3,923 in 1980 (see Table 2.6). The second wealthiest was Greece, with income of $3,176 in 1967. In contrast, six transitions from presidential democracies to dictatorships occurred in countries that were wealthier, all the way up to Argentina in 1976, with an income of $6,055. The difference among countries with incomes under $4,000 is much smaller, but still in favor of parliamentarism: Sixteen parliamentary democracies died under such circumstances during 337 years (one in twenty-one years), compared with nineteen presidential democracies during 320 years (one in seventeen years).

To isolate how much of the difference in the durability of democracy under these two systems is due to wealth, we calculated what would have been the rate of transition from presidential democracies to authoritarianism if there had been exactly as many of them as there were parliamentary democracies in each band of $1,000 of per capita income. The answer is that presidential democracies would have died at an only slightly lower rate than under the observed conditions: 0.0400 (one in twenty-five) instead of 0.0477 (one in twenty-one). Hence, the difference in longevity between parliamentary and presidential democracies was not due to the wealth of the countries in which these democracies existed.

How adept are the alternative institutional arrangements in coping with economic crises? One in twenty-four parliamentary democracies dies (at the rate of 0.0418) when the economy experiences negative rates of growth. When the economy grows, only one in 154 parliamentary democracies collapses (0.0065). Hence, parliamentary democracies are sensitive to economic crises. Presidential systems are less sensitive to economic performance. One in fifteen presidential democracies collapses when incomes decline (0.0658), and one in twenty-five (0.0394) when they grow. But note that parliamentary systems are almost as likely to survive when the economy shrinks as presidential systems are likely to survive when it expands.

We already know that parliamentary democracies endure in countries with incomes above $4,000 regardless of their economic performance. Such democracies survived 143 years during which per capita

incomes declined, and 683 years when they grew. Presidential democracies, however, died in four instances in such wealthy countries: two in forty-five years when incomes declined (one in 22.5), and two in 117 years when incomes increased (one in 58.5). Moreover, parliamentary democracies survive with incomes below $4,000 if the economy grows – only one in 40 (0.0248) of them died under these conditions – much better than presidential ones, which died at the rate of one in 19.4 (0.0511). Yet the enthusiasm for parliamentary systems should be somewhat mitigated, for it seems that their capacity to cope with economic crises is limited to countries that are wealthy. When they are poor, they are vulnerable to economic crises: One in 9.6 of them (0.1042) dies when incomes decline. This rate is higher than that for presidential systems – one of which in 13.4 (0.0748) dies under such conditions – but this difference is due to the fact that the poor parliamentary democracies were poorer than the poor presidential ones. Had poor presidential democracies occurred at the same income levels as the poor parliamentary systems, they would have died at the rate of 0.1333, one in 7.5. Thus, presidential democracies are just unstable, in wealthy as well as in poor countries, when the economy declines and when it expands. Parliamentary democracies are stable in wealthy countries and survive at high rates when the economy grows in poor countries. But they are vulnerable in poor countries that face economic crises.[18]

Statistical analyses highlight the different impacts of the level of development on the survival of parliamentary and presidential democracies. Whereas parliamentary democracies are much less likely to die in countries in which the per capita income is high, the chances of survival for presidential democracies are independent of per capita income. Moreover, once other factors are considered, presidential democracies appear somewhat more sensitive to their economic performance (Table 2.20).

These two economic factors play their same roles whether or not they are placed in a broader context. But non-economic variables do play a role in determining the chances of survival for the two types of

[18] Note that in our standard classification of regimes we count as authoritarian the periods before elected governments overthrow democracy from above ("consolidation rule" of Chapter 1). But if such instances (listed in Appendix 1.3) should prove to be more frequent under parliamentarism, then our results would be an artifact of classification. To test that possibility, we reproduced Table 2.20 reclassifying such periods as democratic and treating such *autogolpes* as transitions. None of the qualitative conclusions was affected.

Table 2.20. Dynamic probit analysis of regime transitions, by type of democracy

Binomial probit model	
Maximum-likelihood estimates	
Dependent variable	REG
Number of observations	3,927
Iterations completed	10
Log-likelihood function	–337.9800
Restricted log-likelihood	–2,630.362
Chi-squared	4,584.764
Degrees of freedom	17
Significance level	0.0000000

	Transitions to dictatorship					
	Transitions to democracy		From parliamentarism		From presidentialism	
Variable	Coefficient	Pr[|Z| ≥ z]	Coefficient	Pr[|Z| ≥ z]	Coefficient	Pr[|Z| ≥ z]
Constant	–2.4358	0.00000	–1.413	0.00000	–1.867	0.00000
LEVLAG	0.7674E-04	0.04158	–0.4268E-03	0.00401	–0.1261E-03	0.46306
GLAG	–0.1627E-01	0.08018	–0.2897E-01	0.08296	–0.3513E-01	0.01543
TLAG	0.6591	0.00038	0.7195	0.00104	0.5302	0.00144
RELDIF	–0.3177	0.30042	0.6762	0.62051	1.660	0.07734
STRA	0.3759	0.00000	0.3995	0.00363	0.1244	0.00008
SEATS	–0.5318E-02	0.00136	0.3597E-02	0.83106	–0.2993E-02	0.26070
MAJORITY	–0.4399	0.00228	0.1734	0.40417	–0.3708	0.00245
DEADLOCK	0.8453	0.01376	-0.6142E-01	0.08420	0.4827	0.00129
MAJORITY	0.3979	0.00706	0.3592	0.94205	–0.1209	0.12600
DEADLOCK	0.6274	0.07104	0.2415	0.17335	0.3989	0.02739

Notes: The first panel presents results for the five variables considered together. Next, the results for each variable are added to the first five (the values of coefficients and probabilities are almost unaffected by these additions). Finally, the bottom panel shows the results of DEADLOCK and MAJORITY being added simultaneously to the basic five variables. LEVLAG, lagged per capita income; GLAG, lagged rate of growth; TLAG, lagged cumulative rate of leadership turnover; RELDIF, religious fractionalization; STRA, cumulative number of past transitions to authoritarianism; SEATS, share of seats of the largest party; DEADLOCK, dummy variable that equals 1 if 0.33 < SEATS < 0.50; MAJORITY, dummy variable that equals 1 if SEATS > 0.50.

democracies. Religious heterogeneity appears to affect only presidential systems, which are less stable in heterogeneous societies. In turn, past regime instability lowers the chances of survival for democracy under both systems, more so under parliamentarism.

There are good reasons to believe, however, that the functioning of

these institutions depends not only on economic or social factors but also on the relationships of the political forces within them. In particular, a claim has been made repeatedly (Mainwaring 1993; Stepan and Skach 1993; Jones 1995; Carey 1997; Mainwaring and Shugart 1997) that presidential systems are particularly unstable when they function under a highly fractionalized party system. One way to examine this hypothesis is to study the effect of the share of the largest party in the lower house of the legislature under the two systems (SEATS). This variable has no impact on the survival of either type of democracy. The absence of a majority party (MAJORITY), however, does have a strong impact on the stability of presidential democracies, which are unstable when no party controls a majority of seats in the lower house. The chances of survival for parliamentary democracies, in turn, are independent of the existence of a majority party (Table 2.21).

The story, however, does not end there. Presidential democracies appear particularly vulnerable in situations in which the largest legislative party controls more than one-third but less than one-half of seats, a situation that we term "DEADLOCK." Note that both the MAJORITY variable and the DEADLOCK variable assume values of zero in situations of extreme fractionalization, when no single party controls more than one-third of seats. Hence, what distinguishes them are situations in which the largest party has more than one-third but less than one-half of seats. And presidential democracies are much less likely to survive under the conditions of such moderate fractionalization.[19]

The reason we refer to these situations as deadlocks is based on the following intuition. Suppose that the plurality party is the same as the president's party, but the opposition parties can muster a majority if they unite against the president. Then the opposition can pass legislation. The president can veto it, and, under typical procedures for overruling the veto, the president will have enough support to make it stand. Hence, a deadlock ensues. Yet we may be barking up the wrong tree, for if legislative deadlocks are what underlie such situations, then such deadlocks should also ensue when a party different from that of the president controls a majority of seats. Hence, we examined the

[19] "Deadlocks" occurred in 30.9% of presidential and 45.0% of parliamentary years. Majority parties existed in exactly one-half of presidential and 43.1% of parliamentary years. Finally, situations of extreme fractionalization are not infrequent: In 19.1% of years under presidentialism and 11.9% under parliamentarism, no party controlled more than one-third of seats.

Table 2.21. Hazard rates for parliamentary and presidential democracies, by political conditions

	Total			Parliamentary			Presidential		
Variable	**PDA**	**TDA**	**TD**	**PLA**	**TLA**	**TL**	**PPA**	**TPA**	**TP**
SEATS									
0.0–33.3	0.0220	5	227	0.0147	2	136	0.0330	3	91
33.4–50.0	0.0224	15	668	0.0077	4	519	0.0738	11	149
50.1–66.6	0.0204	11	540	0.0146	5	343	0.0304	6	197
66.7–100	0.0402	8	199	0.0325	5	154	0.0667	3	45
MINORITY	0.0223	20	895	0.0091	6	656	0.0581	14	241
MAJORITY	0.0256	19	741	0.0201	10	498	0.0373	9	241
EFFPARTY									
0–2	0.0261	9	345	0.0240	6	250	0.0316	3	95
2–3	0.0154	9	585	0.0051	2	394	0.0366	7	191
3–4	0.0281	9	320	0.0041	1	246	0.1081	8	74
4–5	0.0272	5	184	0.0149	2	134	0.0600	3	50
5–	0.0126	2	158	0.0097	1	103	0.0182	1	55

Notes: Totals differ because some data for seats and for the number of effective parties are not available. SEATS, share of seats of the largest party; MAJORITY, dummy variable that equals 1 if SEATS > 0.50; EFFPARTY, index of the number of effective parties. PDA stands for the probability of transition from democracy to authoritarianism. TDA is their number. TD is the total number of annual observations of democracy. PLA stands for the probability of transition from parliamentarism to authoritarianism. TLA is their number. TL is the total number of annual observations of parliamentarism. PPA stands for the probability of transition from presidentialism to authoritarianism. TPA is their number. TP is the total number of annual observations of presidentialism.

effect of a version of the DEADLOCK variable in which we added all the instances of divided government (which occurred in seven countries, during forty-nine years) to the previous version. Yet the effect of this new variable on the stability of presidential democracies is much weaker. Hence, it may be not deadlock that weakens presidential democracies, but something about the difficulty of forming legislative coalitions when there are a few parties with similar strengths. And note that the descriptive patterns presented in Table 2.21 show that presidential systems are particularly brittle when the number of effective parties in the legislature is between three and four. The process of forming legislative coalitions in presidential systems has been little

studied (but see Figueiredo and Limongi 2000), and we do not know how it works.

Before concluding, however, that instability of democracy is an inherent effect of presidentialism, we need to examine one more rival hypothesis. If presidentialism is a military legacy, then perhaps presidential democracies last for shorter periods simply because they emerge in countries where the military is politically relevant. We thus need to compare separately the hazard rates for parliamentary and presidential democracies distinguished by their origins. It is apparent that a military legacy shortens the life of democracy regardless of its institutional framework. Democracies that emerged from civilian dictatorships died at the rate of 0.0158, with an expected life of 63.4 years; those that succeeded military dictatorships died at the rate of 0.0573, with an expected life of 17.5 years. Parliamentary democracies, however, are still more stable regardless of their origins. Given civilian origins, parliamentary democracies died at the rate of 0.0119 and had an expected life of 83.7 years, and presidential democracies died at the rate of 0.0329, with an expected life of 30.4 years. Given military origins, parliamentary systems died at the rate of 0.0400, with an expected life of 25 years, and presidential systems died at the rate 0.0628 and had an expected life of 16 years. Thus, again, the stability of democracies seems to be an effect of their institutional frameworks, not only of their origins.

Thus, although we remain uncertain about the reasons, it is clear that presidential democracies are less durable than parliamentary ones. This difference is not due to the wealth of the countries in which these institutions were observed, nor to their economic performance. Neither is it due to any of the political conditions under which they functioned. Presidential democracies are simply more brittle under all economic and political conditions.

Conclusion

We began this chapter with the observation that democracies are much more frequent in developed countries, and dictatorships in poor ones. Yet this observation is not very illuminating, and neither are the innumerable cross-sectional analyses of this pattern. The regimes we observe in particular countries at any moment depend on the conditions under which these regimes were born and on the conditions they encountered and produced as time passed. And because our systematic observations begin only in 1950 or when countries first became

independent (in some cases when data became available), we took the regimes under which the countries entered the sample as given and studied their subsequent dynamics.

The most important lesson we have learned is that wealthy countries tend to be democratic not because democracies emerge as a consequence of economic development under dictatorships but because, however they emerge, democracies are much more likely to survive in affluent societies. We find it difficult to explain why dictatorships die and democracies emerge. Although we are willing to believe that economic development may open the possibility for transition to democracy, even when the conditions for democracy are ripe, the outcomes of political conflicts are indeterminate. Hence, we failed to detect any thresholds of development that would make the emergence of democracy predictable. In sum, modernization theory appears to have little, if any, explanatory power.

In turn, we found that the survival of democracies is quite easily predictable. Although some other factors play roles, per capita income is by far the best predictor of the survival of democracies. Democracies survive in affluent societies whatever may be happening to them. They are brittle in poor countries. But they are not always sentenced to die: Education helps them to survive independently of income, and a balance among the political forces makes them more stable. Institutions also matter: Presidential democracies are less likely to survive under all circumstances we could observe than are parliamentary ones.

Yet one should not forget that we are dealing only with chances, probabilities, not certainties. And if all we can predict are chances, there must be other factors that matter, some we did not identify. These may be idiosyncratic, impossible to catch in a statistical analysis; but on the other hand, they might be systematic, and we may simply have failed to find them. Whichever they are – this is not a book on the philosophy of history – they remain hidden from our scrutiny. And this is a fact with consequences for what follows.

Appendix 2.1: Dynamic Probit Model

To decide which mechanism generates the relationship between development and democracy, we need to determine how the respective transition probabilities change with the level of development or other exogenous variables. To estimate the impacts of these variables on transition probabilities, we rely on Amemiya (1985, chap. 11).