2 The Interplay between Economic and Political Development

Theoretical Notions

Economic freedoms, in the form of free markets and small governments that focus on the maintenance of property rights, are often thought to encourage economic growth. This view receives support from the empirical findings discussed in chapter 1. The connection between political and economic freedom is more controversial, as stressed in the theoretical parts of the recent surveys by Sirowy and Inkeles (1990) and Przeworski and Limongi (1993). Some observers, such as Friedman (1962), believe that the two freedoms are mutually reinforçing. In this view, an expansion of political rights—more "democracy"—fosters economic rights and tends thereby to stimulate growth. But the growth-retarding aspects of democracy have also been stressed. These features involve the tendency to enact rich-to-poor redistributions of income (including land reforms) in systems of majority voting and the possibly enhanced role of interest groups in systems with representative legislatures.

Authoritarian regimes may partially avoid these drawbacks of democracy. Moreover, nothing in principle prevents nondemocratic governments from maintaining economic freedoms and private property. A dictator does not have to engage in central planning. Examples of autocracies that have expanded economic freedoms include the Pinochet government in Chile, the Fujimori administration in Peru, the shah's regime in Iran, and several previous and current governments in East Asia. Furthermore, as Schwarz (1992) observes, most OECD countries began their modern economic development in systems with limited political rights and became full-fledged representative democracies only much later.

The effects of autocracy on growth are adverse, however, if a dictator uses his or her power to steal the nation's wealth and to carry out nonproductive investments. Many governments in Africa, some in Latin America, some in the formerly planned economies of Eastern Europe, and the Marcos administration in the Philippines seem to fit this pattern. Thus, history suggests that dictators come in two types: one whose personal objectives often conflict with growth promotion and another whose interests dictate a preoccupation with economic development. This perspective accords with Sah's (1991, pp. 70–71) view that dictatorship is a form of risky investment. In any event, the theory that determines which kind of dictatorship will prevail seems to be missing.

Democratic institutions provide a check on governmental power and thereby limit the potential of public officials to amass personal wealth and carry out unpopular policies. Since at least some policies that stimulate growth will also be politically popular, more political rights tend to be growth enhancing on this count. Thus, the net effect of democracy on growth is theoretically inconclusive.

The interplay between political institutions and economic outcomes also involves the effect of the standard of living on a country's propensity to experience democracy. A common view since Lipset's (1959) research is that prosperity stimulates democracy, an idea often described as the Lipset hypothesis. Lipset (1959, p. 75) apparently prefers to view it as the Aristotle hypothesis: "From Aristotle down to the present, men have argued that only in a wealthy society in which relatively few citizens lived in real poverty could a situation exist in which the mass of the population could intelligently participate in politics and could develop the self-restraint necessary to avoid succumbing to the appeals of irresponsible demagogues." (For a statement of Aristotle's views, see Aristotle 1932, book VI.)

Theoretical models of the effect of prosperity on democracy are not well developed. Lipset (1959, pp. 83–84) emphasizes increased education and an enlarged middle class as elements that expand "receptivity to democratic political tolerance norms" (a phrase that I wish I understood). He also stresses Tocqueville's (1835) idea that private organizations

and institutions are important as checks on dictatorship. This point has been extended by Putnam (1993), who argues that the propensity for civic activity is the key underpinning of good government in the regions of Italy.[1] For Huber, Rueschemeyer, and Stephens (1993, pp. 74–75), the crucial concept is that capitalist development lowers the power of the landlord class and raises the power and ability to organize of the working and middle classes.

Despite the lack of a compelling underlying theory, the cross-country evidence examined in this study confirms that the Lipset hypothesis is a strong empirical regularity. In particular, increases in various measures of the standard of living tend to generate a gradual rise in democracy. In contrast, democracies that arise without prior economic development—sometimes because they are imposed by former colonial powers or international organizations—tend not to last. Given the strength of this empirical regularity, one would think that clear-cut theoretical analyses ought to be attainable. (This seems to be a case where the analysis works in practice but not in theory.)

Effects of Democracy on Economic Growth

The principal measure of democracy used in this study is the indicator of political rights compiled by Gastil and his associates (1982–1983 and subsequent issues) from 1972 to 1994. A related variable from Bollen (1990) is used for 1960 and 1965.[2] The Gastil concept of political rights is indicated

by his basic definition: "Political rights are rights to participate meaningfully in the political process. In a democracy this means the right of all adults to vote and compete for public office, and for elected representatives to have a decisive vote on public policies" (Gastil, 1986–1987 ed., p. 7). In addition to the basic definition, the classification scheme rates countries (somewhat impressionistically) as less democratic if minority parties have little influence on policy.

Gastil applied the concept of political rights on a subjective basis to classify countries annually into seven categories, where group 1 is the highest level of political rights and group 7 is the lowest. The classification is made by Gastil and his associates based on an array of published and unpublished information about each country. Unlike the rule of law index, discussed in chapter 1, the subjective ranking is not made directly by local observers.

The original ranking from 1 to 7 has been converted here to a scale from 0 to 1, where 0 corresponds to the fewest political rights (Gastil's rank 7) and 1 to the most political rights (Gastil's rank 1). The scale from 0 to 1 corresponds to the system used by Bollen.

Figure 2.1 shows the time path of the unweighted average across countries of the democracy index for 1960, 1965, and 1972–1994. The number of countries covered rises from 99 in 1960 to 109 in 1965 and 138 from 1972 to 1994. The figure

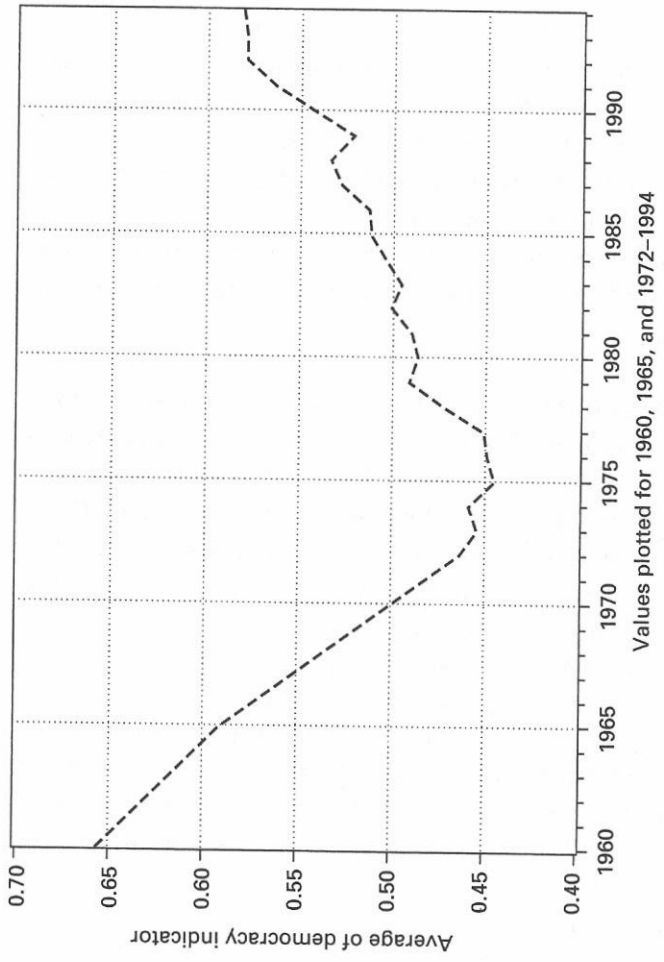

Figure 2.1
Democracy in the world

shows that the mean of the democracy index peaked at 0.66 in 1960, fell to a low point of 0.44 in 1975, and rose subsequently to 0.58 in 1994.

Figures 2.2 and 2.3 demonstrate that the main source of the decline in democracy after 1960 is the experience in sub-Saharan Africa. Figure 2.2 shows that the average of the democracy indicator in sub-Saharan Africa peaked at 0.58 in 1960 (twenty-six countries), then (for forty-three countries) fell to low points of 0.19 in 1977 and 0.18 in 1989 before rising to 0.38 in 1994. This pattern emerges because many of the African countries began with democratic institutions when they became independent in the early 1960s, but most evolved into one-party dictatorships by the early 1970s. (See Bollen 1990 for further discussion.) The democratization in Africa since 1989 has been substantial; whether it will be sustained is not yet known.

For countries outside sub-Saharan Africa, Figure 2.3 shows that the average of the democracy index fell from 0.68 in 1960 (seventy-three countries) to 0.55 in 1975 (ninety-five countries). It then returned to 0.69 in 1990 but fell to 0.67 in 1994.

Some of the analysis also uses the Gastil indicator of civil liberties. The definition here is that "civil liberties are rights to free expression, to organize or demonstrate, as well as rights to a degree of autonomy such as is provided by freedom of religion, education, travel, and other personal

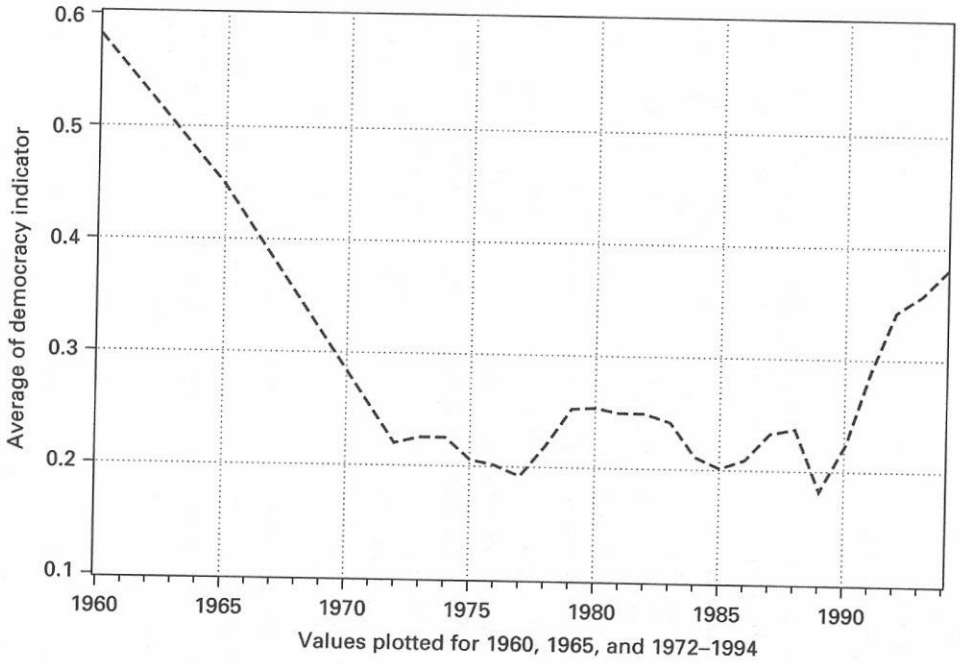

Figure 2.2
Democracy in sub-Saharan Africa

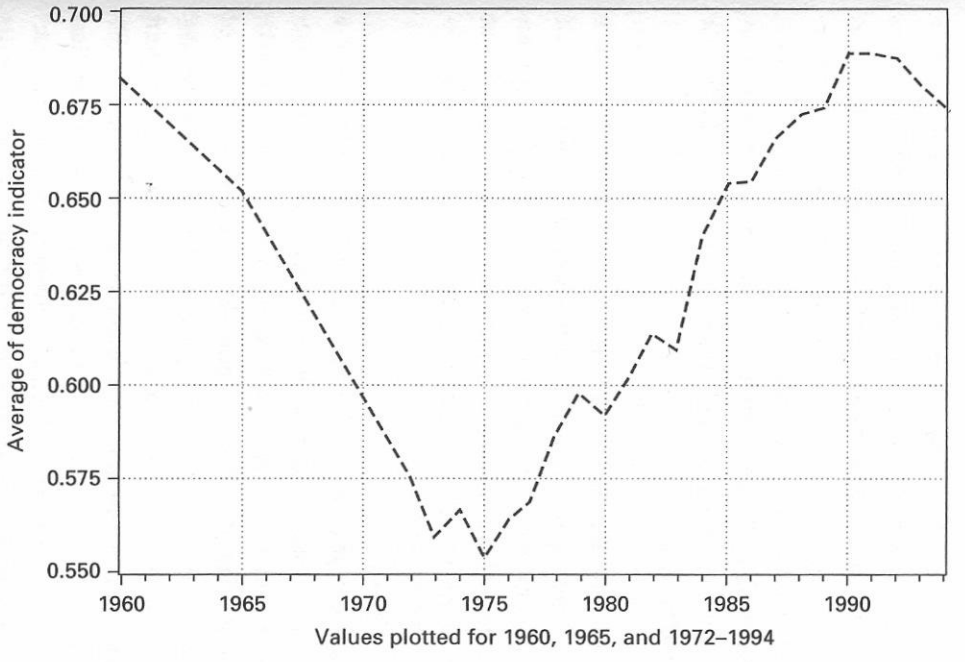

Figure 2.3
Democracy outside sub-Saharan Africa

rights" (Gastil 1986–1987 ed., p. 7). Otherwise the subjective approach is the same as the one used for the political rights indicator. The original scale for the civil liberties index from 1 to 7 has again been converted to 0 to 1, where 0 represents the fewest civil liberties and 1 the most. In practice, as observed by Inkeles (1991), the indicator for civil liberties turns out to be extremely highly correlated with that for political rights.

The previous discussion indicated that the net effect of more political freedom on growth is theoretically ambiguous. If the indicator for democracy is entered linearly into the regression system of table 1.1, then the resulting coefficient estimate turns out to be negative but statistically insignificant: −0.003 (0.006).[3]

The system shown in column 1 of table 1.1 allows for a quadratic in the indicator. In this case, the estimated coefficients on democracy and its square are each statistically significant. (The p value for joint significance of the two terms is 0.001.) The pattern of results—a positive coefficient on the linear term and a negative coefficient on the square—means that growth is increasing in democracy at low levels of democracy, but the relation turns negative once a moderate amount of political freedom has been attained.[4] The estimated turning point occurs at an indicator value of approximately 0.5, which corresponds to the levels of democracy in 1994 for Malaysia and Mexico.

Table 1.2 shows that an analogous nonlinear relation shows up in the effect of democracy on the investment ratio. The level of democracy that maximizes this ratio is again around 0.5.

One way to interpret the results is that in the worst dictatorships, an increase in political rights tends to increase growth and investment because the benefit from limitations on governmental power is the key matter. But in places that have already achieved a moderate amount of democracy, a further increase in political rights impairs growth and investment because the dominant effect comes from the intensified concern with income redistribution. Thus, growth would likely be reduced by further democratization beyond the levels attained in 1994 in countries such as Malaysia and Mexico. Moreover, political liberalization has probably gone beyond the point of growth maximization in places such as Chile, South Korea, and Taiwan. (These countries went from levels for the democracy indicator of 0.17, 0.33, and 0.33, respectively, in the early 1980s to 0.83, 0.83, and 0.67, respectively, in 1994.)

Figure 2.4 shows the partial relation between the growth rate and democracy indicator, as implied by the system shown in column 1 of table 1.1. (The concentration of points at a democracy value of 1.0 corresponds to the many OECD countries that are rated as fully democratic.) An inverse U shape can be discerned in the plot, with many of the low- and high-democracy places exhibiting negative residuals.[5]

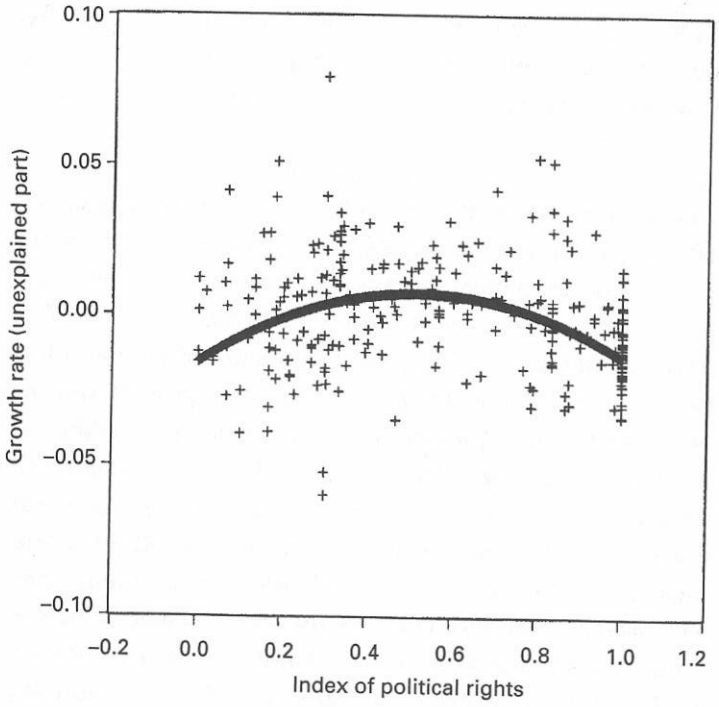

Figure 2.4
Growth rate versus indicator of democracy

Only a few of the observations with middle levels of democracy, such as Guyana over 1975–1985 and Pakistan over 1965–1975, have substantially negative residuals.

The overall relation between growth and democracy is far from perfect; for example, a number of countries with little democracy have large positive residuals. Also, the places

with middle levels of democracy seem to avoid low growth rates but not to have especially high growth rates. Thus, there is only the suggestion of a nonlinear relation in which more democracy raises growth when political freedoms are weak but depresses growth when a moderate amount of freedom is already established. One cannot conclude from this evidence that more or less democracy is a critical element for economic growth.

Framework for the Determination of Democracy

Inspection of the cross-country data suggests that countries at low levels of economic development typically do not sustain democracy. For example, the political freedoms installed in most of the newly independent African states in the early 1960s did not tend to last. Conversely, nondemocratic places that experience substantial economic development tend to become more democratic. Examples are Chile, South Korea, Taiwan, Spain, and Portugal. Moreover, the countries of Central and Eastern Europe, which have been reasonably advanced economically for some time, especially in terms of education, eventually became more democratic. Thus, a casual view of the data tends to confirm the Lipset hypothesis.

To assess this hypothesis formally, I consider a system of the form

$$DEMOC_{it} = a_0 + a_1 Z_{i,t-T} + a_2 DEMOC_{i,t-T} + u_{it}, \qquad (2.1)$$

where i is the country, t is the time period, and T is a time lag, usually taken to be five years. *DEMOC* is the indicator for democracy; Z is a vector of variables, such as per capita GDP and education, that influence the extent of democracy; and u is an error term. The idea in the equation is that if $0 < a_2 < 1$, then the extent of democracy in a country converges gradually over time toward a (moving) target that is determined by the Z variables. In practice, the Z variables are themselves highly persistent over time.

Operationally I use a panel setup in which the dependent variable, $DEMOC_{it}$, is observed at most six times for each country: 1972, 1975, 1980, 1985, 1990, and 1994. (The year 1972 is the initial date of the Gastil sample.) The variables $Z_{i,t-T}$ and $DEMOC_{i,t-T}$ refer to variables observed roughly five years prior to these dates.[6] (The values for $DEMOC_{t-T}$ are for 1965, 1972, 1975, and so on.)

Regression Results for Democracy

The basic regression results are in column 1 of table 2.1. This system contains a single constant term and the five-year lag value of democracy.[7] The explanatory variables also include several indicators of the level of the standard of living: the log of real per capita GDP, the log of life expectancy at birth,[8] and measures of educational attainment. These indicators are observed roughly five years prior to the dependent variable. The schooling figures that turn out to have the most explanatory power are the years of attainment at the primary level for males and females aged fifteen and over.

A dummy for oil-exporting countries, as designated by the International Monetary Fund (IMF),[9] is also included as a rough adjustment of GDP for the contribution of natural resources. That is, the income generated from natural resources such as oil may create less pressure for democratization than income associated with the accumulation of human and physical capital.

The specification includes some other possible influences on democracy that have been proposed in the political science literature that began with Lipset (1959) (see Lipset, Seong, and Torres 1993 and Lipset 1994 for discussion). The urbanization rate is often mentioned as a determinant of democracy, although the sign of this influence is not clear on theoretical grounds. (The easier communication and transportation in urban areas may make it easier for the populace to resist oppression, but these forces also make it easier for a dictator to monitor and control his or her subjects.) The simple correlation between democracy and urbanization is strongly positive, but urbanization is also positively related to real per capita GDP and the other measures of the standard of living that are included as regressors. In any event, the system includes the rate of urbanization observed five years prior to the dependent variable.[10]

The system also includes a measure of country size, the log of the five-year-earlier level of population. It is, how-

Table 2.1
Regressions for democracy and civil liberties indexes

	Dependent variables		
	(1)	(2)	(3)
Independent variable	Democracy	Democracy	Civil liberties
Constant	−0.91	−0.54	−0.48
	(0.26)	(0.28)	(0.21)
$DEMOC_{t-5}$	0.672	0.650	0.680
	(0.028)	(0.042)	(0.026)
Log(GDP)	0.045	0.041	0.037
	(0.017)	(0.019)	(0.014)
Male primary schooling	−0.056	−0.047	−0.037
	(0.014)	(0.015)	(0.011)
Female primary schooling	0.060	0.053	0.047
	(0.014)	(0.015)	(0.011)
Log(life expectancy)	0.187	0.100	0.096
	(0.076)	(0.085)	(0.062)
Urbanization rate	−0.102	−0.061	−0.032
	(0.048)	(0.051)	(0.039)
Log(population)	0.0061	0.0049	−0.0016
	(0.0043)	(0.0046)	(0.0035)
Oil country dummy	−0.107	−0.129	−0.101
	(0.030)	(0.032)	(0.025)
$DEMOC_{t-10}$		0.035	
		(0.040)	
R^2	.59, .74, .66,	.73, .67,	.59, .81, .77,
	.74, .76, .55	.75, .76, .57	.83, .70, .72
Number of observations	85, 97, 101,	89, 101,	85, 97, 101,
	102, 105, 102	102, 105, 102	102, 105, 102

Notes: System 1 has six equations, where the dependent variables are the values of the Gastil democracy index for 1972, 1975, 1980, 1985, 1990, and 1994. The variable $DEMOC_{t-5}$ is for 1965, 1972, and so on. (The data for

Table 2.1 (continued)

(Notes, continued) 1965 are from Bollen 1990.) The variables GDP (real per capita GDP), male and female primary schooling (years of attainment for persons aged fifteen and over at the primary level), urbanization rate, and population refer to 1965, 1970, and so on. Life expectancy at birth applies to 1960–1964, 1965–1969, and so on. The oil dummy equals 1 for countries designated as oil exporting by the International Monetary Fund (IMF) and 0 otherwise. System 2 contains only the five equations that start with the 1975 value of the democracy index. This system adds a second lag of the index (applying to 1965, 1972, etc.) as an explanatory variable. System 3 is the same as system 1 except that the dependent variable and its lag are for the Gastil civil liberties index. (The value for 1965, from Bollen 1990, coincides with the democracy index.)

Each system contains only one constant, as shown. The estimation, by the SUR technique, weights countries equally but allows for different error variances in each period and for correlation of these errors over the periods. Standard errors of the estimated coefficients are shown in parentheses. The R^2 values apply to each period individually.

ever, not apparent a priori whether a larger place is more or less likely to be democratic. (One selection problem here is that the existing countries had not become too large to split apart. See Alesina and Spolaore 1995 for a discussion of the determinants of country size.)

The first observation from column 1 of table 2.1 is that the estimated coefficient on lagged democracy is 0.67 (s.e. = 0.03). Thus, democracy is highly persistent over time, but roughly one-third of the adjustment to a target position (determined by the other variables) occurs over five years.

The results for the standard of living are broadly highly supportive of the Lipset idea that more prosperous places

are more likely to be democratic. The estimated coefficients on log(GDP) and log(life expectancy) are each significantly positive: 0.046 (0.017) and 0.19 (0.08), respectively. Thus, the target level of democracy is increasing in these indicators of the standard of living.

The estimated coefficient on years of primary school attainment for females aged fifteen and over is significantly positive, 0.060 (0.014), whereas that for male schooling is significantly negative: −0.056 (0.014).[11] A surprising aspect of this result is that once GDP and life expectancy are held constant, the level of schooling does not help to explain democracy. However, a smaller excess of male over female attainment—that is, more equal educational opportunity across the sexes—raises the target level of democracy. The gap between male and female attainment may be viewed as a proxy for the equality of schooling more generally. However, an explicit measure of educational inequality does not have a lot of explanatory power for democracy. Perhaps more promising is the idea, reminiscent of Tocqueville (1835), that expanded educational opportunity for women goes along with a social structure that is generally more participatory and, hence, more receptive to democracy.

The oil country dummy is significantly negative, −0.11 (0.03), thereby indicating that the high level of per capita GDP in oil countries does not have the usual positive effect on democratization. It seems plausible that this result would extend to natural resource activities more generally. To test this idea, I introduced the measures of natural resource intensity used by Sachs and Warner (1995): the ratios (in

1971) of primary product exports to total exports or to GDP. However, these variables are insignificant if added to the system shown in column 1 of table 2.1; for example, the estimated coefficient on the primary product share of exports is 0.005 (0.029). The estimated coefficient on the oil dummy is then −0.113 (0.032), about the same as that shown in table 2.1. It seems likely, however, that a better measure of natural resources would outperform the oil dummy.

The p value for the joint significance of the variables that measure the standard of living—log(GDP), log(life expectancy), male and female primary schooling, and the oil dummy—is 0.000. Thus, the general link between democracy and the standard of living is firmly established.[12]

The urbanization rate enters negatively in the system shown in column 1 of table 2.1; the estimated coefficient is −0.10 (0.05). Thus, once the indicators of the standard of living are held constant, it is not true that more rural places are less likely to be democratic.

The coefficient on the log of population is positive but not significant: 0.006 (0.004). (The simple correlation between democracy and country size is also close to zero.) Thus, there is no clear evidence on whether larger countries are more or less likely to be democratic.

Column 2 of table 2.1 adds a second lag of democracy, that is, a value applying roughly ten years prior to the dependent variable. (This system includes only the five equations that begin with the observation of democracy for 1975.) The

estimated coefficients on the five- and ten-year lags are 0.65 (0.04) and 0.04 (0.04), respectively. Hence, there is no indication that the longer-term history of democracy matters once the situation five years previously is held constant.

Table 2.2 considers some other possible determinants of democracy, many of which have been proposed in the political science literature. These additional variables are entered one set at a time into the six-period regression system described in column 1 of table 2.1. For example, on the first line of table 2.2, the infant mortality rate has an estimated coefficient of −0.42 (0.53) and is therefore insignificant. Infant mortality and life expectancy are highly correlated and are essentially indistinguishable in the regressions.

The second regression in table 2.2 adds years of school attainment for males and females aged fifteen and over at the secondary and higher levels. These values are individually and jointly insignificant, whereas the estimated coefficients on primary attainment remain significant (−0.064 [0.017] for males and 0.069 [0.017] for females). Hence, it appears to be early education that matters for democratization. Similar results apply to the determination of fertility rates and health status. However, rates of economic growth (and investment) relate far more to secondary and higher schooling than to primary education.

Regression 3 of table 2.2 includes a measure of inequality, as gauged by Gini coefficients for data on income distribution. (A higher Gini coefficient signifies more inequality.) Figures

for the early 1960s are used in the first three equations (for 1972, 1975, and 1980), and values for the early 1980s are used in the last three equations (for 1985, 1990, and 1994). These data on income distribution have been used in numerous studies but are thought to be highly inaccurate.[13] In any event, the estimated coefficient on inequality is essentially zero. Although the sample of observations is much reduced (because of the limited data on inequality), the estimated coefficients of the other explanatory variables remain similar to those shown in column 1 of table 2.1.

The finding that inequality is unimportant for democracy may reflect the poor quality of the data on income distribution rather than the irrelevance of inequality for democracy. In particular, the other independent variables—especially female primary schooling—may be superior to the reported Gini coefficients as measures of income inequality. The data on educational attainment at seven levels allow us to construct measures of schooling inequality. Regression 4 of table 2.2 uses as an independent variable the standard deviation of log (1+ years of schooling)[14] for the population of both sexes aged fifteen and over. This variable is observed for 1965, 1970, and so on. The estimated coefficient is negative (−0.058 [0.043]), indicating that more inequality of schooling goes along with less democracy, but statistically insignificant at conventional critical levels. The estimated coefficients of male and female primary schooling remain significant here: −0.047 (0.015) and 0.051 (0.016), respectively. If the Gini coefficient for years of schooling is used as an alternative measure of educational inequality, then the

Table 2.2
Additional determinants of democracy

Independent variables	Regression coefficients
1. Infant mortality rate	−0.42 (0.53)
2. Male upper schooling	0.021 (0.024)
Female upper schooling	−0.016 (0.027)
	p value = 0.60
3. Income inequality (Gini coefficient)	0.02 (0.12)
4. Educational inequality (standard deviation of log[1+years of schooling] for population aged fifteen and over)	−0.058 (0.043)
5. Ethnolinguistic fractionalization	−0.004 (0.032)
6. Rule of law index	0.048 (0.056)
7. Dummy for former colony	−0.010 (0.017)
8. Dummy for British colony	−0.018 (0.018)
Dummy for French colony	−0.007 (0.026)
Dummy for Spanish colony	−0.002 (0.022)
Dummy for Portuguese colony	0.031 (0.044)
Dummy for other colony	−0.010 (0.032)
	p value = 0.82
9. Muslim religion fraction	−0.076 (0.028)
Protestant religion fraction	0.054 (0.031)
Hindu religion fraction	0.119 (0.052)
Buddhist religion fraction	0.046 (0.054)
Miscellaneous Eastern religion fraction	−0.130 (0.073)
Jewish religion fraction	0.058 (0.076)
Nonreligion fraction	−0.266 (0.096)
Other religion fraction	−0.061 (0.052)
	p value = 0.0002

Notes: The indicated groups of explanatory variables are added, one at a time, to the system for the democracy index shown in column 1 of table 2.1.

Table 2.2 (continued)

(Notes, continued) (Case 6 applies only to the three periods that start with the value of the democracy index for 1985.)

The infant mortality rate applies to 1965, 1970, and so on. Upper schooling is the years of secondary and higher schooling for males or females aged fifteen and over. Income inequality is the Gini coefficient for income data applying around 1960 in the first three equations and in the early 1980s in the last three equations. A higher number indicates more inequality. Educational inequality is the standard deviation of log(1+years of schooling) for the overall population aged fifteen and over in 1965, 1970, etc. The ethnolinguistic fractionalization variable, which runs between 0 and 1, is a measure of heterogeneity of language and ethnicity. The number, observed once for each country, represents the probability that two randomly selected persons will come from different groups; hence, a higher value signifies more heterogeneity. See Mauro (1995) for a discussion of these data. The rule of law index, discussed by Knack and Keefer (1995) and available for 1982–1995 from Political Risk Services, is a subjective indicator of the extent of maintenance of the rule of law. The variable runs from 0 to 1, with a higher value indicating a more favorable environment.

Colony is a dummy for countries that are former or present colonies, where any country that was independent before 1776 is designated as a noncolony. In case 8, dummies for former British, French, Spanish, Portuguese, and other colonies are added together to the system from column 1 of table 2.1. Colonial status is based on the most recent ruler; for example, the Philippines is attributed to the United States rather than Spain.

In case 9, the fractions of the population affiliated with eight major religious groups are entered together into the system from column 1 of table 2.1. The left-out religion category is Catholic. The religion data are for 1970 (in the first three equations) and 1980 (in the last three equations) and come from Barrett (1982). The Protestant group includes Anglicans, Eastern Orthodox, marginal Protestants (Jehovah's Witnesses, Mormons, new age cults), and cryto-Christians (secret believers in Christ not professing publicly). Eastern religions include Chinese folk religions, Confucianism, and new religions. The nonreligion category comprises those professing no religion and atheism. Other religions include Parsis, Spiritists, tribal religions, indigenous Third World Christians not of Western importation, and Bahais. Jains and Sikhs are classed with Hindus.

estimated coefficient is again negative but even less statistically significant. Hence, these results indicate that male and female years of schooling do not enter the regressions merely as proxies for educational inequality.

The population's degree of heterogeneity with respect to ethnicity, language, and culture may also matter for democracy. The usual idea is that more heterogeneity makes it more difficult to sustain democracy. A standard measure of a population's heterogeneity is its ethnolinguistic fractionalization, a measure of disparity of languages and ethnicity within a country. (See Mauro 1995 for a discussion.) The variable runs between 0 and 1 and is intended to measure the probability that two randomly chosen persons in a country will come from different groups. Hence, 0 is the most homogeneous and 1 is the most heterogeneous. Regression 5 of table 2.2 shows that the estimated coefficient of the fractionalization variable (observed once per country) is close to zero.

A measure of the rule of law has substantial explanatory power for economic growth. However, the connection between political freedom and the rule of law is unclear, as stressed in the theoretical parts of the recent surveys by Sirowy and Inkeles (1990) and Przeworski and Limongi (1993). Some observers, such as Friedman (1962), argue that the two variables are mutually reinforcing, but others regard them as essentially independent.

Regression 6 of table 2.2 checks out this relationship by entering lagged values of the rule of law index into the equations for democracy. Since the data on the rule of law begin in 1982, this system includes only the equations for democracy for 1985, 1990, and 1994. The values for the rule of law in this system apply to 1982, 1985, and 1990. The result is that the estimated coefficient on the rule of law variable is positive but insignificant, 0.048 (0.056). Thus, holding fixed the measures of standard of living, there is not much evidence that rule of law promotes political freedom. Less directly, however, an expansion of the rule of law would raise economic growth and lead over time to a higher standard of living and, hence, to more democracy.

The rule of law measure can also be viewed as the dependent variable in a system where the independent variables are own lags and lags of the other variables, including the democracy index. (Three equations—for 1985, 1990, and 1995—are used here.) In this setting, democracy turns out to enter with a positive coefficient, 0.026 (0.027), which is not significant at conventional critical levels. Thus, there is also not strong evidence that political freedom stimulates the maintenance of the rule of law.

Colonial heritage would be important for democracy if countries inherit tendencies for more or less political freedom from their previous rulers. For example, Lipset, Seong, and Torres (1993, p. 168) argue that British rule provided a crucial learning experience for subsequent democracy. In table 2.3, a noncolony is defined to be a country that was independent prior to and since 1775 (so that the United States is treated as a former colony of Britain). Each former colony is attributed to its most recent occupier; for example,

Table 2.3
Democracy in relation to colonial status and religion

	Number of countries	Democracy indicator (average 1975–1994)
Colonial status		
Noncolony	32	0.69
Colony	106	0.46
British colony	53	0.54
French colony	23	0.25
Spanish colony	16	0.60
Portuguese colony	5	0.28
Other colony	9	0.35
All countries	138	0.51
Religious affiliation		
Primary religious affiliation, 1980		
Catholic	49	0.60
Muslim	32	0.26
Protestant	24	0.78
Hindu	5	0.66
Buddhist	4	0.56
Miscellaneous Eastern religions	3	0.45
Jewish	1	0.85
Nonreligious	1	0.10
Other religion	17	0.28
All countries with data on religion	136	0.51

Note: See the discussion in the text and table 2.2 for definitions of colonial status and religious affiliation. Section II shows averages for 1975–1994 of the democracy measure for groups of countries in which the most common religious affiliation in 1980 is of the indicated type.

the Philippines is associated with the United States rather than Spain, Rwanda and Burundi are attached to Belgium rather than Germany, and several Caribbean countries are related to Britain rather than Spain. The classification treats as noncolonies places such as South Korea, Taiwan, Hungary, and Poland, which were occupied by a foreign power for some periods.

The first section of table 2.3 shows that the thirty-two noncolonies are more likely to be democratic (average value for the democracy indicator from 1975 to 1994 of 0.69) than are the colonies (average value of 0.46). Within the colonies, the former possessions of Britain and Spain are substantially more democratic than are those of France, Portugal, or other countries. (The former possessions of Spain would look less democratic in earlier periods.)

In the statistical analysis, with the measures of standard of living held constant, regression 7 of table 2.2 shows that a dummy variable for colonial status (1 for former colony, 0 for noncolony) is insignificant for democracy. Moreover, regression 8 indicates that a breakdown among British, French, Spanish, Portuguese, and other colonies fails to generate any significant coefficients. (The p value for joint significance of the five coefficients is 0.82.) These results, in conjunction with table 2.3, suggest that the influence of former colonial status on democratic tendency must work indirectly through effects on the standard of living, as measured here by GDP, life expectancy, and male and female

primary schooling. These indirect links with colonial history are worth further study.

Religious affiliation has also been stressed as an important determinant of democracy (see Huntington 1991, pp. 71–85, and Lipset 1994, p. 5). (The theory of the interplay between religion and political structure is even less developed than are other aspects of the theory of democracy.) To check for a connection between religion and political freedom, I use data compiled by Jong-Wha Lee on the fractions of a country's population in 1970 and 1980 affiliated with nine major groups:[15] Catholic, Muslim, Protestant (including Anglican and some other Christian groups), Hindu (including Jains and Sikhs), Buddhist, miscellaneous Eastern religions (Chinese folk religions, Shinto, Confucianism, and new religionists), Jewish, no professed religion (including atheists), and other religious groups (such as Parsis, Bahais, Spiritists, tribal religions, and indigenous Third World Christians).

The second section of table 2.3 verifies that differences in a country's primary religious affiliation relate strongly to democracy. When countries are sorted in accordance with the most popular religion in 1980, the average of the democracy indicator from 1975 to 1994 is 0.85 for Jewish (1 country), 0.78 for Protestant (24 countries), 0.66 for Hindu (5 countries), 0.60 for Catholic (49 countries), 0.56 for Buddhist (4 countries), 0.45 for miscellaneous Eastern religions (3 countries), 0.28 for other religions (17 countries), and 0.26 for Muslim (32 countries). China is the only place in which

nonreligion is the most common affiliation, and the average of the democracy index in this case is 0.10. The mean value of democracy for all 136 countries with data on religion is 0.51.

A prominent aspect of this breakdown is that Protestant countries are nearly always highly democratic, whereas Muslim countries are usually not democratic. Only 4 of the 32 Muslim countries have democracy indicators that averaged at least 0.5 for 1975–1994: Gambia, Senegal, Malaysia, and Turkey.

Regression 9 of table 2.2 shows the results when eight religious affiliation variables are entered into the equations for democracy.[16] (The omitted characteristic is chosen arbitrarily to be Catholic, the most prevalent religion when countries are weighted equally.) The regressions indicate that the only significant religion coefficients at the 5 percent critical level are for nonreligion, −0.27 (0.10); Hindu, 0.12 (0.05); and Muslim, −0.08 (0.03). The estimated coefficient for Protestant is positive but not significant, 0.05 (0.03). Thus, the strong explanatory power for religion that appears in table 2.3, especially the contrast in democratic tendency between Protestant and Muslim countries, is mostly reflected in the measures of standard of living, which are being held constant.

The p value of 0.0002 indicates that the eight religion coefficients are significant overall; however, much of this significance hinges on the presence of a few outlier countries.

For example, the significantly positive coefficient on Hindu mainly indicates that India and Mauritius are surprisingly democratic, given their indicators of the standard of living. If these two places are omitted from the sample, the estimated coefficient on Hindu falls to 0.041 (0.064). The significantly negative coefficient on nonreligion depends on the inclusion of China, the one country for which this affiliation exceeds 0.5.[17] If China is omitted, the estimated coefficient of nonreligion becomes −0.25 (0.14); that is, the point estimate is about the same, but the rise in the standard error eliminates the statistical significance.

The weak results on the estimated religion coefficients do not necessarily mean that religion is unimportant for understanding political freedom (or in other respects). Rather, the indication is that the main effects on democracy work indirectly through influences on the economic variables—for example, through effects on female schooling. Given the striking patterns that emerge in table 2.3, these channels are worth further investigation.

The democracy indicator is a narrow measure that focuses on political rights, specifically the role of elections. In contrast, the Gastil index of civil liberties is a broader concept that covers freedoms of speech, press, and religion and also considers a variety of legal protections. In practice, however, the civil liberties variable is highly correlated with the democracy index: 0.86 in 1972, 0.93 in 1980, 0.94 in 1990, and 0.91 in 1994. Given this high degree of correlation, it is not surprising that results with the civil liberties index

as the dependent variable, shown in column 3 of table 2.1, look similar to those found for the democracy index.[18] This result suggests that the economic and social forces that promote political rights are similar to those that stimulate civil liberties.

Long-Run Forecasts of Democracy

The estimated relation from column 1 of table 2.1 implies a gradual adjustment of democracy toward the values determined by the explanatory variables aside from lagged democracy.[19] In a full system, the dynamics of these explanatory variables would also be determined. In practice, the levels of GDP and the other variables are highly persistent over time, although they evolve gradually in line with the process of economic development, some of which has already been studied in chapter 1 in terms of rates of economic growth.[20]

One simple way to relate the current level of democracy to its long-run target is to compute at each date the estimated level of democracy that would arise asymptotically if all the right-hand-side variables (aside from lagged democracy) were held fixed at their current values. For example, in 1975, the long-run level of democracy is calculated from the 1970 values (1965–1969 for life expectancy) of the regressors included in column 1 of table 2.1.[21] The resulting projected values for 1975 and 1994 are shown along with the actual values of democracy in table 2.4. The gap is the difference

Table 2.4
Actual and long-run values of democracy

Country	Democracy, 1975			Democracy, 1994		
	Actual	Projected	Gap	Actual	Projected	Gap
Algeria	0.17	0.01	0.16	0.00	0.20	–0.20
Benin	0.00	0.36	**–0.36**	0.83	0.24	**0.59**
Botswana	0.83	0.51	0.32	0.83	0.76	0.08
Cameroon	0.17	0.27	–0.10	0.17	0.38	–0.21
Central African Republic	0.00	0.15	–0.15	0.67	0.13	**0.54**
Congo	0.33			0.50	0.48	0.02
Egypt	0.17	0.38[a]	–0.21	0.17	0.44	–0.27
Gambia	0.83	0.18[a]	**0.65**	0.00	0.17	–0.17
Ghana	0.00	0.25	–0.25	0.33	0.21	0.12
Guinea-Bissau	0.17			0.67	0.18	**0.48**
Kenya	0.33	0.23	0.10	0.17	0.38	–0.21
Lesotho	0.33	0.59	–0.25	0.50	0.76	–0.26
Liberia	0.17	0.25	–0.08	0.00		
Malawi	0.00	0.06	–0.06	0.83	0.21	**0.63**
Mali	0.00	0.17	–0.17	0.83	0.27	**0.56**
Mauritius	0.83	0.48	**0.35**	1.00	0.75	0.25
Mozambique	0.17	0.33	–0.16	0.67	0.32	**0.34**
Niger	0.00	0.27	–0.27	0.67	0.32	**0.34**
Rwanda	0.00	0.31	–0.31	0.00	0.30	–0.30
Senegal	0.17	0.22	–0.05	0.50	0.28	0.22
Sierra Leone	0.17	0.18	–0.01	0.00	0.16	–0.16
South Africa	0.50	0.64	–0.14	0.83	0.61	0.23
Sudan	0.17	0.33	–0.16	0.00	0.39	**–0.39**
Swaziland	0.17	0.45	–0.29	0.17	0.54	**–0.37**
Tanzania	0.17	0.21	–0.05	0.17	0.26	–0.10
Togo	0.00	0.21	–0.21	0.17	0.15	0.01
Tunisia	0.17	0.35	–0.19	0.17	0.36	–0.19
Uganda	0.00	0.27	–0.27	0.33	0.32	0.02
Zaire	0.00	0.15	–0.15	0.00	0.07	–0.07
Zambia	0.33	0.15	0.18	0.67	0.07	**0.60**

Table 2.4 (continued)

Country	Democracy, 1975			Democracy, 1994		
	Actual	Projected	Gap	Actual	Projected	Gap
Zimbabwe	0.17	0.41	–0.24	0.33	0.48	–0.14
Barbados	1.00	0.84	0.16	1.00	0.92	0.08
Canada	1.00	0.96	0.04	1.00	(1.06)	–0.06
Costa Rica	1.00	0.76	0.24	1.00	0.86	0.14
Dominican Republic	0.50	0.57	–0.07	0.50	0.66	–0.16
El Salvador	0.83	0.46	**0.37**	0.67	0.63	0.03
Guatemala	0.50	0.50	0.00	0.50	0.63	–0.13
Haiti	0.17	0.36	–0.19	0.33	0.21	0.13
Honduras	0.17	0.49	–0.32	0.67	0.45	0.22
Jamaica	1.00	0.78	0.22	0.83	0.81	0.03
Mexico	0.50	0.56	–0.06	0.50	0.80	–0.30
Nicaragua	0.33	0.53	–0.19	0.50	0.56	–0.06
Panama	0.00	0.74	**–0.74**	0.83	0.79	0.04
Trinidad and Tobago	0.83	0.85	–0.02	1.00	0.88	0.12
United States	1.00	(1.02)	–0.02	1.00	(1.11)	–0.11
Argentina	0.50	0.74	–0.24	0.83	0.76	0.07
Bolivia	0.17	0.25	–0.09	0.83	0.45	**0.39**
Brazil	0.50	0.64	–0.14	0.83	0.76	0.08
Chile	0.00	0.65	**–0.65**	0.83	0.74	0.09
Colombia	0.83	0.59	0.25	0.67	0.83	–0.16
Ecuador	0.00	0.59	**–0.59**	0.83	0.72	0.11
Guyana	0.50	0.67	–0.17	0.83	0.65	0.19
Paraguay	0.33	0.61	–0.27	0.50	0.68	–0.18
Peru	0.17	0.41	–0.25	0.33	0.55	–0.21
Uruguay	0.33	0.75	**–0.41**	0.83	0.77	0.07
Venezuela	0.83	0.53	0.30	0.67	0.46	0.21
Bahrain	0.17			0.17	0.43	–0.27
Bangladesh	0.00	0.38	**–0.38**	0.83	0.46	**0.37**
China	0.00	0.53[a]	**–0.53**	0.00	0.53	**–0.53**
Hong Kong	0.67	0.45	0.22	0.33	0.85	**–0.51**

Table 2.4 (continued)

Country	Democracy, 1975			Democracy, 1994		
	Actual	Projected	Gap	Actual	Projected	Gap
India	0.83	0.20	**0.63**	0.50	0.38	0.12
Indonesia	0.33	(–0.05)	**0.38**	0.00	0.25	–0.25
Iran	0.17	0.22	–0.05	0.17	0.26	–0.10
Iraq	0.00	0.15	–0.15	0.00	0.09	–0.09
Israel	0.83	0.71	0.12	1.00	0.86	0.14
Japan	0.83	0.91	–0.08	0.83	(1.06)	–0.23
Jordan	0.17	0.22	–0.06	0.50	0.57	–0.07
South Korea	0.33	0.50	–0.17	0.83	0.81	0.03
Malaysia	0.67	0.40	0.27	0.50	0.73	–0.23
Nepal	0.17	0.34	–0.17	0.67	0.33	**0.34**
Pakistan	0.33	0.30	0.03	0.67	0.44	0.23
Philippines	0.33	0.62	–0.29	0.67	0.74	–0.07
Singapore	0.33	0.36	–0.03	0.33	0.73	**–0.39**
Sri Lanka	0.83	0.70	0.13	0.50	0.82	–0.32
Syria	0.17	0.29	–0.13	0.00	0.54	**–0.54**
Taiwan	0.17	0.55	**–0.38**	0.67	0.86	–0.19
Thailand	0.83	0.55	0.28	0.67	0.87	–0.20
Austria	1.00	0.89	0.11	1.00	1.00	0.00
Belgium	1.00	0.93	0.07	1.00	(1.01)	–0.01
Cyprus	0.50	0.67	–0.17	1.00	0.93	0.07
Denmark	1.00	0.90	0.10	1.00	0.96	0.04
Finland	0.83	(1.04)	–0.20	1.00	(1.08)	–0.08
France	1.00	0.92	0.08	1.00	(1.01)	–0.01
West Germany	1.00	0.97	0.03	1.00	(1.05)	–0.05
Greece	0.83	0.65	0.18	1.00	0.71	0.29
Hungary	0.17	0.94	**–0.77**	1.00	0.83	0.17
Iceland	1.00	0.80	0.20	1.00	0.89	0.11
Ireland	1.00	0.90	0.10	1.00	1.00	0.00
Italy	1.00	0.88	0.12	1.00	0.96	0.04
Netherlands	1.00	0.92	0.08	1.00	0.97	0.03

Table 2.4 (continued)

Country	Democracy, 1975			Democracy, 1994		
	Actual	Projected	Gap	Actual	Projected	Gap
Norway	1.00	0.99	0.01	1.00	1.00	0.00
Poland	0.17	0.80	**–0.63**	0.83	0.86	–0.03
Portugal	0.33	0.73	**–0.40**	1.00	0.95	0.05
Spain	0.33	0.82	**–0.49**	1.00	0.99	0.01
Sweden	0.83	0.90	–0.07	1.00	0.98	0.02
Switzerland	1.00	(1.02)	–0.02	1.00	(1.06)	–0.06
Turkey	0.67	0.46	0.21	0.33	0.72	**–0.38**
United Kingdom	1.00	0.94	0.06	1.00	(1.02)	–0.02
Yugoslavia	0.17	0.65	**–0.48**	0.17	0.70	**–0.53**
Australia	1.00	0.92	0.08	1.00	1.00	0.00
Fiji	0.83	0.52	0.31	0.50	0.75	–0.25
New Zealand	1.00	0.89	0.11	1.00	0.95	0.05
Papua New Guinea	0.67	0.46	0.21	0.83	0.50	**0.33**

Note: Projected values are based on the estimated system shown in table 2.1, column 1. The 1975 projection is [1/(1 – coeff. of lagged democracy)] * (estimated value based on other variables included in the 1975 equation). The 1994 projection is formed analogously. Values in parentheses are linearly fitted values that lie outside the range (0, 1). Values shown in boldface type have a magnitude of at least 0.33.

[a] Long-run projected value based on variables included in the 1980 equation.

between the current level of democracy and its long-run target. Values of the gap that exceed 0.33 in magnitude are shown in boldface type.

In 1975, out of 100 countries with data, 13 were below the long-run target for democracy by at least 0.33 and 5 were above by at least 0.33. In 1994, out of 102 places with data, 8 were below target by at least 0.33 and 12 were above target by at least 0.33. The larger relative number with positive

gaps in 1994 than in 1975 reflects the global upward trend in democracy (figure 2.3), which has surpassed the trend in the model's target level of democracy.

One striking observation is that only two countries—China and Yugoslavia—appear with the same sign (negative) on both lists. With an estimated rate of convergence for democracy of about one-third per five-year period (from the coefficient on lagged democracy in column 1 of table 2.1), a lot of reversion to the mean occurs over nineteen years.

Among the African countries, Botswana, Gambia, and Mauritius looked "too democratic" in 1975, but the situation for Gambia changed with a coup in 1994. Botswana and Mauritius were still above target for democracy in 1994 but by smaller amounts than in 1975.

Several African countries, such as Benin and Rwanda, were surprisingly nondemocratic in 1975. However, a recent surge of democratization caused many of the African countries to become more democratic than predicted by 1994. This group includes Benin, Central African Republic, Guinea-Bissau, Malawi, Mali, Mozambique, Niger, and Zambia. In some of these cases, the democratization may be explicable from the pressures and rewards exerted by international organizations, such as the International Monetary Fund (IMF) and the World Bank. (The recent U.S. efforts in Haiti are analogous.)

In any case, the regression analysis predicts that, as with the African experience of the 1960s, democracy that gets well

ahead of economic development will not last. (As a possible indicator of this process, Niger had a military coup in January 1996 and then became nondemocratic.) South Africa, which was below target for democracy in 1975, also became above target by 1994 and would be projected to become less democratic.

A few African countries still had below-target levels of democracy in 1994. Prominent here are Rwanda, Sudan, and Swaziland. (Nigeria and Somalia would likely be included in this category but have missing data and are therefore excluded from table 2.4.)

For Latin America in 1975, several countries were surprisingly nondemocratic, including Panama, Chile, Ecuador, and Uruguay. All of these places subsequently experienced sharp increases in political freedom. In 1994, Bolivia had far more democracy than would be predicted from its economic situation. Mexico was below target in 1994 and is predicted to become more democratic.

Among Asian countries, surprisingly low democracy prevailed in 1975 in Bangladesh, China, and Taiwan, but only China remained in this state in 1994. Hong Kong, Singapore, and Syria exhibited below-target democracy in 1994. The model predicts increases in democracy in these cases, but the model has not been informed of Hong Kong's post-1997 relationship with China. It will be of interest to see whether prosperous Singapore joins South Korea and Taiwan in their marked democratizations.

On the other side, democracy was higher than predicted for India and Indonesia in 1975. The Indian situation (along with that in Mauritius) accounted for the significance of the Hindu variable in the regression analysis. However, with the decline in Gastil's measure of democracy (in 1991 and 1993), India no longer looked like a large outlier in 1994. For Indonesia, the decline in democracy to zero in 1994 meant that it had fallen below target. Nepal had surprisingly high democracy in 1994.

Because of lack of data, only three countries from Central or Eastern Europe are represented in the sample: Hungary, Poland, and Yugoslavia. In each of these places, democracy was strikingly below its target level in 1975. Two countries in Western Europe—Portugal and Spain—were also surprisingly nondemocratic. By 1994, all of these countries except Yugoslavia had, as predicted, become far more democratic. Thus, these countries were no longer negative outliers in 1994; in fact, Hungary was more democratic than predicted. The model forecasts a large increase of democracy in Yugoslavia, which should perhaps now be identified with Serbia. The model also predicts substantial democratization for Turkey, which was surprisingly nondemocratic in 1994.

Some Conclusions

The positive relation between democracy and prior measures of prosperity—the Lipset hypothesis—is well established as an empirical regularity. Given the strength of this relation, it is surprising that convincing theoretical models

of this mechanism do not exist. Thus, development of such a theory is a priority for future research. At the empirical level, it would be interesting to investigate the relation of democracy to inequality, colonial status, and religion. Of course, it may be that the development of satisfactory theories for the determination of democracy would also suggest additional empirical linkages that ought to be explored.