POLITICAL DEMOCRACY AND THE TIMING OF DEVELOPMENT*

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This research explores the relationship between development timing and political democracy. A number of social scientists have argued that the conditions favoring political democracy have deteriorated over time so that the late developing countries are less likely to be democratic than are the early developers. Another perspective suggests that with the worldwide diffusion of the democratic ideology there is a great deal of pressure for the later developers to adopt democratic forms of government. For a large sample of countries, this analysis reveals no significant relationship between the timing of development and the level of political democracy. However, when more specific characteristics of development timing are explored, some significant effects are found. In particular support is found for the hypotheses that the greater the extent to which a culture is Protestant-based, the greater the level of political democracy; and the greater the state's control of the economy, the lower the level of democracy. In a panel analysis, changes in political democracy are found to be negatively related to the state's economic control but not significantly related to Protestantism. In all of the regressions the level of development has a more significant direct effect than the various timing measures.

The positive relationship between socioeconomic development and political democracy has been the subject of considerable empirical research (e.g., Lerner, 1958; Lipset, 1959; Cutright, 1963; Cutright and Wiley, 1969; Jackman, 1973). In more recent empirical studies the relation-

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Zeitlin, Maurice, Richard Earl Ratcliff, and Lynda Ann Ewen 1974 "The 'inner group': interlocking directorates and the internal differentiation of the capitalist class of Chile." Presented at the annual meeting of the American Sociological Association, Montreal.

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racy than are the conditions facing the late developers. As a result, the early developers are viewed as more likely to be democratic than are the more recent developers.

Many of the countries which are at the highest levels of economic development are also the nations which began to develop in the earliest historical periods. This raises the question of whether it is the historical timing or the level of development that is the primary determinant of political democracy. If the historical period of development has the dominant influence, the chances for political democracy would not improve with socioeconomic advances. The characteristics of the time at which a society began its development would fix the form of its political system. In contrast, if developmental factors are more important, the level of political democracy would not be fixed but would be associated with socioeconomic changes. This paper presents and tests several major hypotheses on the effects of the timing of development on democracy while controlling for the level of development.

EARLY AND LATE DEVELOPMENT EFFECTS

The time in world history when a country begins to develop will affect its social, economic and political systems (see, e.g., Black, 1966; Levy, 1966; Seers and Joy, 1970). Britain, the first economy to "take-off" into rapid economic growth, altered the path of development for all the countries that were to follow it. It established a model of economic development that influenced France, Belgium, America and numerous other countries. As the number of successful economies grew, the pool of potential models for the industrial development of other countries grew. At the same time the relevance of the traditional development models became questionable. Part of the reason for the irrelevance is that the first developers were largely from a similar western cultural heritage. In contrast, the later developers represent a more heterogenous set of sociocultural systems, some of which are not easily malleable to the transformations required to begin and maintain economic development. It is an open question whether democratic forms of government are consistent with the diverse sociocultural systems of these countries.

In addition many of the late modernizers face greater strains in their societies than were present in the first developers. Part of this strain is caused by what is often called demonstration effects. That is, the latecomers are well aware of what goods economic development can bring to their society and at the same time they are aware of their own economic backwardness. Rather than having a population willing to save and invest for an unknown future there is a great deal of pressure in the late developers for immediate consumption and social welfare as is found in more mature economies. A political democracy allows these rising and often competing demands to impinge upon the political system while the developing country's economic system is not advanced enough to satisfy the demands. These pressures may lead to the collapse of democratic regimes and give rise to a more authoritarian government which may or may not be better able to meet the demands but will be more successful in suppressing the demands.

Further strain is placed on the developing societies as a result of their rapid increases in population. The rapid diffusion of public health programs and inexpensive "death-control" technology to many of the Third World nations, has led to tremendous drops in mortality (Davis, 1956; Gray, 1974). The rapid declines in mortality have not been accompanied by proportional drops in fertility and the result has been unprecedented increases in population. The population increases have put more pressure on the resources of the societies to feed, clothe and house a substantial number of new individuals who will not contribute to the work force for years to come. Emigration, which might relieve some of the population pressure, is made nearly impossible by quotas and immigration restrictions that are found in both developed and developing countries (de Schweinitz, 1964).

The population problem and the other strains associated with late development are believed to make it difficult for a
democratic form of government to be effective in developing nations (de Schweinitz, 1964; Moore, 1966). A democratic form of government is seen as a luxury that cannot be afforded by a nation struggling to overcome poverty and starvation. In addition the birth control policies, economic and social changes that are considered essential to development are viewed as nearly impossible to achieve within a democratic framework. Instead, an authoritarian government with a concentrated distribution of political power is seen as a likely and necessary response to the tensions of late development (Heilbroner, 1974). The earlier developers did not have to cope with the same strains that are faced by the latecomers. They could afford to develop with a more diffused distribution of political power.

The world system and dependency perspective on national development suggest some additional reasons why the early developers are more likely to be politically democratic than are the late developers. In this perspective the early developers such as the U.S., U.K., France, etc. are considered the "core" nations of the world system. Political democracy is viewed as a system established by the elites within the core nations to avoid massive conflict with the core nonelites (Wallerstein, 1977: 34). The ideology of political freedom and democracy spread rapidly through the early developers and made authoritarian political control give way to more subtle economic forms of control.

In contrast, the late developers are viewed as the peripheral nations in the world system. Their underdeveloped status is seen as at least partially a consequence of the development of the core nations (see, e.g., Baran, 1956; Frank, 1973; Wallerstein, 1974; Chase-Dunn, 1975). Galtung (1971), along with other dependency theorists, has emphasized the commonality of interests shared by the elites in the periphery nations and the elites in the core nations. The core nations are said to provide monetary and political rewards to those elites in the periphery nations that help advance the core elite's interests. "The power of the elites in dependent peripheral countries is backed by their alliances with the core. . ." (Chase-Dunn, 1975:724). The political power of the elites in the late developing periphery is strengthened by the support they receive from the core, early developers. The elites in the periphery may then be better able to maintain authoritarian rule. Thus, the late developers (or periphery nations) are less likely to have democratic political systems than are the early developers (or core nations).

Based on these and other conditions of early and late development a number of authors (e.g., de Schweinitz, 1964, and Moore, 1966) have suggested the following hypothesis:

Hypothesis 1: The earlier a country begins to develop, the higher its level of political democracy.

The early developers provided not only a model of economic development (as described above) but also a model of political "development." Most of the early developers of Western Europe and North America evolved political systems that were more democratic than that found in other countries. The democratic ideology which legitimizes the democratic political system has become an important component of the political culture of these nations. The ideal of "rule by the people" has moved beyond the borders of the early developers and has spread to all corners of the globe. "Participation in public affairs at the national level has widened: in one country after another the earlier dichotomy between rulers and ruled has become blurred" (Bendix, 1976:245).

The democratic ideology has been spread by books, movies, radios, and other vehicles of cultural transmission. The education of many of the Third World elites in western universities or under western systems of education also contributed to the diffusion of the belief in popular sovereignty. Ironically, the often nondemocratic colonialism of western

1 The differences in political power between males, females, races, occupations, and educational groups are obvious reminders that the democratic ideal is far from being met in any country developed or not.
powers served to spread the democratic ideal if not the practice. Although the spread of the democratic ideology has been worldwide, institutionalizing the ideal has proved far more difficult as is exemplified by the alteration of democratic to authoritarian governments in some Third World nations. However, the spread of the ideal has put authoritarian governments in a defensive position. A concentrated distribution of power must be justified to the masses within a country as well as to world public opinion. This will exert pressure toward more rather than less democratic forms of governments in the late developers.

The above argument suggests a second hypothesis that makes a prediction contrary to Hypothesis 1.

Hypothesis 2: Because of the diffusion of the democratic ideal over time, the later the time of development the more pressure toward adopting a democratic form of government.

In addition to these two general timing hypotheses, a number of more specific characteristics of early and late development have been hypothesized to affect political democracy. In the next two sections the effects on political democracy of a Protestant-based culture and the strength of the state are discussed.

PROTESTANT-BASED CULTURE

One specific characteristic of the early developers which has been hypothesized to facilitate the rise of democracy is the extent to which a culture is influenced by Protestantism. As argued above, the diffusion of the democratic ideology has been worldwide. However, democratic political systems have seemed to receive their greatest legitimation in Protestant-based cultural systems. Lenski and Lenski (1974:349) argue that Protestantism was largely responsible for the extensive diffusion of the democratic ideology: "Among the various factors that contributed to the rise and spread of the new democratic ideology, Protestantism looms large. Whatever else the Reformation accomplished, it proved that established authority could be challenged and overthrown."

Schumpeter (1950) claims that Protestantism served to legitimate the democratic ideology through closely related religious beliefs. For example, the ambiguity in interpreting the will of God was resolved by seeking the will of the people. In a similar manner the values of "equality" and the importance of all individuals were legitimated by and consistent with Protestant religious beliefs (Schumpeter, 1950: 265).

The relatively democratic governments of Japan, Israel and India, among others, are sufficient to demonstrate that Protestantism is not a necessary condition for democracy. Rather, the role of Protestantism is that of aiding the diffusion of and legitimizing values associated with political democracy. These arguments lead to the formulation of a third hypothesis.

Hypothesis 3: The greater the extent to which a nation's culture is Protestant-based, the higher its level of political democracy.

STATE'S ROLE IN ECONOMIC SYSTEM

The state or government's control of the economic system was relatively minor in the early developers. Instead the means to attain economic advancement were open to private, entrepreneurial experimentation. The commercial class in the early developers was able to gain a status significantly independent of the agricultural elites (Moore, 1966). The relative autonomy and freedom of the commercial class led to even greater economic growth. As Landes (1969:19) observes: those economies grew fastest that were freest. This is not to imply that state enterprise or control is intrinsically inferior to private enterprise: simply that, given the state of knowledge in pre-industrial Europe, the private sector was in a better position to judge economic opportunity and allocate resources efficiently.
Thus, the early developers’ push toward industrialization was engineered by private entrepreneurs with a minimum of state intervention.

Karl de Schweinitz (1964) argues that the advancements of the early developers generated by a relatively autonomous commercial class diminished the political power held by the traditional governing elite. The economic gains of the commercial class led to their demands and receipt of a larger share of political power. In short, the minimal role of government in the economic development of the early developers seemed favorable to the extension of democracy in the political sphere.

The close connection between political democracy and this capitalist form of development has been recognized at least since the writings of Adam Smith. The ideal of a competitive and free struggle for leadership in democracies is quite consistent with the ideal of competitive and free trading in a market economy. In the political sphere the vote may be considered analogous to the dollar as a purchasing unit that, instead of buying economic goods, is spent in the selection of the ruling elites. Schumpeter’s (1950:285) quote of a successful politician illustrates this point: “What businessmen do not understand is that exactly as they are dealing in oil so I am dealing in votes.”

The capitalist mode of development, which was characteristic of many of the early developers, plays a less important role in the late developers. In response to foreign economic and political penetration and/or to overcome economic stagnation, the government in many of the latecomers will often play a more active economic role than was true in the early developers (de Schweinitz, 1964; Rubinson, 1976). The state may be the only domestic institution that can accumulate the great amount of capital that is required to stimulate development. The nationalization of industries, the imposition of quotas on imports, and the creation of programs to increase native production are all examples of the enlarged role that the late developers’ governments play.

According to de Schweinitz (1964:59–75) the state or government in the latecomers is also likely to play a bigger part in handling the discontent of labor that accompanies a higher level of economic development. In the early comers labor was able to organize largely independently of the state. In the process of organization and legitimation the laborers gradually were able to attain a greater amount of political power. The late developers, however, cannot afford to have the growth processes slowed down by the demands of labor. Karl de Schweinitz argues that the state tends to incorporate the labor unions into the government so that they do not have a chance for autonomous development. The close ties of labor organization and the state weakens the impetus toward a more diffused distribution of political power. Under these conditions the political elites will be able to maintain a concentrated distribution of power. Moore (1966) also argues that the state plays a much larger role in the development of the latecomers. He hypothesizes that with the change from the bourgeois revolutions of the early developers to the “revolutions from above” and the “peasant revolutions” of the latecomers, the chances for political democracy have been greatly diminished.

These arguments suggest that if a state or government exercises a great degree of control in the economic system this will lead to a more concentrated distribution of power in the political system.

Hypothesis 4: The greater the state’s control of the economic system, the lower the level of democracy in the political system.

MEASURES

A sample of 99 countries at widely varying levels of development is used for the empirical analysis. Because data for the state’s control of the economic system are not available for Communist countries (except Yugoslavia) the sample omits these societies. The following measures are used to operationalize the theoretical concepts that are specified in Hypotheses 1–4.

Time of Development

The time in world history that a nation begins to develop is a rather complex con-
cept. It is not the "time" per se that is important but the combination of variables characterizing a historical period. Hypothesis 1 represents the views of some theorists that the factors characterizing the historical periods of the earlier developers favored political democracy. These favorable factors have steadily deteriorated over time so that the later the development the more obstacles to democratic development. Hypothesis 2 supports the opposite generalization; the conditions for democracy have improved, the later the time of development. When measuring the time of development it is difficult, if not impossible, to single out a particular year that unambiguously marks a starting point in a nation's development. There is also the possibility that "breakdowns of modernization" may occur (Eisenstadt, 1964). Regional differences in starting points of development within nations are also likely. For example, in the United States the East began a period of rapid growth before other regions of the country. However, there are clearly differences in the timing of development when contrasting the various nations of the world so that it is possible to derive approximate starting points.

For this research two measures of timing are used. The first is measured by Black (1966) as reported in Taylor and Hudson (1971). It is the approximate year at which the consolidation of modernizing leadership occurs and is the first step in the development process.

The consolidation is marked by three characteristics: (1) the assertion of the determination to modernize; (2) an effective and decisive break with the institutions of an agrarian way of life; and (3) the creation of a national state with an effective government and a reasonably stable consensus on political means and ends by the inhabitants. (Taylor and Hudson, 1972: 16)

The timing variable was scored by subtracting the starting year of development for each country from 1966. This gives the highest score to those countries which have been developing the longest and the lowest scores to those countries recently beginning to develop.

As an added check on the timing hypothesis a second measure of the timing of development is used for a smaller sample of countries. This is the approximate economic take-off date from Rostow (1961:38; 1971:55) and Collier (1975:341). Rostow (1961:39) establishes three criteria to be met for a country to attain economic take-off:

1. a rise in the rate of productive investment from, say, 5% or less to over 10% of national income (or net national product [NNP]);
2. the development of one or more substantial manufacturing sectors, with a high rate of growth;
3. the existence or quick emergence of a political, social and institutional framework which exploits the impulses to expansion in the modern sector and the potential external economy effects of the take-off and gives growth an on-going character. (Rostow, 1961:39)

Rostow lists take-off dates for a little over a dozen countries. This sample is too small to be reliable. Collier's (1975) economic take-off date for Latin American countries supplements Rostow's measure.

Collier (1975) measures the economic take-off date by using the physical indicator of when a country reached electric production of .10 kilowatt-hours per capita. He finds that this indicator, as well as several other physical indicators, lead to take-off dates that are close to Rostow's take-off dates for the few countries where Rostow's and Collier's (1975: 340–1) sample overlap. A combination of Rostow's and Collier's take-off dates form the second timing measure.3

**Protestant-Based Culture**

An indicator of how much a cultural system derives from Protestant ideas is the proportion of a nation's population that is Protestant. For most parts of the world the percentage of Protestants in a

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3 To maintain comparability with the rest of the analyses, I did not use the economic take-off dates of the Communist countries of China, Cuba and Russia. In a regression not reported here these countries were used in an analysis which included a dummy variable for Communist countries. The basic results were the same as reported in Table 2—the coefficient for the economic take-off was not significantly different from zero.

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2 The year 1966 is arbitrary. Any other year could be chosen without affecting the results.
nation has changed very slowly. For the African nations where there is increase in Protestantism, this data is for 1965 (Taylor and Hudson, 1971).

**State's Control of Economic System**

One indicator of the state's control of the economic system is the proportion of a nation's economic activity consumed by the government. A measure of general government consumption as a proportion of GDP in 1960 is used. This World Bank measure includes all current expenditures for purchase of goods and services by central, regional, and local governments.

**Economic Development**

Economic development is measured by the natural logarithm (ln) of energy consumption per capita in 1965 (Taylor and Hudson, 1972). The utility of using energy consumption as an indicator of development is recognized by many social scientists. Work by Cottrell (1953; 1960) provides a multilinear theory of societal evolution based upon the role of energy. Within development theory, Levy (1966) has given the most attention to the importance of energy in the development process. In fact he defines development or modernization on the basis of the amount and uses of inanimate energy and tools.

The basic relationship that energy consumption has to development is also supported by empirical works. Darmstadter (1971) shows that there is a high correlation between per capita energy consumption and per capita GNP both cross-sectionally and over time. The amount of industrial capital stocks that a country has is central to its industrialization process.

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4 The 1960 measure of government consumption was chosen because it had a more significant relationship to political democracy than either the 1965 or 1955 measure.

5 For a more detailed description of the components of this measure see World Bank (1976:6–7).

6 The 1965 measure of energy consumption was empirically chosen over a 1960 measure because of its closer relationship to the 1965 political democracy index. In the panel analysis reported later, the 1960 measure is used since the 1965 measure could not affect changes in political democracy from the earlier period 1960–65.

Frank (1959), testing time-series data, finds a correlation of 0.989 between energy consumption and industrial stock for the U.S. and a similar correlation for the U.K.

Using energy consumption also avoids some of the exchange rate and comparability problems that arise in using GNP and GDP. In addition energy consumption is often available for a larger and more representative sample of countries than is GNP or GDP.

The ln of energy consumption is used because there is empirical evidence that the relationship between development and democracy is curvilinear and can be best captured by a log transformation of energy consumption (Jackman, 1973). In addition the transformation reduces the extreme skewness in the untransformed energy consumption variable.

**Political Democracy**

Like many complex and abstract concepts in the social sciences, there are a number of possible definitions of political democracy. Common to many of these definitions are two dimensions: (1) popular sovereignty, and (2) political liberties. The first dimension, popular sovereignty, implies that the elites of a country must be accountable to the nonelites. The most common institution through which the nonelites exercise their control is through elections. In order for elections to represent popular sovereignty, there must be as wide a franchise as possible, equal weighting of votes and fair electoral processes. The second dimension, political liberties, is also essential to political democracy. Political liberties include the rights of free speech, a free press, and the right to organize against any officeholders or their policies.

One or both of these dimensions are found in other definitions of political democracy. Hewitt (1977:456–7), for instance, lists three characteristics of political democracy: (1) an elected chief executive (or executive responsible to elected assembly), (2) universal manhood suffrage, and (3) "fair" elections as represented by a secret ballot. All three of these
characteristics are indicators of popular sovereignty. Hewitt does not list any indicators of political liberties.

Lenski (1966:319) lists three criteria of political democracy: (1) universal adult suffrage, (2) the right of political opposition, and (3) the right of disadvantaged elements in the population to organize on their own behalf. This definition includes both of the dimensions discussed above; the first criterion indicates popular sovereignty and the second and third are elements of political liberties.

As illustrated by the preceding discussion there are numerous potential indicators of political democracy. But given the limited cross-national data that exists, the best that can be done is to attain a sample of all possible indicators of the construct, and to use these as measures of political democracy.

One goal in selecting indicators for this research is to choose those which are available for the largest possible sample of nations. It is important to have a democracy index that is representative of both developed and developing nations. Measures of political democracy used by Lipset (1963), Neubauer (1967), Cutright and Wiley (1969), and Hewitt (1977) do not have adequate coverage of less developed countries (LDC), whereas the measures of Coleman (1960) and Adelman and Morris (1973) do not include more developed countries (MDC). Those indices that contain both LDCs and MDCs, such as Jackman (1974; 1975), are often still not much larger than 60 to 80 countries.

It is also desirable to have an index that is available for more than one time period. In a later section of this paper a panel analysis will be used necessitating an index that is available for two time periods so that changes in political democracy can be analyzed. This goal of having measures at two time points conflicts with the goal of having a number of countries at varying levels of development. Since a significant proportion of the LDCs became independent in the late 1950s and early 1960s, not many indicators for them will be available before this time period. For example, Cutright and Wiley (1969) have a political representation index available for four ten-year periods extending back to 1927–36. But their sample is composed of only 40 countries. Coleman (1960), Lipset (1963), Cutright (1963), Neubauer (1967) and Jackman (1974; 1975) present indices for only one time-period.

Even more important to the selection of an index is the question of the validity of some of the indicators used in the political democracy indices (May, 1973). For example, a number of studies have failed to distinguish between political democracy and political stability. Lipset (1963), Cutright (1963), McCrone and Cnudde (1967), Smith (1969), Cutright and Wiley (1969), and Coulter (1975), among others, use an index that awards the highest scores to countries that are stable and democratic; "A scheme for scoring nations . . . should penalize each nation for political instability which represents 'backsliding' and reward it for achieving or retaining more complex political forms of organization" (Cutright, 1963:256).

Jackman (1975:86) claims that the failure to distinguish between stability and democracy has led to spurious findings in the study of political democracy's effects on economic equality. Spurious findings might also result in this research if one of these measures were used. This is because those countries that have been developing the longest are generally the most stable. A democracy measure incorporating stability in its construction would increase the chances of a positive relationship because of stability's positive association with the length of time a country has been developing. The confounding of stability and democracy in one index also complicates the study of changes in democracy. Although a country's level of democracy may change drastically over a five- or ten-year period (e.g., Brazil, 1960–65), an index aggregated over a ten- or twenty-year period may gloss over these changes.

Another variable that is related to political democracy, but can be concep-

7 Jackman's argument has recently been critiqued by Rubinson and Quinlan (1977), who claim that similar findings occur using either Jackman's democracy index or Cutright's. However, Rubinson and Quinlan constructed Cutright's index over a shorter time period than originally used by Cutright, thereby lessening the very stability aspect that Jackman criticized (see Rubinson and Quinlan, 1977: 613, fn. 4).
ally distinguished from it, is the percentage of the adult population voting. This indicator also has been used in a number of indices (e.g., Lerner, 1958; Smith, 1969; Jackman, 1975). Although having democratic institutions has no meaning without some popular participation, the percentage of the population voting in an election may reflect factors other than the extent of political democracy. For example, Kornhauser (1959) and Huntington (1968) argue that mass participation is considered desirable in both democratic and authoritarian regimes and therefore, high voting participation can be found in either type of society. Some countries require participation of all voters in elections so that participation statistics reflect a legal requirement rather than how democratic the system is. In addition, low levels of participation may result from either apathy of the voters or satisfaction with the government so that participation is viewed as not necessary (Lipset, 1963).

A more pragmatic reason for not using participation statistics is that it is difficult if not impossible to get these statistics for a large number of LDCs and for more than one time period. A measure of the percentage of the population eligible to vote (the franchise) is a much better indicator of political democracy but an accurate measure of it is even more difficult to find than accurate participation statistics. These and other arguments (see May, 1973) suggest that using voting participation as an indicator of political democracy raises a number of difficulties.

Political democracy should also be distinguished from social democracy. A strong socialist or labor party in power may be crucial to reducing the inequalities in the distribution of social and economic goods, but such indicators of social democracy are analytically distinct from indicators of political democracy. “Political democracy is not a sufficient condition for the achievement of a more equal society. The crucial matter is what the mass electorate does with the franchise and other democratic procedures” (Hewitt, 1977: 451). In fact the relationship between political and social democracy is the subject of considerable research (see, e.g., Jackman, 1975; Hewitt, 1977). At this point it seems best to treat these two concepts separately.

Because of the limitations in the other indices discussed above, a different index of political democracy is constructed. Of course there are a number of limitations which remain (e.g., no indicator of the popular support of government policies between elections), but the index has several advantages over existing ones. For example, it does not confound indicators of stability, voter turnout or economic equality with political democracy. In addition the index is available for over 120 countries in 1965 and 110 in 1960, including a large number of LDCs as well as MDCs.

The index consists of six components; three indicators of popular sovereignty and three of political liberties. The three measures of popular sovereignty are: (1) fairness of elections, (2) effective executive selection, and (3) legislative selection. The indicators of political liberties are: (4) freedom of the press, (5) freedom of group opposition, and (6) government sanctions. A description of each component and a correlation matrix of them is in the Appendix of this paper. Cronbach’s (1951) alpha for the index is over .9, indicating high reliability. In addition, the index has moderate to high correlations with a number of other democracy indices (e.g., 0.70 with Adelman and Morris [1973], 0.79 with Jackman [1973], and 0.85 with Cuthright and Wiley [1969]).

**ANALYSIS**

Hypotheses 1 and 2 represent the two most general propositions of this research. The first hypothesis suggests that the conditions favoring the rise of political democracy have deteriorated over time so

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8 Several other limitations also can be mentioned. For example, there are no indicators of the class, sex, and race composition of the political elite. Nor is there a measure of how “open” the elite is in its recruitment of new members. Measures such as these would provide additional measures of popular sovereignty and the extent to which a “power elite” exists in countries which meet some of the other, more common conditions (e.g., fair elections and political liberties) of democracy.

9 A more complete discussion and presentation of the index is in preparation.
that the later a country begins to develop the less its chances for democracy. Hypothesis 2 states that the chances for democratic political systems have improved because of the worldwide diffusion of the democratic ideology.

These general hypotheses can be tested in the following regression equation:

\[ Y = b_0 + b_1X_1 + b_2X_2 + e, \]  

where \( Y = \) political democracy index, 1965, 
\( X_1 = \) in energy consumption per capita, 1965, 
\( X_2 = \) Black’s timing of development, 
\( e = \) residual term.

Hypothesis 1 predicts that \( b_2 \) will be positive and significant; that is, the longer a country has been developing the greater its level of democracy. Hypothesis 2 suggests that \( b_2 \) will be negative and significant, so that the late developers are more likely to be democratic. The timing of development is correlated with the level of development \( (r = 0.76) \). This regression allows us to evaluate the general timing hypotheses compared with the effects of development. If the timing of development is more important than the level of development, the standardized regression coefficient for the timing variable should be greater than that for the level of development. If the level of development is more important, the opposite should be found.

The regression results are reported in Table 1. The coefficient for the timing of development variable \( (b_2) \) is positive as predicted by the first hypothesis but is not significantly different from zero.\(^{10} \) In contrast, the coefficient for the level of development \( (b_1) \) is positive and highly significant \( (p < 0.01) \). This suggests that the overall effect of timing is not strongly positive or negative. The level of development is far more important in determining whether a country is democratic or not.

Since there is a moderately high correlation between the timing of development and the level of development, it is possible that multicollinearity is affecting the results. Multicollinearity refers to the interdependency of the independent variables in a regression analysis. When the interdependency is great, it is difficult to separate the unique effects of each collinear variable. As a result, the estimates of the regression coefficients are likely to have large standard errors and are particularly susceptible to the effects of sampling fluctuations.

In Table 1, the timing of development, but not the development level, has a large standard error relative to the magnitude of its regression coefficient. Since there are only two independent variables in the regression (excluding the constant), the degree of collinearity for each variable is identical. If the correlation between these variables is the only factor leading to the nonsignificance of development timing, then the level of development should also have a large standard error, which it does not. However, it is possible that the particular sample configuration used resulted in the level of development being signifi-

\(^{10} \) There was some concern that the U.K., which began to develop long before any other country, might act as an outlier having a disproportionate effect on the estimate of the regression coefficients. To investigate this possibility, I reran the regression omitting the U.K. The regression estimates were not significantly different. As a further check on the possible impact of this type of outlier the democracy index was regressed on the natural log of the time of development. Again, no significant differences resulted. In this case it made the most sense to use the unlogged time of development variable including the U.K.

Table 1. Regression of Political Democracy Index on Black’s Time of Development and In Energy Consumption per Capita

<table>
<thead>
<tr>
<th>Regressand</th>
<th>R²</th>
<th>R²</th>
<th>Degrees of Freedom</th>
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<tr>
<td>Political Democracy 1965</td>
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<td>.426</td>
<td>37.4</td>
<td>2</td>
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<table>
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<th>Regressor</th>
<th>Regression Coefficient* (Standard Error)</th>
<th>Standardized Regression Coefficient</th>
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<tr>
<td>Time of Development</td>
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<td>.056</td>
</tr>
<tr>
<td>In Energy Consumption per Capita 1965</td>
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<td>.618</td>
</tr>
<tr>
<td>Constant</td>
<td>.464</td>
<td></td>
</tr>
</tbody>
</table>

* Regression coefficient significant at .05 level.
significant. Indeed if multicollinearity is a serious problem in this regression, a change in the sample should lead to very different results.

To test this possibility, I selected a random subsample of the full 99 cases and reran the regression. The results were the same: the level of development was significant and development timing was not. Two additional random subsamples were analyzed with the same conclusion.

As an additional test of the general timing hypothesis another regression was run including the Rostow-Collier measure of the timing of development. The following regression equation was tested:

\[ Y = b_0 + b_1X_1 + b_2X_2^* + e, \]  
(2)

where \( Y \) = political democracy index, 1965, \( X_1 \) = ln energy consumption per capita, 1965, \( X_2^* \) = Rostow-Collier's economic take-off date, \( e \) = residual term.

The results are reported in Table 2. As was found with Black's measure, the coefficient for the Rostow-Collier's take-off date is not significantly different from zero and the coefficient for development is positive and significant. Based on these consistent results across samples and measures of development timing, it is unlikely that multicollinearity can explain these findings.

The nonsignificant impact of the timing of development on political democracy does not rule out the possibility that more specific characteristics of development timing may affect democracy. As one possibility, Hypothesis 3 predicts that the greater extent to which a culture is Protestant-based, the more likely it is to be democratic. Hypothesis 4 suggests that a high degree of state controlled economic activity lessens the chances for political democracy. These two more specific hypotheses are tested in the following regression equation:

\[ Y = b_0 + b_1X_1 + b_3X_3 + b_4X_4 + e, \]  
(3)

Table 2. Regression of Political Democracy Index on Rostow-Collier's Take-Off Date and In Energy Consumption per Capita

<table>
<thead>
<tr>
<th>Regressand</th>
<th>( R^2 )</th>
<th>( \bar{R}^2 )</th>
<th>( F )</th>
<th>Degrees of Freedom</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Democracy 1965</td>
<td>.527</td>
<td>.489</td>
<td>13.9</td>
<td>2, 25</td>
<td>28</td>
</tr>
</tbody>
</table>

\[ \text{'Take-Off' Date} = -0.099 \] (1.04)

\[ \text{In Energy Consumption per Capita 1965} = 8.34^{*} \] (3.90)

\[ \text{Constant} = 210 \]

* Regression coefficient significant at .05 level.

Table 3 presents the results of this regression. Once again the most significant effect is that of the level of development (standardized regression coefficient =

Table 3. Regression of Political Democracy Index on State’s Control of the Economy, Percentage of the Population Protestant, and In Energy Consumption per Capita

<table>
<thead>
<tr>
<th>Regressand</th>
<th>( R^2 )</th>
<th>( \bar{R}^2 )</th>
<th>( F )</th>
<th>Degrees of Freedom</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Democracy 1965</td>
<td>.492</td>
<td>.475</td>
<td>30.6</td>
<td>3, 95</td>
<td>99</td>
</tr>
</tbody>
</table>

\[ \text{State's Control of the Economy 1960} = -1.05^{*} \] (4.72)

\[ \text{Percentage Population Protestant} = 0.229^{*} \] (0.99)

\[ \text{In Energy Consumption per Capita 1965} = 9.20^{*} \] (1.40)

\[ \text{Constant} = 18.0 \]

* Regression coefficient significant at .05 level.

---

11 To select the random subsample, I assigned all countries a random number from a uniform distribution between zero and one. Those cases with a random number greater than 0.5 were analyzed.
0.56). However, both the percentage of the population that is Protestant and the state's economic strength measure have significant coefficients (p < .05) in the predicted direction. That is, the greater the proportion of the population that is Protestant, the higher the level of democracy, and the greater the proportion of GDP consumed by the government the less the level of democracy.\footnote{There was some concern that there may have been an interaction effect between development level and the state's control of the economy such that highly developed countries with economically strong governments have a different effect than predicted by the linear effects of these variables. For example, some of the social democracies of Europe, such as the U.K., Finland, Sweden, etc., have governments which consume and control a large percentage of GDP and are at high levels of development. Yet, their political systems are relatively democratic. It is possible, then, that a high development level combined with a strong government may have a significant impact. To test this, I reran equation (3) with an interaction term \(X_1 \times X_4\) included. The interaction term proved not to be significant. This partially may have resulted because of the interaction term's high correlation with \(X_1\) and \(X_4\).} This equation also was estimated including Black's timing of development. The timing of development variable was still found to be insignificant as in Table 1.

Panel Design

Since development, Protestantism and the state's economic control are related to the level of political democracy, it is of interest to see if these same variables are related to changes in political democracy. The cross-sectional design is sometimes thought to represent more long-run relationships between variables. Those variables important in explaining cross-sectional variation may not have the same importance in explaining more short-run changes in political democracy. A panel design is one means to investigate this question. In panel analysis the dependent variable at time \(t\) is regressed on itself at an earlier time point along with the other independent variables. In this way it is possible to estimate the impact of the other independent variables on the dependent variable, while controlling for the earlier or lagged value of the dependent variable. The panel design used is represented in the following equation:

\[
Y_t = b_0 + a_1Y_{t-1} + b_1X_1 + b_2X_3 + b_4X_4 + e
\]

\[
Y_{t-1} = \text{political democracy, 1965},
\]

\[
X_1 = \text{ln energy consumption per capita, 1960},
\]

\[
X_3 = \text{percentage of population Protestant},
\]

\[
X_4 = \text{state's control of economy, 1960},
\]

\[
e = \text{residual term}.
\]

The results of this regression are reported in Table 4.\footnote{Although panel estimation can provide information on the causes of changes in a dependent variable that are not available from a cross-sectional analysis (Heise, 1970), there are several cautionary remarks to be made. If there are unknown explanatory variables omitted from the equation (4), the residuals are likely to be autocorrelated. Autocorrelated residuals, in conjunction with the lagged dependent variable, will lead to bias and inconsistent estimates of the regression coefficients. With positively autocorrelated residuals the coefficient for the lagged dependent variable is generally biased upward and the remaining explanatory variable effects are biased toward zero (Hibbs, 1974:294-8). In equation (5) this means that the OLS estimate of \(a_1\), the coefficient of the earlier value of political democracy, is likely to be larger than the true effect and the esti-}

<table>
<thead>
<tr>
<th>Regressand</th>
<th>(R^2)</th>
<th>(R^2)</th>
<th>F</th>
<th>Degrees of Freedom</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Democracy 1965</td>
<td>.835</td>
<td>.827</td>
<td>108</td>
<td>4, 86</td>
<td>91</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Regression Coefficient* (Standard Error)</th>
<th>Standardized Regression Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Democracy 1960</td>
<td>.814* (.061)</td>
<td>.745</td>
</tr>
<tr>
<td>State's Control of the Economy 1960</td>
<td>-.520** (.315)</td>
<td>-.073</td>
</tr>
<tr>
<td>Percentage Population Protestant</td>
<td>.019 (.061)</td>
<td>.017</td>
</tr>
<tr>
<td>In Energy Consumption per Capita 1965</td>
<td>3.75* (.929)</td>
<td>.230</td>
</tr>
<tr>
<td>Constant</td>
<td>-7.76</td>
<td></td>
</tr>
</tbody>
</table>

\* Significant at .05 level. 
\** Significant at .10 level.
is that associated with the lagged value of political democracy. The next largest standardized regression coefficient (0.23) is that for In energy consumption per capita. This variable’s effect is significant at the 0.01 level. The state strength’s regression coefficient is negative and significant at the 0.10 level (but not at the 0.05 level). Finally, the indicator of Protestantism is not significant in explaining the 1960 to 1965 changes in democracy. As was found for the previous regressions, the level of development’s effects are more important than Protestantism or the state’s control of the economic system. Equation (4) also was estimated including Black’s timing of development. Once again it was found to be insignificant.

Although substantial changes in political democracy occurred in a number of countries between 1960 and 1965, a longer lag would allow for more changes in a greater number of countries. Because of data availability, the attempt to estimate any lags longer than five years leads to a tremendous drop in the number of LDCs in the sample. In addition, Monte Carlo simulations by Pelz and Lew (1970) suggest that the true effects of variables in a panel design may be exaggerated if too long a lag is chosen. However, there was some concern that the short lag involved in the estimation may have biased the results against finding stronger effects of Protestantism and the state’s control of the economy. For this reason a ten-year lag model also was estimated. In the 49 countries for which data were available, the estimated coefficients for percent Protestant and state’s economic control were even less significant than those reported in Table 4. However, if more data becomes available, further research on the lag would be worthwhile.

## DISCUSSION AND CONCLUSIONS

A number of social scientists have expressed considerable pessimism about the chances for political democracy in the late developers. The strains under which the latecomers must industrialize are viewed as something best handled by authoritarian governments. On the other hand, another perspective argues that with the diffusion of the democratic ideology over time, the latecomers increasingly will be under pressure to adopt more rather than less democratic forms of government. My research lends no support to either of these generalizations.

However, when more specific characteristics associated with development timing are examined, some significant effects are found. In the cases explored here, I have found support for the hypotheses that the greater the extent to which a culture is Protestant-based the greater the level of political democracy, and the greater the government’s control of the economic system the lower the level of democracy.

In a panel analysis of changes in political democracy, the state’s control of the economic system had negative effects as found in the “cross-sectional” regressions. Protestantism, however, did not appear to have any significant impact. In all of the regressions the most significant variable is the level of development. These results indicate that the level of development is a more important explanatory variable than the timing variables. However, a note of caution must be made in interpreting the null effect of the general timing variable. Although my results do not support the generalizations that conditions have become progressively worse or better for political democracy, these findings do not rule out the possibility that some of the more specific characteristics, such as differing cultural systems and economic dependency, have an effect. It is possible that the null effect of the time of development represents a “balancing out” of these positive and negative, more specific characteristics. In failing to find a general timing effect, this research has performed only a first step. Future research in this area should concentrate on
other specific timing variables (e.g., political instability, dependency, and rates of development) that may affect democracy and should compare their effects with development.

APPENDIX

The following is a brief description of the political democracy index for 1965. The 1960 political democracy index was constructed the same way except for a five-year change in time periods. A more detailed discussion of this index can be found in Bollen (1978: chap. 2).

The first component of the index, freedom of the press, is taken from Nixon (1965). The chief criterion for developing the measure is the degree of control normally exercised by any official agency which has the power to interfere with the dissemination and discussion of the news (Nixon, 1960: 17). Countries were rated by a panel of experts in the area of comparative journalism. The panel used reports from the International Press Institute, the Inter-American Press Association, and other country sources.

The second component, freedom of group opposition, classifies countries according to four levels: (1) no parties excluded, (2) one or more minor or "extremist" parties excluded, (3) significant exclusion of parties (or groups), and (4) no parties or all but the dominant party and its satellites excluded (Banks, 1971: segment 10, field 0). The average scores from 1964 to 1966 are used. If the measure is not available for three years, the average for those years with data in the three-year period is used. For this Bank's variable and the others used in the index, numerous country sources, newspapers, and journals were consulted for the ranking of nations. For a list of the primary sources see Banks (1971: Appendix 2).

The next component is a measure of elite political power as reflected in government sanctions. The sanctions include such actions as the closing of newspapers, censorship, restrictions on political participation, curfews, and the banning of groups opposing the government (Taylor and Hudson, 1971). Basic data for this indicator are in Taylor and Hudson (1971). A three-year average from 1964 to 1966 is used. The use of this variable as it appears in the original data set is biased against those societies which are relatively free to begin with. That is, those societies which are relatively free have more to lose than societies that already have many restrictions. In order to correct for this bias, the number of elite sanctions is subtracted from an average "freedom" score formed by a country's freedom of the press and freedom of group opposition measures. This resulted in a higher correlation with the other five components than was found using the unadjusted elite sanction variable or its log.14

The fourth component, fairness of elections, ranges from: (1) no elections, (2) rigged elections, (3) substantial irregularity in elections, and (4) relatively free and competitive elections. This variable is the electoral irregularity variable for 1965 in Taylor and Hudson (1971). If no elections were held from 1961 to 1967 a country was scored as having no elections for 1965. Information on the number of elections during this period is from Taylor and Hudson (1971).

Effective executive selection is scored in two categories—elective and nonelective. This variable is from Banks (1971: segment 1, field j). The original "indirect elections" category was combined with the "elective." The "nonelective" category includes those societies having no elections from 1961 to 1967. A three-year average for this measure is computed for the years 1964 to 1966.

The final component, legislative selection, is formed by the combination of two variables. The first variable is a dichotomy describing whether the method of selecting the legislative body is nonelective or elective (Banks, 1971: segment 1, field p). Those countries in which no legislative body existed were scored as nonelective. The second variable used in this component is the effectiveness of the legislature (Banks, 1971: segment 10, field 1). Three levels of effectiveness are used: (1) ineffective, (2) partially effective, and (3) effective. The simple sum of these two measures has a questionable relationship to political democracy. An elected legislature that is powerless or ineffective does not indicate a

14 Using this corrective procedure involves a trade-off. The trade-off is that the correlations between the corrected elite sanctions and freedom of the press and freedom of group opposition are probably increased due to the use of these latter two freedoms in the corrective procedure. The benefit of the procedure is that the original government sanction variable by itself is of questionable validity as an indicator of political democracy because of its bias against those countries which have the most freedom to begin with. It is my judgment that the benefit of increasing validity outweighs any increase in the two correlations caused by a common component.

Table A1. Correlation Matrix of the Six Components in the 1960 Political Democracy Index

<table>
<thead>
<tr>
<th></th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>X6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press Freedom</td>
<td>(X1)</td>
<td>1.0</td>
<td>.77</td>
<td>.79</td>
<td>.78</td>
<td>.61</td>
</tr>
<tr>
<td>Freedom of Group Opposition</td>
<td>(X2)</td>
<td>.77</td>
<td>1.0</td>
<td>.86</td>
<td>.65</td>
<td>.79</td>
</tr>
<tr>
<td>Elite Sanctions</td>
<td>(X3)</td>
<td>.79</td>
<td>.86</td>
<td>1.0</td>
<td>.68</td>
<td>.76</td>
</tr>
<tr>
<td>Fairness of Elections</td>
<td>(X4)</td>
<td>.78</td>
<td>.65</td>
<td>.68</td>
<td>1.0</td>
<td>.58</td>
</tr>
<tr>
<td>Executive Selection</td>
<td>(X5)</td>
<td>.61</td>
<td>.54</td>
<td>.60</td>
<td>.58</td>
<td>1.0</td>
</tr>
<tr>
<td>Legislature Selection</td>
<td>(X6)</td>
<td>.77</td>
<td>.79</td>
<td>.76</td>
<td>.69</td>
<td>.68</td>
</tr>
</tbody>
</table>

All correlations significant at .001 level.
democratic system. Nor does an effective legislature that is appointed indicate democracy. Legislatures that are both elective and effective are more valid measures of political democracy. To capture the extent to which both conditions are met, the two variables are multiplied together to derive the sixth and final component of the political democracy index.

All six components were scored so that they ranged from zero to 100 with 100 indicating a high level of political democracy. Any country which had more than three of the six components missing were dropped. Values were estimated for nations having three or less missing components. Less than 10% of the variables needed to construct the index were estimated. The correlation matrix between the six components for 1960 is presented in Table A1.

REFERENCES


Jackman, Robert W. 1973 "On the relation of economic development
The Olson model is a central concept in the study of political economy. It posits that the distribution of national income within a state is a key determinant of political stability. More specifically, the model suggests that the distribution of income affects the level of economic development and, consequently, the level of political organization. The higher the level of income distribution, the more likely it is that a state will experience political instability. This is because a high degree of income distribution leads to a high level of inequality, which, in turn, leads to political unrest.

The Olson model is based on the assumption that income distribution is an important factor in the formation and maintenance of political systems. This assumption is supported by a number of empirical findings. For example, a study by Rostow (1960) found that the distribution of income within a state is a key determinant of political stability. The study showed that the higher the level of income distribution, the more likely it is that a state will experience political instability. This is because a high degree of income distribution leads to a high level of inequality, which, in turn, leads to political unrest.

The Olson model is also supported by a number of theoretical findings. For example, a study by Olson (1965) found that the distribution of income within a state is a key determinant of political stability. The study showed that the higher the level of income distribution, the more likely it is that a state will experience political instability. This is because a high degree of income distribution leads to a high level of inequality, which, in turn, leads to political unrest.

The Olson model is a powerful tool for understanding political economy. It can be used to explain a wide range of political phenomena, from the formation and maintenance of political systems to the behavior of political leaders. The model is also useful for predicting the future of political systems. For example, the model can be used to predict the future of political systems in developing countries. The model suggests that the distribution of income within a state is a key determinant of political stability. This is because a high degree of income distribution leads to a high level of inequality, which, in turn, leads to political unrest.

The Olson model is also useful for understanding the relationship between political economy and other social phenomena. For example, the model can be used to explain the relationship between political economy and the distribution of income. The model suggests that the distribution of income within a state is a key determinant of political stability. This is because a high degree of income distribution leads to a high level of inequality, which, in turn, leads to political unrest.

The Olson model is also useful for understanding the relationship between political economy and the distribution of wealth. The model suggests that the distribution of wealth within a state is a key determinant of political stability. This is because a high degree of wealth distribution leads to a high level of inequality, which, in turn, leads to political unrest.

The Olson model is also useful for understanding the relationship between political economy and the distribution of power. The model suggests that the distribution of power within a state is a key determinant of political stability. This is because a high degree of power distribution leads to a high level of inequality, which, in turn, leads to political unrest.