

The Level of Democratization Related to Socioeconomic Variables in 147 States in 1980–85

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It is argued in this article that democratization is causally related to socioeconomic variables indicating the distribution of economic and intellectual power resources among competing groups. This assumption has been deduced from an evolutionary theory of politics, according to which politics is principally a struggle for scarce resources. Consequently, democracy is assumed to emerge in conditions in which power resources have become so widely distributed that no group is any longer able to suppress its competitors or to maintain its hegemony. Empirical variables were formulated to measure hypothetical concepts 'democracy' and 'power resources'. The hypothesis is tested by empirical data covering 147 states of the period 1980–85. The results of correlation analysis show that the principal explanatory factor, the Index of Power Resources, statistically explains about 70 percent of the variation in the Index of Democratization. Regression analysis is used to disclose how well the general relationship applies to single countries and which countries deviate from the general pattern. High negative residuals are interpreted to mean that the level of democratization should be much higher than it actually is, and high positive residuals can be interpreted to mean that the level of democratization is much higher than expected on the basis of the country's social conditions.

One of the most exciting problems of comparative politics still concerns the social requisites of democracy. Many kinds of theories and generalizations on the conditions of democracy have been formulated and tested, but until now no theory has become generally accepted. Disagreements concern several crucial points. It has not been possible to agree on the relative significance of political versus social factors, or on the weight of internal versus external factors. The question on the nature of relevant social factors is also still open. Some researchers emphasize the role of cultural and historical factors; some others pay more attention to socioeconomic factors, although their lists of relevant socioeconomic variables may differ considerably. A very important controversy concerns the question of whether or not it is possible to find universally valid explanatory factors. In other words, are there explanatory variables which apply equally and in a similar way to all countries, or is it more reasonable to assume that explanatory factors vary from country to country? The acceptance of the latter alternative would imply that it is impossible to find any universally valid explanation for democratization. The acceptance of the former assumption would still leave open the question on the nature of explanatory

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One of the most exciting problems of comparative politics still concerns the social requisites of democracy. Many kinds of theories and generalizations on the conditions of democracy have been formulated and tested, but until now no theory has become generally accepted. Disagreements concern several crucial points. It has not been possible to agree on the relative significance of political versus social factors, or on the weight of internal versus external factors. The question on the nature of relevant social factors is also still open. Some researchers emphasize the role of cultural and historical factors; some others pay more attention to socioeconomic factors, although their lists of relevant socioeconomic variables may differ considerably. A very important controversy concerns the question of whether or not it is possible to find universally valid explanatory factors. In other words, are there explanatory variables which apply equally and in a similar way to all countries, or is it more reasonable to assume that explanatory factors vary from country to country? The acceptance of the latter alternative would imply that it is impossible to find any universally valid explanation for democratization. The acceptance of the former assumption would still leave open the question on the nature of explanatory

variables; and, of course, disagreements concern also the definition of democracy and the measurement of democratization.

My intention in this article is to report on the research design and results of my current comparative study of democratization, which covers 147 independent states over the period 1980–85. However, first I shall briefly refer to some other contemporary studies and theories on the social requisites of democracy because they provide points of comparison for my own efforts to tackle the same problem.

Alternative Hypotheses on Democratization

Contemporary research on the social requisites of democracy can be traced primarily to Daniel Lerner's, S. M. Lipset's, and Karl W. Deutsch's pioneering studies and hypotheses (see Lerner 1968/1958; Lipset 1960; Deutsch 1961). Their hypotheses have been empirically tested, discussed, criticized, and further developed in many later studies (for reviews, see May 1973; Pennock 1979; Vanhanen 1979, 1984; Lipset 1983; Badie 1984; Berg-Schlosser 1985; Diamond et al. 1986).

Lipset (1960, 49–50) assumed that the state of economic development is the most important factor causally related to democracy. He said:

Perhaps the most common generalization linking political systems to other aspects of society has been that democracy is related to the state of economic development. The more well-do a nation, the greater the chances that it will sustain democracy.

This hypothesis of Lipset has probably been the most influential and inspiring one in this field of study. In a revised edition of *Political Man* (1983, 469–476) he repeats his hypothesis and defends it by referring to a number of social scientists who have continued to work in this area and, 'using more statistically sophisticated methods, have also found a positive relationship between economic development and democracy, although it should be noted that their indicators and definitions of democracy have varied'.

Guillermo O'Donnell challenged Lipset's 'optimistic equation' hypothesis, according to which 'more socio-economic development = more likelihood of political democracy'. He came to the conclusion that, 'in contemporary South America, high modernization tends to consolidate new patterns of dependence and to lead to mass praetorianism, which introduces serious distortions in formally democratic political institutions', and he hypothesized that 'political authoritarianism – not political democracy – is the more likely concomitant of the highest levels of modernization'. His thesis is that we cannot explain democratization by the same factors in all parts of the world (O'Donnell 1973; see also Badie 1984). It seems to me that redemocratizations in South America in the 1980s have falsified

his hypothesis on the linkage between modernization and authoritarianism (cf. Muller 1985; Diamond et al. 1986).

In a new comparative study *Transitions from Authoritarian Rule* Guillermo O'Donnell and Philippe C. Schmitter (1986, 4) descriptively analyze the process of recent redemocratizations, but they do not have any specific theory on the causes of democratization. They emphasize, however, that transitions from authoritarian rule 'should be analysed with distinctly political concepts, however vaguely delineated and difficult to pin down they may be', although it does not mean 'a denial of the long-run causal impact of "structural" (including macroeconomic, world systemic, and social class) factors'.

The dependency theory formulated by Gunder Frank and others emphasizes the significance of external factors. According to this theory, the economic underdevelopment of the Third World countries is causally related to the development of the core countries of the capitalist world system. Underdevelopment is, as Immanuel Wallerstein says, 'the result of being involved in the world economy as a peripheral, raw material producing area' (Wallerstein 1982). Underdevelopment is interpreted as the necessary product of capitalism itself (see Frank 1970; Wilson & Woods 1982; Badie 1984; Zolberg 1984; Muller 1985). Dependency theory does not particularly try to find an explanation for democratization or for the lack of democracy, but it implicitly includes an assumption that the lack of democracy in so many Third World countries is due to economic underdevelopment which is caused by external factors. According to Kenneth Bollen, some dependency theorists

suggest that political inequality as manifested in non-democratic governments in the peripheral and semiperipheral countries is maintained with the economic, political, and, sometimes, military support of the elites in the core countries.

By empirical data Bollen tested the dependency/democracy hypothesis and found that different positions in the world system are associated with different levels of political democracy even after controlling for economic development. The level of democracy is the lowest in peripheral countries (Bollen 1983). This result, however, does not prove that economic dependency has caused the failures of democracy in peripheral countries and it does not solve the causal problem on the origin of economic dependency. Edward N. Muller (1985) concludes that breakdowns of democracy in many economically advanced countries of the Third World 'ran counter to basic hypotheses of modernization theory', but, on the other hand, he also found that 'there is no empirical support for hypotheses that explain breakdowns of democracy in the Third World as a result of dependent economic development'. According to Laurence Whitehead's generalization (1986, 4),

in all the peacetime cases considered here internal forces were of primary importance in determining the course and outcome of the transition attempt, and international factors played a secondary role.

Raymond D. Gastil (1984), who has been involved with the Comparative Survey of Freedom since the early 1970s, discards socioeconomic explanations of democracy and seems to think that democratization depends principally on the diffusion of democratic ideas. He agrees that favourable economic conditions can help a democratic system to succeed, but these are 'the secondary factors in a more general process of the diffusion of democracy'. He says that democratic ideas spread in recent centuries from a very few centers, and he comes to the conclusion that the existence or lack of democracy in a particular country can be seen 'as primarily the result of the relative effectiveness of the diffusion of democracy and its supporting concepts'. Consequently,

the setbacks for democracy that have occurred in recent years, especially on the African continent, can be seen as the inevitable result of insufficient time for the diffusion of the critical ideas to the populations concerned.

Juan J. Linz emphasizes the significance of political variables 'that tend to be neglected in many other approaches to the problem of stable democracy'. He does not deny the importance of socioeconomic factors, but argues that they leave a lot of room for political actors to make choices 'that can increase or decrease the probability of the persistence and stability of a regime'. In crisis situations, 'leadership, even the presence of an individual with unique qualities and characteristics – a Charles de Gaulle, for instance – can be decisive and cannot be predicted by any model' (Linz 1978, 4–5). However, he did not try to measure or estimate the relative weight of the structural characteristics of societies versus historical political processes, unique personalities, and other political factors. Of political factors, Linz has especially explored the comparative advantages of parliamentarism and presidentialism. He suggests that a shift from presidentialism to parliamentarism 'might increase the flexibility and crisis-surviving capacity of many Latin American democracies', and notes that 'with the exception of the United States, a country that is so many ways exceptional, almost all stable democracies in the world have been parliamentary democracies'. His thesis is that 'political crafting' plays an important role. Thus, for example, the economic crisis of the 1930s was for many of the European democracies which survived a 'period of creative political crafting in which new coalitions and new policies were forged', whereas 'in both Germany and Austria there was more active crafting of democratic destruction than there was crafting of democratic consolidation' (Linz & Stepan 1986; see also Linz 1984).

Samuel P. Huntington assumes that there are many factors – economic, social, external, and cultural – which appear to be associated with the

emergence of democratic regimes. He takes into account both internal and external factors. The emergence of democracy in a society is helped by a number of factors, he explains:

higher levels of economic well-being; the absence of extreme inequalities in wealth and income; greater social pluralism, including particularly a strong and autonomous bourgeoisie; a more market-oriented economy; greater influence *vis-à-vis* the society of existing democratic states; and a culture that is less monistic and more tolerant of diversity and compromise.

Because he thinks that no one of these preconditions is sufficient to lead to democratic development and because he does not have any way of estimating their relative importance, he cannot present any testable hypothesis on democratization (Huntington 1984; cf. Pennock 1979; Powell 1982).

Dirk Berg-Schlosser (1985) has investigated conditions conducive to democratic political systems in a comparison group of 22 'semicompetitive' and 'polyarchal' Third World countries. He took into account both internal and external conditions and concluded that factors involved are highly varied and to a lesser degree economically determined. He found that specific influences of political culture play a clearly important role as demonstrated by factors such as 'region' and 'former colonial power'. He pays particular attention to the agrarian structures and remarks 'that widespread small-scale farming in predominantly agrarian countries is an important factor in the emergence of democratic social and political structures'. However, he does not present any general theory or hypothesis on the conditions connected with democratization.

Claudio Ary Dillon Soares (1988) has attempted to clarify the relationship between economic development and political democracy in Latin America. He is not satisfied with 'socioeconomic preconditions theories' which originated in Core countries and tend to emphasize internal determinants and to minimize the role of external ones. He emphasizes that analysts

working in developing countries have been far more sensitive both to historical peculiarities of each country and to external factors. Accordingly, theories of imperialism, colonialism, and of dependency have a far more receptive audience in developing countries than in Core countries.

Soares tested his hypothesis that socioeconomic preconditions theories would have a higher predictive value in Core countries than in Latin America and found that empirical evidence supported his assumption. Several Latin American countries should be stable democracies by now, if they had followed the same path as the central capitalist countries. He concluded that the relationship

between economic development and electoral democracy is not simple nor universally valid. Empirically, the relationship is strong across all three subsets of countries and within the Core democratic subset. It is weak in the Latin American and Socialist subsets. In these subsets democracy awaits explanation.

Mitchell A. Seligson has studied development and democracy in Central America. He starts from the question: 'Why has democracy, which for so long has been orphan in this region, suddenly begun to find a home?' His explanation is based on the hypothesis that minimum levels of wealth and literacy are necessary but not sufficient conditions for the development of democracy. He found the data for Central America to be consistent with the theory. In the 1950s, the fundamental prerequisites for democracy were not present in Central America outside of Costa Rica, whereas during the past 10–15 years these countries have crossed the threshold of necessary prerequisites for democracy. As a consequence 'democracy, however fragile, is beginning to emerge in the region'. On the other hand, the social basis of democracy in Central America is still fragile because of great inequalities which produce social unrest and violence. Seligson notes that the distribution problem 'has not only not been solved, but has probably worsened over the past few decades'. Therefore democracy is not safe in Central America: 'To emphasize growth alone would be sheer folly because growth with inequality would merely fertilize the seeds of violence and thereby threaten the health of the roots of democracy' (Seligson 1987; see also Seligson 1988). James M. Malloy (1987) says that there is no unilinear tendency toward democracy or toward authoritarian rule in Latin America. Rather, the predominant pattern is cyclical. According to his argument, the decisions of political leaders form 'a key voluntary dimension to the process that not only makes it difficult to formulate a general theory but also precludes neat deterministic theories based on general laws'. He recommends case studies:

Once sufficient case studies on the demise of authoritarian regimes have been accumulated, and those experiences contrasted with the breakdown of democratic regimes, we will be in a better position to advance some generalizable hypotheses about long-term trends in Latin American politics.

The project on 'Democracy in Developing Countries' directed by Larry Diamond, Juan Linz, and S. M. Lipset aims

to identify which factors have most consistently and powerfully accounted for democratic success and failures in the Third World, and what role is also played by unique and idiosyncratic features of a country's political life.

It comprises 26 countries in Asia, Africa, and Latin America. Specialists in the history and politics of these countries have been writing case studies of each country. Case studies are bound together by a common analytical framework and a general set of theoretical issues and propositions. Their comparative research in progress is based on the idea that the same factors are not necessarily equally important in all countries and that the unique peculiarities of a country's political life may have a significant role. Consequently they cannot present any particular hypothesis on the requisites of democracy, which should apply to all countries, whereas they give a long

list of tentative propositions on conditions and circumstances which are assumed to develop and sustain democratic government. Their propositions refer to both internal and external factors, as well as to social and political factors. Their method is basically inductive. It is not yet clear whether they are able to find any common theoretical explanation for democratization or not (Diamond et al. 1986). They concede that their theoretical arguments are not yet 'integrated into a single, all-encompassing theory, and that it will be some time (if ever) before the field produces one' (Diamond et al. 1988).

Evolutionary Interpretation of Democratization

It is assumed in all of the studies reviewed above that there is a variety of factors sustaining democracy and that we cannot establish any uniform explanation for democratization. I agree that many kinds of factors, both internal and external, can further or hamper democratization, but, on the other hand, I argue that there is and there must be a common factor which is able to account for the major part of the variation of political systems from the aspect of democratization. This argument is based on the idea that, as a consequence of natural selection, all species have species-specific behavioral predispositions which are common to all members of the species in the same sense as common morphological characteristics (see, for example, Wilson 1975, 1978; Lorenz 1977, 1982; Alexander 1980; Eibl-Eibesfeldt 1984). It means, in the case of political behavior, that there must be universal political behavior patterns which remain more or less the same across all cultural variations. In addition, because behavioral predispositions produced by evolution are assumed to be adaptive, we can expect that people behave approximately in the same way in similar environmental circumstances. The same concerns political structures which can be regarded as crystallized behavior patterns. Therefore it seems reasonable to assume that it is possible to find a common theoretical explanation for democratization. This explanation can be derived from an evolutionary theory of politics, according to which politics is principally a struggle for scarce resources, in which struggle all available resources are used as positive or negative sanctions (see Vanhanen 1985, 1988). It follows from this assumption that the distribution of power in a society must be related to the distribution of the most important power resources among competing groups. If relevant power resources are widely distributed among various sections of the population, environmental conditions are favourable for democratization; if they are concentrated in the hands of the few, conditions are unfavorable for democracy and favorable for autocratic political systems. So the relative distribution of economic, intellectual, and other power resources between various sections of the population is the

fundamental factor which is assumed to account for the variation of political systems from the aspect of democratization. The adaptation of political systems to environmental conditions means that power structures become adapted to resource structures. It can be hypothesized that *democratization takes place under conditions in which power resources have become so widely distributed that no group is any longer able to suppress its competitors or to maintain its hegemony.*

We can test this hypothesis on the requisites of democratization by seeking operational variables to measure the variation of political systems from the aspect of democratization and relative differences between societies in the distribution of some important power resources. Correlations between the measures of democratization and resource distribution should be positive and strong. Weak or negative correlations would falsify my hypothesis. I do not expect complete positive correlations because my operational measures of theoretical concepts are incomplete and because part of variation in political systems may be accidental or due to some other unknown factors.

I try to test the above hypothesis and to see to what extent it is possible to explain the variation in democratization by the explanatory variables of this study. The 147 states which were independent in 1980 and whose population was more than 200,000 inhabitants are used as observation units. The period of comparison covers the years 1980–85. Previously I tested the same hypothesis by a longitudinal study which covered 119 states over the period 1850–1979 (see Vanhanen 1979, 1984, 1986). In this study I am going to use nearly the same basic variables as in the previous longitudinal studies. It makes the results of analyses comparable.

Political Variables

It seems to me that the two most important dimensions of democratization concern the degree of legal competition within the political system and the degree of participation (cf. Dahl 1971). The existence of legal competition indicates that people and their groups are free to organize themselves and to oppose the government. It also indicates the existence of equality in the sense that different groups are equally free to compete for power. The degree of participation in crucial decision-making through elections or by some other means indicates the extent of the population taking part in politics (cf. Bollen 1979, 1980, who excluded electoral participation from his measures of the level of political democracy). I consider a political system the more democratized the higher the degree of competition and participation.

Two political variables are used to measure the degree of competition

and the degree of participation. The smaller parties' share of the votes cast in parliamentary and/or presidential elections is used to measure the degree of competition (Competition). It is calculated by subtracting the percentage of votes secured by the largest party from 100. The percentage of the total population who actually voted in the same elections is used to measure the degree of electoral participation (Participation). Because these variables are assumed to indicate two different dimensions of democracy, it is reasonable to argue that a combination of the two would probably be a more realistic indicator of democracy than either of them alone. They could be combined in many ways. In this study they are combined into an Index of Democratization (ID) by multiplying them and dividing the outcome by 100. It is assumed that both of the two dimensions are equally important for democracy. I therefore think it to be more realistic to combine them by multiplying than by adding. A low value of either of the two variables is enough to prevent democratization. This index gets high values only if the values of both basic variables are high.

These variables are used to measure the level of democratization, but they can also be used to determine the minimum threshold of democracy. It can be done by defining the minimum values of Competition, Participation, and ID that a country has to reach in order to cross the threshold of democracy. The selection of threshold values is inevitably more or less arbitrary. It seems to me that 30 percent for Competition, 10 percent for Participation, and 5.0 index points for ID might be reasonable threshold values of democracy. The same threshold values were used in my earlier longitudinal study. The countries above these threshold values are regarded as Democracies, and the countries below any of them Non-democracies. The same threshold values are applied systematically to all countries.

Statistical data on Competition and Participation are given in the Appendix. Unfortunately it is not possible to document them in the context of this paper. Most electoral data were taken from *Chronicle of Parliamentary Elections*, published by the International Centre for Parliamentary Documentation, and from *Keesing's Contemporary Archives*. Data are arithmetic means of the years 1980–85.

Explanatory Variables

It is very difficult to find and define crucial power resources for the reason that nearly anything can become a resource in the struggle for power (cf. Friedrich 1950). Important resources can vary from country to country and from one period to another. Besides, it may be impossible to find reliable and valid empirical indicators to measure the distribution of those resources at the national level and to get such measurements comparable from country

to country. These obstacles are formidable, but they do not need to be insurmountable. I think that some aspects of resource distribution can be compared from country to country by using suitable indicators whose meaning remains approximately the same across societies. Particularly the dispersion or concentration of economic and intellectual power resources seems to suit indirect measurement. They do not cover the whole arsenal of power resources, but it is reasonable to assume that economic and intellectual resources are important means of power in all societies. They can be assumed to be the most important power resources as long as the struggle for power remains more or less peaceful. When competing groups resort to violence, the means of violence and the ability to use them become the most important power resources. Because I have not found any satisfactory way of measuring the distribution of the means of violence, I have to restrict the measurement to some aspects of economic and intellectual power resources. The problem is how to measure them.

In my earlier comparative studies I used five social variables (see Vanhanen 1979, 1984) to indicate the distribution of economic and intellectual power resources. The same five variables, with some changes, will be used in this study. They are:

- (1) the percentage of urban population (Urban Population = UP);
- (2) the percentage of non-agricultural population (NAP);
- (3) the number of students in universities and equivalent degree-granting institutions per 100,000 inhabitants (Students);
- (4) the percentage of literate population (Literates); and
- (5) the percentage share of family farms of the total area of holdings (Family Farms = FF).

The first four of these variables are relatively unproblematic, and there have been enough relatively reliable statistical data on them. It is assumed that the higher values of these variables, the more widely economic and intellectual power resources are usually distributed. My principal statistical sources have been the World Bank's 'World Development Reports', FAO's *Production Yearbooks*, the United Nations' *Demographic Yearbooks*, and Unesco's *Statistical Yearbooks*, but in single cases I have resorted to several other international and national sources, too.

Family Farms is a much more problematic variable for the reason that it is not easy to find an operational definition for 'family farms'. In principle, I mean by 'family farms' holdings (1) which are mainly cultivated by the holder family itself, and (2) which are owned by the cultivator family or held in ownerlike possession, or, if leased, tenancy does not make the tenant family socially and economically dependent on the landowner (see Vanhanen 1979, 1984). The number of workers employed is used as a

criterion for the upper limit of family farms. The category is intended to include the farms which provide employment for not more than four people, including family workers (see Barraclough & Domike 1970, 48). The results of several agricultural censuses providing statistical data on employment in agriculture by size-class of holding have facilitated the use of this criterion. The upper-hectare limit of family farms was determined on the basis of data on employment, if such data were available. However, for most countries such data are not available. In these cases the upper hectare limit of family farms was estimated. In fact, it was necessary to determine the upper hectare limit of family farms separately for every country, because agricultural conditions vary so greatly from country to country that the use of a uniform hectare limit would be unrealistic and misleading.

The classification of customary African land-tenure systems has been most problematic. Earlier, these systems were called communal land-tenure systems, but John W. Bruce emphasizes that the term 'communal' is misleading. There are communal grazing rights in some areas of Africa, but rights over arable area are 'essentially individual – acquired by the individual, enjoyed by him, and disposed of by him'. Bruce estimates that the farmer often has a more 'proprietary' attitude toward his holding than characterization as a 'mere usufructuary' would imply (Bruce 1985, 1–7; see also Riddell & Dickerman 1986). On the other hand, African farmers' rights over land are not completely comparable with individual ownership. Bruce noted that, if compared with the concept of 'family farms' as used in my study, he would say that African holdings under customary tenures are 80–90 percent 'family farms' (discussion with John Bruce, William Thiesenhusen, and Carol Dickerman at Land Tenure Center, University of Wisconsin, 14 February, 1986). Dirk Berg-Schlosser has expressed the same idea (a letter of 21 May, 1986 to the writer). I have accepted this interpretation for the basis to estimate the share of family farms in African countries. However, because some holdings are bigger than family farms and because part of land is probably rented to share-croppers or tenants, I have estimated that 70 percent of the area under indigenous tenure systems belongs to the category of Family Farms.

Empirical data on Family Farms are principally from FAO's Report on the 1960 World Census of Agriculture and 1970 World Census of Agriculture; World Atlas of Agriculture, Vols 1–4; Land Tenure Center's and Concentration in the Third World; and Riddell & Dickerman (1986). Data and estimations on the share of family farms are given in the Appendix. Lack of space does not allow us to document data in this connection.

In addition to the above five variables, I shall use, in this study, a new explanatory variable to indicate the decentralization of the most important non-agricultural economic power resources, because in modern societies most people work and get their livelihood in non-agricultural sectors of

economy. Unfortunately, it is very difficult to find empirical variables to measure the relative distribution of the ownership or control of non-agricultural power resources and to make such measurements comparable from country to country. It seems to me, from the perspective of democracy, that the most crucial characteristic of an economic order concerns the question whether economic power resources are highly concentrated in the hands of one group, whatever that group is, or whether they are widely distributed among many relatively autonomous groups. Consequently, I have attempted to measure to what degree the most important non-agricultural economic power resources are concentrated or decentralized at the national level. I mean by 'decentralization' that the means of production are owned or controlled by several relatively independent groups, which may include individuals, corporations, public enterprises, and local and national governments. 'Concentration' represents the opposite of 'decentralization'. They are inversely related to each other, which means that either of them can be used to measure the degree of resource decentralization. I have attempted to measure the concentration of non-agricultural economic power resources by estimating, on the basis of available information, the percentage shares of (1) the public sector, (2) the foreign-owned or controlled sector, and (3) the concentrated private sector. Because all of these subsectors are assumed to indicate the concentration of economic power resources and because they are conceptually mutually exclusive, it may be justified to combine them by adding the percentages. The combined percentage indicates the relative level of resource concentration. In most cases, however, I have used only one or two of these subcategories. Only one subcategory (often together with the foreign sector) has been taken into account in the cases in which either the public or the concentrated private sector has a dominating position. The inverse percentage of this combined percentage of resource concentration is used to indicate

(6) the degree of non-agricultural economic resource decentralization (NARD).

The value of NARD can vary from zero to 100. It differs from the other explanatory variables in one important respect. Its values are based on my own estimations more than empirical statistical data, although two of its components (Public Sector and Foreign Sector) are conceptually clearly demarcated variables. For this reason NARD is a less reliable variable than the other five explanatory variables. However, I assume that the margin of error in my estimations is usually less than 20 percentage points.

The six explanatory variables defined above are used to measure the distribution of economic and intellectual power resources from different

perspectives. These explanatory variables can be used and will be used separately in statistical analysis, but because they are intended to indicate the same basic factor – resource distribution – it is reasonable and necessary to combine them into an Index of Power Resources (IPR). There would be many ways to combine the six variables into an index, depending on how separate variables are weighted. It seems to me that they indicate three major dimensions of resource distribution.

Urban Population and NAP indicate the degree of occupational diversification and the level of socioeconomic development. Indirectly they are assumed to measure the decentralization of economic and organizational power resources. It is assumed that the higher the level of socioeconomic development and occupational diversification as indicated by UP and NAP, the more widely economic resources and organizational capabilities are distributed in a society. These two variables are therefore combined into an Index of Occupational Diversification (IOD) by calculating their arithmetic mean. The combination of these two variables may be a more reliable indicator of resource distribution than either of them alone. Students and Literates indicate the distribution of knowledge and intellectual power resources from two different perspectives. They are combined into an Index of Knowledge Distribution (IKD) by calculating their arithmetic mean. For this operation it was necessary to transform the Students' figures into percentages. This was done by taking 6,000 students per 100,000 inhabitants to represent 100 percent. Family Farms and NARD are intended to measure the degree of resource distribution in agricultural and non-agricultural sectors of economy. They are combined into an Index of Economic Resource Distribution (ERD), but not simply by calculating their arithmetic mean. Because the relative importance of these two sectors varies greatly from country to country, it is necessary to weight the values of FF and NARD by their relative importance. This is done by multiplying the value of FF by the percentage of agricultural population and the value of NARD by the percentage of non-agricultural population (NAP). After that the weighted values of FF and NARD are simply added. In other words, $ERD = (FF \times AP) + (NARD \times NAP)$.

In this way I have combined the original six explanatory variables into three indexes (IOD, IKD, and ERD). It is assumed that, to some degree, each of them measures a different and equally important dimension of resource decentralization. Besides, I assume that the concentration of any of these resources might be enough to block democratization (cf. Huntington (1984, 214), who says that the 'powerful absence of one favorable condition, or, conversely, the presence of a powerful negative condition, that overrides the presence of otherwise favourable conditions, may prevent democratic development'). In other words, even high levels of resource distribution in two dimensions cannot compensate for the lack of

resource distribution in one of these dimensions. I do not therefore combine the three indexes into an Index of Power Resources (IPR) by calculating their arithmetic mean but by multiplying their values and dividing the income by 10,000. It is assumed that the higher the value of IPR, the more widely power resources are distributed in a society. However, because NARD is based on 'soft' data, I shall check its effect on the values of IPR by calculating an alternative IPR-F without NARD. In this alternative combination of explanatory variables Family Farms is used in place of ERD. My assumption is that IPR and IPR-F are theoretically better explanatory variables than any of the single components of them.

Besides, for the sake of comparison, I shall experiment with one alternative explanatory variable in this study. Gross National Product per capita (GNP) will be used as an alternative variable. My empirical data on GNP per capita are principally from Taylor and Jodice (1983, 110–113). GNP per capita measures the wealth of nations, but, in many studies, it has also been used to measure the level of socioeconomic development. I did not include it among my explanatory variables because it indicates more or less the same phenomena as UP and NAP and because data on GNP are probably less reliable and comparable than data on Urban Population, NAP, Students, and Literates. It can be assumed that the higher GNP per capita is, the more widely economic and intellectual power resources are usually distributed in a society.

Research Hypotheses

Now, when we have defined operational variables to substitute the hypothetical concepts 'democratization' and 'the distribution of power resources', the original hypothesis on the requisites of democratization can be replaced by two testable research hypotheses:

- (1) the political variables of this study, ID in particular, are positively correlated with the explanatory variables and especially IPR; and
- (2) all countries tend to cross the threshold of democracy at about the same level of IPR.

In the first case, weak correlations, particularly between ID and IPR, and negative correlations would falsify the hypothesis. In the second case, 'at about the same level of IPR' is expected to separate the countries into the categories of Democracies and Non-democracies. If it does not happen, the results falsify the second hypothesis. However, because we cannot expect ID and IPR to correlate completely, some deviations can be accepted.

Correlation Analysis

The first research hypothesis is tested by correlation analysis. Let us first see the intercorrelations of the political and explanatory variables. The two political variables (Competition and Participation) are only slightly correlated with each other, correlation 0.403, which can be interpreted to mean that they indicate two separate dimensions of democratization. The intercorrelations of the five explanatory variables (except FF) vary from 0.454 to 0.855. Urban Population and NAP are the most highly intercorrelated, whereas FF seems to be independent from the other five explanatory variables (correlations from -0.077 to 0.062). The independence of Family Farms from the other explanatory variables is mainly due to the fact that the values of FF are relatively high for most African countries, whereas the values of the other explanatory variables are low for African countries. The intercorrelations of IOD, IKD, and ERD show that IOD and IKD are strongly intercorrelated (0.79), whereas ERD, in due to FF, is independent from them (correlations 0.023 and 0.065).

The results of correlation analysis (Table 1) support the first hypothesis and do not falsify it. All the correlations between the three political variables and the explanatory variables are positive as hypothesized, and most of them are moderate and some strong. We can see that there is a clear difference in the strength of correlations between Competition and Participation. Competition correlates moderately or strongly with the explanatory variables, whereas most correlations are weak for Participation. This can be interpreted to mean that Participation is probably a less satisfactory indicator of democratization than Competition.

It is remarkable that in all cases ID correlates more strongly with the explanatory variables than either Competition or Participation. It can be

Table 1. The Three Political Variables Correlated with the Explanatory Variables and GNP per Capita in the Group of 147 States in 1980–85.

Variable	Competition	Participation	ID
1. Urban Population	0.429	0.326	0.491
2. NAP	0.527	0.371	0.585
3. Students	0.517	0.373	0.531
4. Literates	0.557	0.477	0.565
5. Family Farms	0.314	0.073	0.396
6. NARD	0.818	0.354	0.849
7. IOD	0.499	0.363	0.561
8. IKD	0.586	0.473	0.594
9. ERD	0.487	0.124	0.546
10. IPR	0.746	0.439	0.850
11. IPR-F	0.681	0.413	0.796
12. GNP per capita	0.428	0.291	0.555

interpreted to indicate that the Index of Democratization is a considerably better measure of democratization than either of the basic political variables alone. On the other hand, IPR is more strongly correlated with ID than any of the six single explanatory variables, although NARD's correlation with ID is about the same (0.849). NARD's high correlation with ID may be partly due to the fact that I had to estimate its values for most countries, and my estimations may be biased. However, my analysis and conclusions are principally based on the correlation between IPR and ID, and NARD is only one of the six components of IPR. The correlation between IPR and ID is therefore only partially due to the values of NARD. IPR-F, from which NARD is excluded, still correlates strongly with ID (0.796). These correlations mean that IPR explains statistically 72 percent of the variation in ID, whereas IPR-F explains 63 percent. My conclusion is that about 30 percent of the variation in ID remains unexplained. It represents the share of measuring errors, of random variation in politics, of unique historical circumstances, of cultural and national peculiarities, and of various other internal and external factors, which have not been taken into account in the explanatory variables of this study. One explanatory variable, the Index of Power Resources, seems to explain the major part of variation in political systems from the aspect of democratization, as indicated by ID.

The alternative explanatory variable, GNP per capita, correlates moderately with ID, whereas its correlations with Competition and Participation are clearly weaker. However, it explains only 31 percent of the variation in the Index of Democratization, which is 41 percentage points less than in the case of IPR. Its correlations with the other explanatory variables are moderate or strong, except in the case of FF (0.241). So it seems to me that GNP per capita could be used as an explanatory variable, but it would increase only slightly the explained part of variation in ID. The multiple correlation, in which ID is used as the dependent variable and the six social variables as the independent variable, is 0.868. When GNP is added to the group of independent variables, multiple correlation rises to 0.877. When the five other social variables without NARD are used as independent variables, multiple correlation is 0.755, and when GNP is added to independent variables, multiple correlation rises to 0.762. In other words, the use of GNP would increase the share of explained variation by only 1 or 2 percentage points.

Regression Analysis

The results of correlation analysis demonstrate that the level of democratization is strongly correlated with the distribution of power resources as indicated by IPR, but they do not tell us how well this relationship applies

to single countries. Regression analysis can be used to disclose the position of single countries and to test the second hypothesis on the emergence of democracy at about the same level of IPR. A regression analysis, in which ID is used as the dependent variable and IPR as the independent variable, produced a simple regression equation $Y \text{ est.} = 0.056 + 0.806X$. One standard error of estimate is 6.5. This regression equation can be used to determine the IPR level at which the regression line crosses the ID threshold of democracy (5.0 index points). The regression line crosses the ID level of 5.0 index points when the value of IPR is about 6.1 index points. It represents the average level of IPR at which political systems seem to have democratized, but because the correlation between ID and IPR is not complete, it is reasonable to accept a transition zone of IPR around the average. The selection of the lower and upper limits of this transition zone is inevitably arbitrary. In this analysis the variation of 3.2 index points around the average is accepted. It is one-half standard error of estimate (6.5). Thus 'at about the same level of IPR' means IPR values from 2.9 to 9.3. This will be the IPR zone of transition at which political systems are expected to cross the threshold of democracy. Now the second hypothesis can be restated in a more exact form. It is hypothesized that

- (2) all countries above the upper limit of the IPR zone of transition (9.3) are Democracies and all countries below the lower limit (2.9) are Non-democracies.

Let us see the actual results of regression analysis which are given in Table 2 and in Figure 1. Table 2 gives the actual values of IPR and ID as well as ID estimates and residuals for each country. In the table the 147 countries of this comparison group are classified into three categories by their IPR values: (1) IPR less than 2.9, (2) IPR 2.9–9.3, and (3) IPR higher than 9.3. An ID estimate indicates what the value of ID should be according to the regression equation, and the residual of each country shows how much the actual value of ID differs from the predicted value. The countries contradicting the second hypothesis are italicized in Table 2.

The countries in the category of IPR less than 2.9 index points should be Non-democracies, but in fact four of them (Gambia, Papua New Guinea, Solomon Islands, and Uganda) are above the threshold of democracy and thus contradict the second hypothesis. On the other hand, the countries with IPR values higher than 9.3 should be Democracies, but, contrary to the second hypothesis, 14 of them (Argentina, Chile, Jamaica, Jordan, South Korea, Lebanon, Mexico, Panama, Philippines, Poland, Singapore, Turkey, Uruguay, and Yugoslavia) are Non-democracies. The second hypothesis does not specify the nature of political systems in the IPR zone of transition.

Table 2. The Results of Regression Analysis for 147 States in 1980–85 in Three Subgroups by the Level of IPR

State	IPR	ID	ID est.	Residual
IPR less than 2.9				
001 Afghanistan	1.1	0	0.9	-0.9
002 Albania	0	0	0.1	-0.1
003 Angola	2.2	0	1.8	-1.8
004 Bangladesh	1.3	0.8	1.1	-0.3
005 Benin	1.5	0.7	1.3	-0.6
006 Bhutan	0.4	0	0.4	-0.4
007 Bulgaria	1.1	0	0.9	-0.9
008 Burkina Faso	0.6	0	0.5	-0.5
009 Burundi	1.0	0	0.9	-0.9
010 Cape Verde Islands	2.0	2.0	1.7	0.3
011 Chad	1.3	0	1.1	-1.1
012 China	0.1	0	0.1	-0.1
013 Comoros	0.5	0.1	0.5	-0.4
014 Cuba	2.1	0	1.7	-1.7
015 Czechoslovakia	0.3	0	0.3	-0.3
016 Djibouti	1.0	0	0.9	-0.9
017 Equatorial Guinea	1.7	0	1.4	-1.4
018 Ethiopia	0.4	0	0.4	-0.4
019 <i>Gambia</i>	1.3	7.6	1.1	6.5
020 German Dem. Rep.	2.4	0.1	2.0	-1.9
021 Guinea	1.6	0	1.3	-1.3
022 Guinea-Bissau	1.7	0	1.4	-1.4
023 Kampuchea	0	0	0.1	-0.1
024 Kenya	2.7	0	2.2	-2.2
025 Korea, North	0	0	0.1	-0.1
026 Laos	1.7	0	1.4	-1.4
027 Liberia	2.0	0.3	1.7	-1.4
028 Madagascar	2.3	6.2	1.9	4.3
029 Malawi	1.2	0	1.0	-1.0
030 Mali	0.9	0	0.8	-0.8
031 Mauritania	1.1	0	0.9	-0.9
032 Mozambique	1.6	0	1.3	-1.3
033 Nepal	0.4	0	0.4	-0.4
034 Niger	0.5	0	0.5	-0.5
035 Oman	0.8	0	0.7	-0.7
036 Pakistan	2.3	0	1.9	-1.9
037 <i>Papua New Guinea</i>	1.9	23.9	1.6	22.3
038 Paraguay	1.9	3.2	1.6	1.6
039 Romania	1.2	1.1	1.0	-0.1
040 Rwanda	1.1	0.3	0.9	-0.6
041 Saudi Arabia	2.1	0	1.7	-1.7
042 Senegal	2.0	3.0	1.7	1.3
043 Sierra Leone	2.2	0	1.8	-1.8
044 <i>Solomon Islands</i>	1.7	15.1	1.4	13.7
045 Somalia	1.0	0.1	0.9	-0.8
046 Sudan	1.5	0.2	1.3	-1.1
047 Swaziland	2.4	0	2.0	-2.0
048 Tanzania	2.3	2.1	1.9	0.2
049 <i>Uganda</i>	2.5	11.6	2.1	9.5
050 USSR	0.1	0.1	0.1	-0.0
051 United Arab Emirates	2.4	0	2.0	-2.0

Table 2. *continued*

State	IPR	ID	ID est.	Residual
101 Bahamas	21.3	15.0	17.2	-2.2
102 Barbados	10.7	21.2	8.7	12.5
103 Belgium	39.0	43.4	31.5	11.9
104 Canada	41.5	25.3	33.5	-8.2
105 <i>Chile</i>	10.9	0	8.8	-8.8
106 Colombia	10.8	11.8	8.8	3.0
107 Costa Rica	14.0	18.2	11.3	6.9
108 Cyprus	19.0	14.3	15.4	-1.1
109 Denmark	42.3	40.8	34.2	6.6
110 Ecuador	11.1	8.0	9.0	-1.0
111 Fiji	11.8	18.4	9.6	8.8
112 Finland	38.9	36.1	31.4	4.7
113 France	39.6	33.8	32.0	1.8
114 Germany, Fed. Rep. of	42.2	33.3	34.1	-0.8
115 Greece	17.1	31.4	13.8	17.6
116 Iceland	48.1	34.2	38.8	-4.6
117 Ireland	31.5	26.3	25.5	0.8
118 Israel	30.7	31.5	24.8	6.7
119 Italy	35.3	41.8	28.5	13.3
120 <i>Jamaica</i>	12.0	4.4	9.7	-5.3
121 Japan	34.8	26.0	28.1	-2.1
122 <i>Jordan</i>	13.0	0	10.5	-10.5
123 <i>Korea, South</i>	19.8	1.8	16.0	-14.2
124 <i>Lebanon</i>	26.0	2.6	21.0	-18.4
125 Luxemburg	31.8	31.6	25.7	5.9
126 Malta	20.7	30.5	16.7	13.8
127 Mauritius	10.2	23.2	8.3	14.9
128 <i>Mexico</i>	12.5	5.8	10.1	-4.3
129 Netherlands	42.8	40.4	34.6	5.8
130 New Zealand	42.5	34.3	34.3	-0.0
131 Norway	34.0	36.9	27.5	9.4
132 <i>Panama</i>	11.7	2.3	9.5	-7.2
133 Peru	12.7	13.5	10.3	3.2
134 <i>Philippines</i>	13.5	3.5	10.9	-7.4
135 <i>Poland</i>	11.8	0.3	9.6	-9.3
136 Portugal	12.3	30.0	10.0	20.0
137 <i>Singapore</i>	14.9	8.2	12.1	-3.9
138 Spain	26.6	29.5	21.5	8.0
139 Sweden	42.1	36.7	34.0	2.7
140 Switzerland	33.0	22.3	26.7	-4.4
141 Trinidad & Tobago	10.9	15.9	8.8	7.1
142 <i>Turkey</i>	10.5	1.5	8.5	-7.0
143 United Kingdom	40.7	31.6	32.9	-1.3
144 USA	48.7	17.4	39.3	-21.9
145 <i>Uruguay</i>	23.2	4.3	18.8	-14.5
146 Venezuela	13.1	18.7	10.6	8.1
147 <i>Yugoslavia</i>	14.9	0	12.1	-12.1

In Figure 1 the same results are given graphically. Vertical lines separate the three IPR zones. A horizontal line at the ID level of 5.0 index points separates the countries into the categories of Democracies and Non-

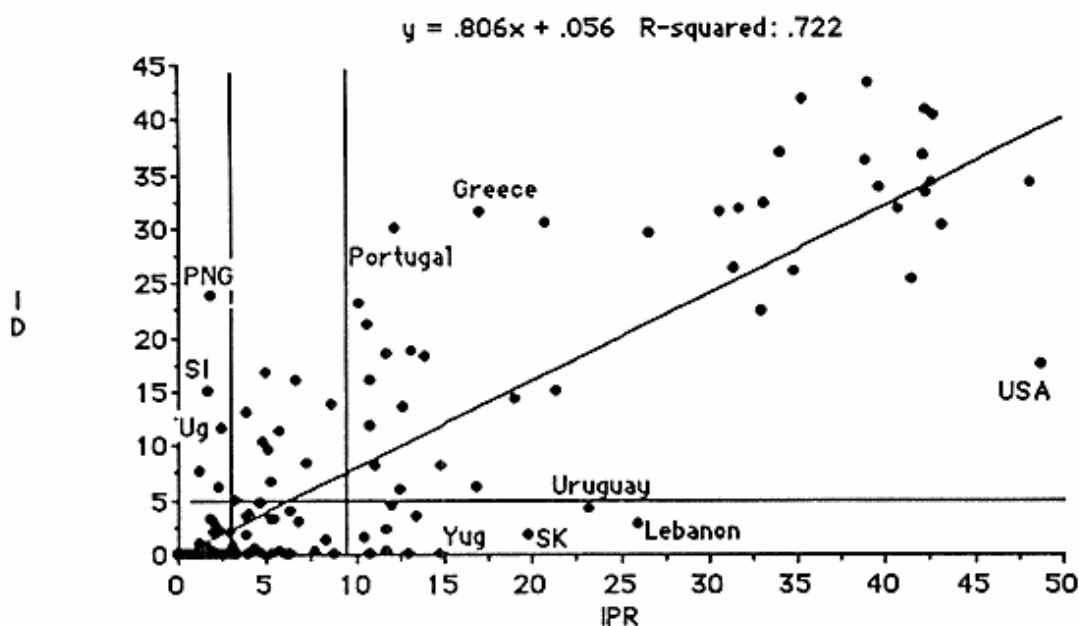


Fig. 1. The Regression of ID on IPR in the Comparison Group of 147 States in 1980-85.

democracies, although not exactly, for some countries whose ID values are 5.0 or higher remain in the group of Non-democracies because their Competition values are below the threshold of 30 percent (see Appendix and Table 2). The countries with the highest positive or negative residuals are indicated in Figure 1.

Table 3, which summarizes the results given in Table 2, shows that the numbers of Non-democracies and Democracies vary strongly by the IPR category, although the hypothesized relationship is not complete. There were altogether 18 countries which contradicted the second hypothesis in the IPR categories 'less than 2.9' and 'more than 9.3'. Their share of the total number of cases in these two categories (104) is 17.3 percent. This

Table 3. The Frequency Distribution of 147 Countries into the Categories of Non-democracies and Democracies by the Three Levels of IPR in 1980-85.

IPR level	Non-democracies		Democracies		Total	
	N	%	N	%	N	%
Less than 2.9	50	92.6	4	7.4	54	100
2.9-9.3	35	81.4	8	18.6	43	100
More than 9.3	14	28.0	36	72.0	50	100
Total	99		48		147	

means that empirical evidence supports the second hypothesis in 82.7 percent of the cases. Because the number of correct predictions is more than four times higher than the number of incorrect ones, I think that empirical evidence has not falsified the second hypothesis. However, deviating cases weaken the hypothesis.

How does one explain the deviations? Because the correlation between the Index of Democratization (ID) and the Index of Power Resources (IPR) is not complete, we have to expect some deviating cases, but, on the other hand, single deviations should be relatively short-lived because political systems are expected to become adapted to their environment. In other words, Non-democracies in the category of 'IPR more than 9.3' should cross the threshold of democracy, whereas Democracies in the category of 'IPR less than 2.9' can be expected to fall below the threshold of democracy (if their IPR values do not rise).

In fact, pressure for democratization has been strong in nearly all the 14 deviating Non-democracies, and seven of them have already crossed the threshold of democracy. Argentina crossed the threshold in 1983 (see Vacs 1987). The same happened in Uruguay in 1984 (see Gillespie 1985). The Philippines can be regarded as having crossed the threshold of democracy in February 1986 as a consequence of the highly competitive presidential election (see *Keesing's Contemporary Archives*, 34297-34301; Nicksch 1988). Turkey reentered the group of democracies in 1983, when competitive parliamentary elections were again held (*Chronicle of Parliamentary Elections*, 1983-84). Singapore achieved the minimum criteria of democracy in the 1984 parliamentary elections, in which the share of the smaller parties rose to 35 percent. However, the fact that the ruling People's Action Party won 77 out of the 79 seats in the Parliament makes Singapore a dubious case (see *Chronicle of Parliamentary Elections*, 1984-85; Nicksch 1988). South Korea crossed the threshold of democracy in 1987 as a consequence of the very competitive presidential election (see *Time*, 28 December, 1987; see also Nicksch 1988). Mexico crossed the threshold of democracy, according to my variables, in its presidential election of 6 July, 1988, when the candidate of the ruling Institutional Revolutionary Party won only 50.4 percent of the votes cast (see *Time*, 18 July and 25 July, 1988).

Of the other seven countries, Chile may become democratized in 1989 through an expected competitive presidential election. Jamaica dropped below the threshold of democracy as a consequence of the 1983 parliamentary elections which were boycotted by the opposition (see *Keesing's Contemporary Archives*, 32724-32725; *Chronicle of Parliamentary Elections*, 1983-84). One can expect that Jamaica will recross the threshold of democracy in the next parliamentary elections (cf. Martz 1988). Jordan is still ruled by the King, although its social conditions seem to be favorable

for a more democratic system. It may be that the state of war with Israel and the fact that Palestinian refugees form a considerable part of its population have hampered the process of democratization. Lebanon is below the threshold of democracy for the reason that its civil war since 1975 has made it impossible for it to organize new parliamentary elections (cf. Hudson 1984; Perry 1988). Panama crossed the threshold of democracy in 1984 (see *Keesing's Contemporary Archives*, 33150–33151), but in 1988 it slipped back to military rule (see *Time*, 7 March, 1988; cf. Martz 1988). Poland and Yugoslavia are deviating socialist countries with higher IPR values than the other socialist countries. Their high IPR values are principally due to the fact that the major part of agricultural land is privately owned. Besides, in Yugoslavia the control of non-agricultural economic power resources is more decentralized than in the other socialist countries. Popular pressure for democratization has been particularly strong in Poland where, according to a recent survey, nearly 70 percent of the population would like to have a competitive multiparty system (see Gebethner 1986). Poland's international position as a member of the socialist bloc is probably the strongest factor which has so far prevented the democratization of its political system. In Yugoslavia domestic pressure might more easily lead to democratization. Its federal system already has strong democratic characteristics. Power is to some degree shared by the major ethnic groups (cf. Powell 1988).

The IPR category 'less than 2.9' index points includes four Democracies which contradict the second hypothesis. In fact, democratic institutions have been in trouble in two of these countries. In Gambia, Senegalese troops were needed to suppress an attempted coup in 1981, after which Gambia merged with Senegal into the Confederation of Senegambia. However, democratic institutions have survived in Gambia (see *Keesing's Contemporary Archives*, 31165–31166, 31548, 31834, 32957; Jackson & Rosberg 1984; Diamond & Galvan 1988). Uganda dropped below the threshold of democracy in 1985 as a consequence of a military coup (*Keesing's Contemporary Archives*, 34023, 34535–34539; see also Kokole & Mazrui 1988). On the other hand, in Papua New Guinea (PNG) and Solomon Islands democratic institutions seem to have functioned smoothly. The stability of democratic institutions in PNG may be partly due to Australia's administrative, financial, and military help. David Lipset remarks that democracy in PNG has not merely persisted without interruption, but has thrived in its first ten years. He seeks an explanation for democracy's success in PNG particularly from its traditional social structures and Australia's colonial rule. He refers to its traditionally egalitarian, factionalized social structures and to Australian colonial rule which allowed the democratically preadaptive features of traditional Melanesian politics to persist without radical deculturation (D. Lipset 1985; see also Pokawin

1982; Diamond et al. 1986). It is possible that important power resources are more widely decentralized in PNG than my variables indicate. The same comments also apply to Solomon Islands (see Saemala 1982).

The above analysis of the 18 deviating cases in the IPR categories 'less than 2.9' and 'more than 9.3' disclosed that eight of them are not deviations any longer. This result supports the assumption that deviations are usually relatively short-lived because political systems tend to become adapted to their environmental conditions through the endless struggle for power. The rest of the deviating cases (10) form 9.6 percent of the total number of countries (104) in these two IPR categories.

GNP per Capita as an Explanatory Variable

Let us see, for the sake of comparison, how well my alternative explanatory factor, GNP per capita, could explain the variation of democratization in this comparison group of 147 states in the period 1980-85. Regression analysis in which GNP per capita was used as the independent variable and ID as the dependent variable produced a simple regression equation: $ID\ est. = 3.635 + 0.002 \times GNP$ (see Figure 2).

Figure 2 shows that few extremely deviating cases (United Arab Emirates, Kuwait, and Qatar) with the highest GNP values and the zero values of ID weaken the correlation between ID and GNP. On the other hand, several countries have been able to cross the threshold of democratization

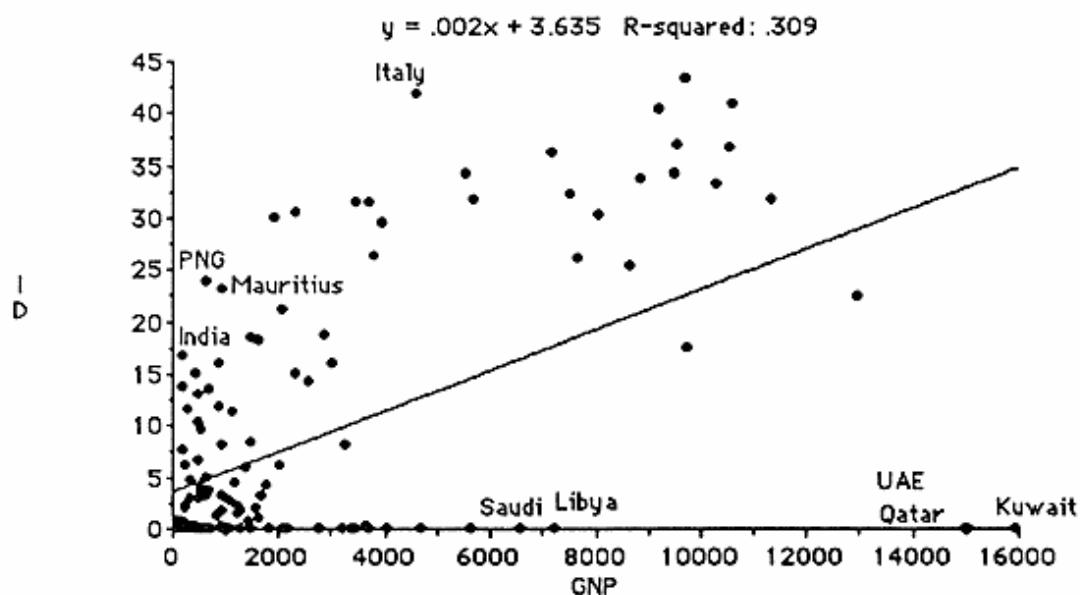


Fig. 2. The Regression of ID on GNP per Capita in the Comparison Group of 147 States in 1980-85.

with relatively low GNP values. The results of this analysis therefore falsify the assumption that a moderate or high GNP per capita would be a necessary requisite for democracy, although they support the hypothesis on the positive relationship between GNP per capita and democracy. It seems to be possible to establish a democratic political system at nearly any level of GNP per capita. My conclusions therefore differ from those of S. M. Lipset who has emphasized the significance of a high level of national wealth as a necessary condition of democracy (see Lipset 1983, 469–476). It is true that a high level of GNP per capita is favorable for democratization, but even a low level of GNP per capita does not necessarily prevent the emergence of democracy. According to my interpretation, the distribution of economic and other power resources is the crucial causal factor, not the level of wealth. In most cases the level of GNP per capita is positively related to the distribution of economic resources, but not in all countries, and for this reason there are wealthy Non-democracies and poor Democracies, which clearly contradict the hypothesis on the positive relationship between affluence and democracy. When ID is correlated with the level of resource distribution (IPR and IPR-F), these deviations disappear, or at least they decrease considerably. In fact, in my study, nearly half of Democracies are relatively poor developing countries.

Conclusion

I have empirically tested my hypothesis on the requisites of democratization. The results show that one explanatory variable (IPR) statistically explains about 70 percent of the variation in democratization (ID) in this comparison group of 147 contemporary states. It is possible that the real relationship between the level of democratization and the degree of resource distribution is even stronger, for the empirical variables of this study are not complete substitutes for the theoretical concepts. On the other hand, I assume that because of its biological nature, politics is always to some degree indeterminable and affected by random factors, which make it impossible to find complete correlations and regularities.

Thus, I come to the conclusion that we can explain the major part of variation in democratization by universally valid explanatory variables. In this point I agree with S. M. Lipset and other proponents of modernization theories, who have sought universal explanations for democratization, and I disagree with the proponents of dependency theories and others, who argue that it is impossible to find any universally valid explanations for the variation of political systems and who consequently resort to various regional, local, and *ad hoc* explanations. According to my argument, the existence of universal behavioral predispositions provides the starting-point

for establishing invariant explanations for political phenomena and applying them to all human populations.

Four of my six explanatory variables are the same as those used by Lipset, Lerner, Deutsch, and others who have tested modernization theories by empirical evidence, but my theoretical interpretation of those variables is different. For me the causal factor behind democratization is not the level of economic development, GNP per capita, or modernization but the degree of resource distribution. Socioeconomic variables are used to measure the level of resource distribution on the basis of the assumption that the higher the level of socioeconomic development, the more widely various politically relevant economic and intellectual resources are usually distributed in a society. However, because correspondence between resource distribution and the level of socioeconomic development is a long way off perfection and because there are several abruptly deviating cases, I have also attempted to measure the distribution of resources by more direct variables (FF and NARD). All these explanatory variables are assumed to measure the same theoretical variable, the relative degree of resource distribution. For this reason I combined various explanatory variables into an Index of Power Resources and it has been used as the principal explanatory variable. The results of empirical analysis indicate that this combined variable explains considerably more of the variation in democratization than any single indicator of socioeconomic development. Besides, most of the great deviations which have always weakened socioeconomic explanations of democratization disappear when IPR is used as the explanatory variable. S. M. Lipset (1983, 473), for example, mentions that

There are, of course, still some deviant cases. Most of them, as already indicated, are oil-rich, otherwise less developed, highly inegalitarian, Middle Eastern states, or the more industrialized Communist regimes.

In addition to these states, several poor democracies have clearly contradicted socioeconomic-preconditions theories. It is remarkable that very few of these countries are deviant cases in my study, because I use the degree of resource distribution as the explanatory variable, and because it can considerably differ from the level of socioeconomic development. I therefore think that the relative degree of resource distribution provides a theoretically much more satisfactory explanation for democratization than the level of economic development or modernization. The ultimate theoretical explanation for the necessity of this relationship was derived from an evolutionary interpretation of politics.

In the same way as the proponents of modernization theories I am inclined to argue that internal factors are usually much more important than external factors and that dependency theories greatly overestimate the weight of external factors. On the other hand, I do not try to deny the

significance of various external factors. They are important to the extent that they influence the degree of resource distribution, but their influence is not always uniform and predictable. Sometimes external factors may increase resource distribution and thus further the prospects of democratization, but they may also further the concentration of resources and thus hamper democratization. One cannot, therefore, present any uniform hypothesis on the effects of external factors to the preconditions of democratization.

According to the results of my comparative analysis as well as according to my theoretical premises, structural social factors are much more important than political factors, or unique historical experiences, or the influence of personalities. In this point I disagree particularly with R. D. Gastil (1984), who seems to think that democratization is almost independent of social structures and that it depends principally on the diffusion of democratic ideas. On the other hand, I want to emphasize that the results of my study left about 30 percent of the variation in democratization unexplained. This 30 percent represents the effects of cultural variation, unique historical experiences and external factors, exceptional local circumstances, and various political and random factors including the role of unique personalities, institutions, and the diffusion of ideas. It is therefore possible that all of the alternative hypotheses reviewed above include reasonable assumptions on the requisites of democratization, although I have tried to show that the major part of variation in democratization can be satisfactorily explained by one explanatory variable derived from an evolutionary theory of politics.

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significance of various external factors. They are important to the extent that they influence the degree of resource distribution, but their influence is not always uniform and predictable. Sometimes external factors may increase resource distribution and thus further the prospects of democratization, but they may also further the concentration of resources and thus hamper democratization. One cannot, therefore, present any uniform hypothesis on the effects of external factors to the preconditions of democratization.

According to the results of my comparative analysis as well as according to my theoretical premises, structural social factors are much more important than political factors, or unique historical experiences, or the influence of personalities. In this point I disagree particularly with R. D. Gastil (1984), who seems to think that democratization is almost independent of social structures and that it depends principally on the diffusion of democratic ideas. On the other hand, I want to emphasize that the results of my study left about 30 percent of the variation in democratization unexplained. This 30 percent represents the effects of cultural variation, unique historical experiences and external factors, exceptional local circumstances, and various political and random factors including the role of unique personalities, institutions, and the diffusion of ideas. It is therefore possible that all of the alternative hypotheses reviewed above include reasonable assumptions on the requisites of democratization, although I have tried to show that the major part of variation in democratization can be satisfactorily explained by one explanatory variable derived from an evolutionary theory of politics.

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APPENDIX. The values of two political and seven explanatory variables of 147 states in 1980–85.

Variables

- 1 = Competition 1980–85
 2 = Participation 1980–85
 3 = Urban Population
 4 = Non-agricultural Population (NAP)
 5 = Students (the number of students per 100,000 inhabitants as a percentage of 6,000)
 6 = Literates
 7 = Family Farms (FF)
 8 = The Degree of Non-agricultural Economic Resource Decentralization (NARD)
 9 = GNP per Capita

State	1	2	3	4	5	6	7	8	9
001 Afghanistan	0	0	15	22	2	24	57	5	160
002 Albania	0	56	37	40	8	70	0	0	740
003 Algeria	2	41	44	50	7	50	36	10	1,450
004 Angola	0	0	21	42	1	41	50	10	420
005 Argentina	24	26	82	87	29	95	48	30	2,030
006 Australia	54	56	89	94	37	100	51	70	8,060
007 Austria	51	63	54	91	30	99	63	70	7,520
008 Bahamas	45	33	64	93	42	93	43	40	2,320
009 Bahrain	0	0	78	97	9	73	28	10	4,060
010 Bangladesh	9	8	11	16	5	33	58	15	90
011 Barbados	48	44	43	84	26	97	14	30	2,080
012 Belgium	73	60	72	97	32	99	87	70	9,700
013 Benin	2	35	14	55	1	26	60	10	220