

Democratization

A comparative analysis of
170 countries

Tatu Vanhanen

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Democratization

Democratization provides an in-depth investigation into the causes of democracy. The author analyses and compares data from 170 countries, in order to construct a compelling argument, concluding that democratization is closely linked to resource distribution.

Using data concerning the state of democracy drawn from the 1850s to the present day, Vanhanen analyses and evaluates the prospects of democracy in each country. His controversial conclusion – that the same explanatory variable appears to explain democratization satisfactorily in all parts of the world, in spite of significant historical and cultural differences between countries – provides theoretical grounds for political and social strategies intended to improve social prerequisites of democracy in the world.

This invaluable reference tool will interest all researchers of democracy and democratization.

Tatu Vanhanen is Emeritus Professor of Political Science at the University of Tampere, Finland. He is also the author of *The Process of Democratization*, *Prospects of Democracy* and *The Democratization of Eastern Europe*.

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**To my wife Anni
and
to the memory of my mother**

Contents

<i>List of illustrations</i>	ix
<i>Preface</i>	xi
<i>Acknowledgements</i>	xiii
<i>List of abbreviations</i>	xv
Introduction	1
1 Debate on the causes of democratization	7
2 Resource distribution theory of democratization	25
3 Measures of democracy	48
4 Explanatory variables	79
5 A review of democratization in 1850–1998	104
6 Correlation analysis	121
7 Regression analysis	133
8 Analysis of single countries	147
9 Conclusions	183
Appendix 1 Data on the measures of democracy for 1999–2001 in 170 countries	190
Appendix 2 Data on adult literacy and students in universities per 100,000 inhabitants in 170 countries	233

Appendix 3	The percentage of Family Farms of the total area of agricultural holdings in 170 countries, 1960–1995, and the percentage of the agricultural population in 1999	239
Appendix 4	The estimated degree of decentralization of mainly non-agricultural economic power resources (DD) in 170 countries, 1995–1999	257
Appendix 5	Data on GNP 1998 and GDP per capita (PPP US\$) 1998 in 170 countries	265
	<i>References</i>	270
	<i>Index</i>	289

Illustrations

Figures

5.1	The results of regression analysis of ID on IPR for single countries in the group of 1,303 country-year observation units in 1850–2000	110
7.1	The results of regression analysis of ID-2001 on IPR for single countries in the group of 170 countries	135
7.2	The results of regression analysis of ID-2001 on IPR-2 for single countries in the group of 170 countries	136
7.3	The results of regression analysis of ID-2001 on Mean for single countries in the group of 170 countries	137
8.1	The results of regression analysis of ID-2001 on IPR for single countries in the group of 42 mainly Muslim countries	165

Tables

3.1	Index of Democratization (ID) correlated with the Polity Democracy–Autocracy (DA) scores and the Freedom House combined ratings of political rights and civil liberties	69
3.2	Number of democracies according to three alternative datasets over the period 1818–1998	70
5.1	Cross-sectional correlations between IPR and ID over the period 1850–1998	106
5.2	Intercorrelations of explanatory variables in the longitudinal group of 1,133 country-year observation units in 1850–1990	108
5.3	Measures of resource distribution correlated with the measures of democracy in the total world group of 1,133 country-year observation units in 1850–1998	109
6.1	Intercorrelations of the five explanatory variables and their combinations in the group of 170 countries	122
6.2	Intercorrelations of the three measures of democracy in 1999–2001 in the group of 170 countries	123

6.3	Correlations between the ten explanatory variables and the three measures of democracy in 1999–2001 in the group of 170 countries	124
6.4	Some results of multiple correlation analysis in the group of 170 countries	128
6.5	The results of multiple regression analysis in which five single explanatory variables are used to explain variation in ID-2001 in the group of 170 countries	130
6.6	The results of multiple regression analysis in which ER, IR, and GDP% are used to explain variation in ID-2001 in the group of 170 countries	130
6.7	The results of multiple regression analysis in which IPR and GDP% are used to explain variation in ID-2001 in the group of 170 countries	130
7.1	Democracies and non-democracies in 2001 cross-tabulated by the transition level of IPR and Mean respectively in the group of 170 countries	138
7.2	Deviating democracies and non-democracies according to the transition levels of IPR and Mean in 2001	139
7.3	The results of regression analysis of ID-2001 on IPR and Mean in turn for single countries in the group of 170 countries	141–144
7.4	The most extremely deviating countries according to regressions of ID-2001 on IPR and Mean respectively in the group of 170 countries	145
8.1	The application of the second research hypothesis to single countries by regional groups	162
8.2	The application of the first research hypothesis to single countries by regional groups	181

Preface

In the Preface to my 1997 book *Prospects of Democracy: A study of 172 countries*, I assumed that it might be my last extensive comparative study of democratization. It was not. Three years ago I realized that I could correct some aspects of my measures of democracy (which have been criticized by several colleagues) as well as explanatory variables and that the use of reconstructed variables might increase the explained part of variation in the measures of democracy. So I started to gather data and to experiment with reconstructed variables.

The research problem is the same as in my previous studies of democratization. The purpose is to explore to what extent it is possible to explain great differences in the degree of democratization by some simple empirical variables intended to measure the distribution of important power resources. This is done by testing hypotheses derived from the evolutionary resource distribution theory of democratization by empirical evidence.

Both the dependent and independent variables of this study differ to some extent from those used in my previous books. The inclusion of referendums to the Participation variable is intended to complement the measurement of democracy by taking into account an important dimension of direct democracy. Explanatory variables intended to measure the variation in the degree of resource distribution have been reconstructed even more drastically. The Urban population and Non-agricultural population variables used in previous studies were excluded and an indicator of per capita income was added to the group of explanatory variables. Further, I invented a new way of constructing the DD variable measuring the degree of decentralization of mainly non-agricultural economic power resources. The five basic explanatory variables are now combined into indices of power resources in three alternative ways. It was exciting to find out that the explained part of variation in the measures of democracy rises over 70 percent in 1999–2001. The readers are invited to see from the following chapters how this was done and on what kind of evidence the results are based.

I have attempted to explore the causes and preconditions of democratization because I believe that democracy provides a better framework for

human life than do autocratic political systems. This book is my new contribution to the global debate on the causes of democratization. If it inspires or challenges other researchers to continue our common effort to solve this problem and to help people living under autocratic systems to expand their sphere of freedom, it has achieved its purpose.

Tatu Vanhanen
January 2003

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I use this opportunity to thank people who have helped me in this work with their ideas, criticism, and advice. In the first chapters of this book, I refer to some of them. I am grateful to discussant Morten Kelstrup and other colleagues who commented on my paper “Causal Explanation of Democratization” introducing the first version of the book manuscript at the project meeting of the NOS-S project in the Department of Peace and Conflict Research at Uppsala University, 10 January 2002; to discussant William J. Dixon and other commentators for their critical comments on my paper “Democratization in 2000: A Causal Analysis of 170 Countries” at the 43rd Annual ISA Convention, New Orleans, 24–27 March 2002; and to convenor Erik Komarov and other colleagues for their useful comments on my paper “The State and Prospects of Democracy in South Asia” at the 17th European Conference on Modern South Asia, Heidelberg, 9–14 September 2002. I also want to express my gratitude to two anonymous reviewers of the manuscript, whose comments were highly valuable.

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data (1850–1991) on explanatory variables in the *Democratization and Power Resources 1850–2000* dataset. I also thank the Association of Finnish Non-Fiction Writers for a travel grant to London in March 2002.

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Tatu Vanhanen

Abbreviations

AP	agricultural population
CIA	Central Intelligence Agency
CIS	Commonwealth of Independent States
Com, C	Competition
DA	Democracy–Autocracy
DD	degree of decentralization of (mainly) non-agricultural economic power resources
DER	Index of the Distribution of Economic Power Resources
ER	Index of Economic Power Resources
FAO	Food and Agriculture Organization of the United Nations
FF	Family Farms
FH	Freedom House
GDP	Gross Domestic Product
GNP	Gross National Product
HDI	Human Development Index
ID	Index of Democratization
IDEA	International Institute for Democracy and Electoral Assistance
IFES	International Foundation for Election Systems
IKD	Index of Knowledge Distribution
IOD	Index of Occupational Diversification
IPR	Index of Power Resources
IPR-2	Extended Index of Power Resources
IR	Index of Intellectual Power Resources
IPU	Inter-Parliamentary Union
ISI	Index of Structural Imbalance
IPRI	Index of Power Resources and Structural Imbalances
LTC	Land Tenure Center
NAP	non-agricultural population
OECD	Organization for Economic Cooperation and Development
Par, P	Participation

PPP	purchasing power parity
PNG	Papua New Guinea
Res	residual
UNDP	United Nations Development Programme
UP	Urban Population
WFB	The World Factbook

Introduction

I have been fascinated by the problem of democracy in poor countries since the 1960s when Lipset argued that democracy is related to the level of economic development and hypothesized that the more well-to-do a nation, the greater the chances that it will sustain democracy (Lipset 1959, 1960). Lipset's study revealed that there is a positive relationship between democracy and various indicators of economic development. It inspired me to explore social prerequisites of democracy. I wondered how to explain the success of democracy in a poor country like India if it is true that a relatively high level of economic development is needed to support democracy. So I started to study politics in India in order to find out the social background of India's many political parties and how the distribution of political power in India through its party system is related to the country's social structures and conditions. My conclusion was that the success of democracy presupposes the distribution of economic and intellectual power among various social groups and their elites rather than a high level of economic development and that, therefore, democracy has survived in India in spite of its poverty. I assumed that if this hypothesis can be proved to apply also to other countries, the future of democracy in underdeveloped parts of the world would seem to be brighter than in the case that democracy is regarded to be possible only in countries which have achieved a high level of economic development (see Vanhanen 1963).

In the next phase, I tested this basic hypothesis in a group of ten new Commonwealth countries and then extended my study to cover nearly all countries of the world (Vanhanen 1968, 1971). Lipset's study gave me the idea that democracy is systematically related to measurable social structures and conditions. From Darwin's theory of evolution by natural selection, I derived a theoretical explanation for the observed relationship between social conditions and democracy. I realized that politics is a part of the general struggle for existence, which is explained by Darwin's theory, and that, therefore, the distribution of political power must be related to the distribution of various resources that are used as sources of power. This insight provided an evolutionary explanation for many regularities in politics and for the strong relationship between measures of democracy and

2 Introduction

measures of resource distribution. I came to the conclusion that democracy does not emerge and flourish accidentally in any kinds of social environments, that it emerges from the sufficient distribution of power resources, and that this regularity provides the most powerful theoretical explanation for democratization.

I have used various measures of resource distribution to explain democratization and have tested hypotheses by empirical data. The results have repeatedly shown that the measures of resource distribution used in my studies explain more than half of the variation in the degree of democratization (see Vanhanen 1984, 1990, 1997). The results do not contradict Lipset's (and many others') hypothesis about the positive relationship between democracy and the level of economic development. Democracy is a greater probability in economically highly developed countries than in less developed countries. According to my interpretation, this relationship is due to the fact that economic and intellectual power resources are usually more widely distributed in economically highly developed countries than in poor countries. My measures of resource distribution have explained significantly more of the variation in democratization than the measures of economic development for the reason that differences in resource distribution explain the success of democracy in some poor countries and the failure of democracy in some relatively wealthy countries. It should be noted that my measures of resource distribution and measures of economic development are highly intercorrelated and partly the same.

My studies of democratization have been based on the idea that, from the perspective of common people, democracy is a better political system than autocracy and that, therefore, it is worthwhile exploring the causes and conditions of democracy. According to my arguments, democracy matters because 'it belongs to the nature of democratic governments to take care of the many, to serve their interests in the endless struggle for survival in this world of scarcity, whereas it belongs to the nature of autocratic systems to serve the interests of the few' (Vanhanen 1997: 3–4). This difference between democracy and autocracy is an inevitable consequence of the fact that those who have power tend to use it for their own advantage. Consequently, because power is shared by the many in democracies, power is used, or at least attempted to be used, for the advantage of the many, and because power is concentrated in the hands of the few in autocracies, it is also used to serve the interests of the few. For this reason subjugated people living under autocratic systems dream of democracy and are willing to struggle for democracy. UNDP's *Human Development Report 2002* (2002: 1–6) emphasizes that politics matter for human development 'because people everywhere want to be free to determine their destinies, express their views and participate in the decisions that shape their lives.' Democratic governance can advance human development by empowering people to press for policies that expand social and economic opportunities.

The central purpose in this new analysis of democratization is to explore to what extent it is possible to explain the variation in democratization in the total world group and at the level of single countries by the reconstructed explanatory variables and their combinations. A significant increase in the explained part of variation would improve the accuracy of predictions for single countries and strengthen the arguments about the causal factors of democratization. This study covers 170 contemporary countries and focuses on the state of democracy in 1999–2001, but a more limited retrospective analysis will be made about the hypothesized relationship over the period 1850–1998.

The book is divided into nine chapters. Chapter 1 concerns the ongoing debate on the causes of democratization. Some major studies and theoretical explanations of democratization are reviewed. They illustrate the theoretical background of this study and help readers to compare my theoretical explanation and research strategy to those used by other researchers. They also show how difficult it has been for researchers to agree on any theory of democratization. In many points, researchers still disagree on the causes of democratization and even on the possibility of finding any coherent explanation for democratization. The review starts from theories and studies based on the idea that democracy is causally related to economic development and modernization. Multivariate models emphasize that there is no dominant factor of democratization and that the causes of democratization may vary substantially from one place to another. Transition and consolidation studies focus on the process of democratization and are not especially interested in causal explanations. Various factors, like political culture and income inequalities, have been used to explain democratization. Several researchers have challenged modernization theory and formulated different causal explanations. The point of this chapter is that there are various and partly contradictory competing theories about the sources of democratization as well as many different ways to study democratization.

Chapter 2 introduces my evolutionary resource distribution theory of democratization. I try to explain the basic ideas of this theory starting from a Darwinian interpretation of politics, which led me to hypothesize that democratization depends on the distribution of power resources within a society. It is emphasized that this hypothesis on democratization is testable and that it can be tested by defining variables that measure the degree of democratization and the degree of resource distribution. Then my theory of democratization is compared with some other explanatory theories in order to point out similarities and differences. In the latter part of Chapter 2, I refer to several researchers who have commented on and criticized my theory and previous studies since the 1970s. Their comments have indicated various weak points in my theory, variables, measurements, and studies but also misunderstandings. In particular, it has been difficult for other researchers to understand my evolutionary argumentation and the

4 *Introduction*

connection postulated between the Darwinian theory of evolution by natural selection and my theory of democratization. Because of this criticism and difficulties in understanding my arguments, I attempt to clarify my theoretical arguments in this study and to show how the basic hypothesis is derived from the Darwinian interpretation of politics formulated in this study.

Measures of democracy are introduced and defined in Chapter 3. At first, the concept of democracy is briefly discussed and defined. Then I refer to different approaches to measure democracy. In fact, measures of democracy seem to vary as much as theoretical explanations of democratization. I explain the origin and evolution of my measures of democracy and define the variables used in this study to measure democracy. Competition and Participation are the two operationally defined political variables that are intended to measure two crucial theoretical dimensions of democracy: competition and participation. These two basic variables are combined into an Index of Democratization (ID) as in my previous studies. However, the present measures of democracy differ from the previous ones in one important respect: referendums are incorporated into the Participation variable. Referendums are taken into account because the significance of referendums seems to be increasing in the world. Referendums can be regarded to represent a new dimension of democracy. In order to separate democracies from non-democracies, threshold values of democracy are defined for measures of democracy. Finally, my measurements of democracy are briefly compared with the Polity Democracy–Autocracy scores over the period 1818–1998 and with the Freedom House combined ratings of political rights and civil liberties over the period 1978–2000.

Explanatory variables are introduced and defined in Chapter 4. At first, I refer to the six explanatory variables used in my previous studies and explain how they were combined into an Index of Power Resources (IPR). Then the old and new explanatory variables of this study are introduced and defined operationally as well as the three different combinations of explanatory variables (IPR, IPR-2, and Mean). These three aggregated indices will be used as alternative operational substitutes for the hypothetical concept of ‘resource distribution.’ Finally, the original hypothesis of democratization is transformed into two research hypotheses which will be tested by empirical data.

Democratization over the period 1850–1998 is analyzed in Chapter 5. Because the explanatory theory used in this study is assumed to be universal, it is interesting to see whether the hypothesized relationship between the measures of resource distribution and the level of democratization has remained stable over time. The first research hypothesis is tested by correlating IPR with ID over the period 1850–1998. Regression analysis is used to illustrate the accuracy of predictions for single countries. The results of correlation and regression analyses are complemented by reviewing predictions presented in my previous studies. The purpose is to see to

what extent predictions were correct or wrong. Some failures to anticipate democratizations or breakdowns of democracy imply that there is a margin of error in predictions based on explanatory variables.

The state of democratization in contemporary countries in 1999–2001 is analyzed in Chapter 6. The first research hypothesis is tested by correlating measures of democracy with explanatory variables and their combinations. The results show that the use of corrected and reconstructed variables has increased the explained part of variation in the degree of democratization significantly. Multiple correlation and multiple regression analyses are used to check the results and to illustrate the relative significance of single explanatory variables.

In Chapter 7, the results of regression analysis are presented for single countries, and these results are used to test the second research hypothesis according to which all countries tend to cross the threshold of democracy at about the same level of resource distribution. The hypothesis is tested by cross-tabulating democracies and non-democracies by the transition levels of the three combinations of explanatory variables. The countries that contradict the second research hypothesis most clearly are indicated. Second, the results of regression analyses are used to test the application of the first research hypothesis to single countries by separating the most deviating countries from the countries for which the actual level of democratization deviates only slightly or moderately from the regression lines.

The results of regression analyses are discussed at the level of single countries in Chapter 8. For the purposes of this analysis, the 170 countries are at first classified into four categories on the basis of the second research hypothesis. Democracies and non-democracies as expected are separated from the countries at the transition levels of IPR and Mean and from deviating democracies and deviating non-democracies. Each of the countries of the last two categories are discussed separately because they contradict the second research hypothesis most clearly. The results are summarized by five regional groups in order to see whether there are significant regional differences. In addition, Muslim countries are briefly analyzed separately. In the second part of this chapter, the first research hypothesis is applied to single countries, which are classified into three categories on the basis of residuals. The countries with large positive residuals are separated from the countries with large negative residuals as well as from the countries with small or moderate residuals. Because the countries with large residuals contradict the first research hypothesis most clearly, each of them is discussed separately in order to find out what special circumstances might explain their deviating positions. The results are summarized by a regional analysis, which is intended to show whether there are significant regional differences in the relative frequency of countries with large positive and negative residuals.

In the concluding Chapter 9, the results of this study are summarized and discussed. The purpose is to point out the most important findings

6 *Introduction*

and to discuss their implications for the prospects of democracy. The results are also compared to the results and conclusions made in some other studies of democratization.

The contemporary statistical data used in this study are presented and documented in five appendices. Their presentation makes it possible for other interested researchers to check my data, to use them in their own reanalyses, and to think over how it might be possible to correct the variables used in this study, or to invent better variables.

1 Debate on the causes of democratization

Ever since S.M. Lipset's seminal article 'Some Social Requisites of Democracy' (1959), researchers have discussed and studied the causes of democratization. Most of the world's countries have democratized, at least to some extent, but democracy is still fragile in many of them, and the number of countries in which democratic institutions, or attempts to establish democracy, have failed is considerable. Therefore it would be important to understand why democracy has emerged in some countries but not in certain others. What are the causes of democratization and of the failures of democratization? Are the causes and failures of democratization similar in all parts of the world, or do they vary from place to place and over time? These are some of the basic questions tackled by researchers and investigated in this study, too.

Economic development and modernization

Lipset assumed that two characteristics of a society 'bear heavily on the problem of stable democracy: economic development and legitimacy, or the degree to which institutions are valued for themselves and considered right and proper' (Lipset 1960: 46). He tended to agree with Weber who suggested that modern democracy in its clearest form can occur only under capitalist industrialization. Lipset emphasized the significance of social conditions conducive to democracy and related democracy to the level of economic development and wealth. According to his generalization, 'the more well-to-do a nation, the greater the chances that it will sustain democracy' (Lipset 1959: 75; 1960: 48–50). When he tested this hypothesis by empirical evidence, he found that the average wealth, degree of industrialization and urbanization, and the level of education is much higher for the more democratic countries than for the less democratic ones.

Daniel Lerner had presented similar arguments on the effects of modernization on political development in his book *The Passing of Traditional Society: Modernizing the Middle East* (1958). According to his theory, the process of modernization follows a similar pattern in different countries. It starts from urbanization, and is followed by increased literacy and rising media

participation. Finally, modernization produces democracy: ‘Democratic governance comes late, historically, and typically appears as a crowning institution of the participant society’ (Lerner 1968: 64).

Many other researchers have tested and retested Lipset’s and Lerner’s economic development and modernization hypotheses of democratization, developed them further, and applied them to different regions and periods of time (see, for example, Marvick 1962; Cutright 1963; Neubauer 1967; Needler 1968; Olsen 1968; Smith 1969; Banks 1970; Winham 1970; Cutright and Wiley 1969–70; Kim 1971; May 1973; Marquette 1974; Coulter 1975; Bollen 1979; O’Regan 1992; Muller 1995, 1997; Londregan and Poole 1996; Karvonen 1997; Przeworski and Limongi 1997; Mousseau 2000; Bunce 2000; Elgström and Hyden 2002). In the expanded edition of *Political Man* (1983), Lipset repeats his arguments on the social requisites of democracy and notes that a number of social scientists ‘have continued to work in this area and, using more statistically sophisticated methods, have also found positive relationships between economic development and democracy’ (1983: 470). He refers to Inkeles and Diamond, who ‘present considerable evidence to sustain the hypothesis that the level of a country’s economic development independently affects the orientations conducive to democracy of its citizens.’ However, he admits that there are still deviant cases. Most of them are ‘oil-rich, otherwise less developed, highly inegalitarian, Middle Eastern states, or the more industrialized Communist regimes’ (ibid.: 473; see also Lipset *et al.* 1993).

Gary Marks and Larry Diamond refer to the numerous studies which have tested Lipset’s assertion of a direct relationship between economic development and democracy in the last 30 years and conclude that ‘the evidence shows, with striking clarity and consistency, a strong causal relationship between economic development and democracy’ (Marks and Diamond 1992: 6). Diamond (1992) notes that a number of studies have strongly supported Lipset’s thesis, but he makes some reservations. His argument is that the Human Development Index is an even better indicator of economic development than per capita GDP. He assumes that ‘the relationship between economic development and democracy has weakened somewhat in the last 30 years as the number of democracies, especially in the middle ranges of development, has grown, especially in the last few years’ (ibid.: 102). Diamond emphasizes the extraordinary consistency with which the central premise of Lipset’s thesis has stood up through all manner of tests, but he reformulates it slightly: ‘The more well-to-do the people of a country, on average, the more likely they will favor, achieve, and maintain a democratic system for their country.’ According to his interpretation, economic development promotes democracy ‘only by effecting changes in political culture and social structure’ (ibid.: 109, 128). Christian Welzel (2000) has explored the relationship between measures of democracy and some indicators of human development and found that they are strongly correlated.

Lipset's thesis about the strong positive relationship between economic development and democracy has become generally accepted. Economic development constitutes an essential part of the more extensive process of modernization. Robert A. Dahl (1989), for example, notes that polyarchy has been strongly associated with a society marked by a host of interrelated characteristics including

a relatively high level of income and wealth per capita, long-run growth in per capita income and wealth, a high level of urbanization, a rapidly declining or relatively small agricultural population, great occupational diversity, extensive literacy, a comparatively large number of persons who have attended institutions of higher education, . . .

(Dahl 1989: 251)

He calls such a society a modern dynamic pluralist society. Edward N. Muller makes the same conclusion on the connection between economic development and democracy: 'Quantitative cross-national research on the economic determinants of democracy consistently finds that a country's level of economic development is associated positively and strongly with the extent to which the political system manifests properties of democracy' (Muller 1997: 133).

Dietrich Rueschemeyer *et al.* (1992) accept the repeated observations that socio economic development and democracy are positively correlated, but they point out that such a correlation does not carry its own explanation. They do not accept the usual explanation, according to which economic development produces the middle class, which is the primary promoter of democracy, whereas the upper class, and especially the lower class, are seen as the enemies of democracy. Their theoretical explanation is different: democracy concerns power, and democratization represents an increase in political equality. Therefore, power relations determine whether democracy can emerge, stabilize, and then maintain itself. Capitalist development tends to change the balance of power among different classes and class coalitions. Industrialization empowers subordinate classes and makes it politically difficult to exclude them. Empowered lower classes can then challenge the hegemony of upper classes, and this challenge, if it is successful, leads to democratization. As a consequence, there is positive correlation between capitalist development and democracy (*ibid.*: 1–5). Their conclusion is that 'capitalist development is associated with democracy because it transforms the class structure, strengthening the working and middle classes and weakening the landed upper class' (*ibid.*: 7). They support these theoretical arguments by historical evidence and emphasize that the working class was the most consistently pro-democratic force. So they differ from Lipset who focuses in his theoretical explanation on education, moderation, and tolerance, which are assumed to characterize the middle class (*ibid.*: 13–14). However, after the comparative historical

studies, they found it necessary to modify certain ideas of their original framework. For example, they note that the middle classes turned out to be more central to the political developments in South America than in the advanced capitalist societies (ibid.: 281–2). Besides, they observed so much regional variation in the paths to democracy that they rejected ‘the assumption of cross-national statistical research that there is a homogeneous pattern of causation throughout history’ (ibid.: 284; cf. Sanderson 2001: 317–18).

Robert J. Barro (1999) found on the basis of his statistical analysis covering 100 countries that empirical evidence supports the Lipset hypothesis: prosperity stimulates democracy. In particular, increases in various measures of the standard of living – real per capita GDP, life expectancy at birth, and measures of education – tend to generate a gradual rise in democracy. Once the indicators of the standard of living are held constant, some other variables, like the urbanization rate and the size of population, are not important. Income inequality seems also to be unimportant for democracy, but he notes that this finding ‘may reflect the poor quality of the data on income distribution rather than the irrelevance of inequality for democracy’ (ibid.: 69). Referring to African countries in particular, he observed that countries at low levels of economic development typically do not sustain democracy.

Valerie Bunce’s (2000: 706) argument is that the level of economic development seems to have considerable impact not so much on whether democracy exists as on its sustainability over time. Democracy can be introduced in poor as well as rich countries, but its prospects for enduring increase substantially at high levels of economic development (see also Yi Feng 1997; Landman 2000: 61–82; Clague *et al.* 2001).

Multivariate models

Lipset himself has in his later works emphasized the multivariate nature of social requisites of democracy. For example, in his paper ‘The Social Requisites of Democracy Revisited’ (1994), he refers not only to the level of economic development but also to de Tocqueville’s idea of social equality; to the significance of market economy; to the centrality of political culture, including ‘the acceptance by the citizenry and political elites of principles underlying freedom of speech, media, assembly, religion, of the rights of opposition parties, of the rule of law, of human rights, and the like’ (1994: 3); to religious traditions; to Weber’s idea of legitimacy; to the effects of electoral systems and political parties; and to the significance of a strong civil society. It is possible that all these factors affect the chances of democracy in a country, but a problem is that it is probably impossible to test a hypothesis based on a list of various undefined factors.

There are several other studies in which the origin of democracy is traced to multivariate causal factors. Dahl listed in his *Polyarchy* (1971)

seven sets of complex conditions favoring polyarchy. In his later book *On Democracy* (1998), Dahl mentions three essential conditions for democracy: (1) control of military and police by elected officials; (2) democratic beliefs and political culture; and (3) no strong foreign control hostile to democracy; and, in addition to them, two favorable conditions for democracy: (4) a modern market economy and society, and (5) weak subcultural pluralism (*ibid.*: 147). All of these conditions are plausible but so vague that it would be very difficult to operationalize them and to test their explanatory power (see also Dahl 1989: 244–64; cf. O'Regan 1992). The same concerns the long list of facilitating and obstructing factors for democratic development used in Diamond *et al.*'s (1990, 1995) extensive comparative study of politics in developing countries. Their cluster of such factors includes legitimacy and performance, political leadership, political culture, social structure and socio-economic development, civil society, state and society, political institutions, ethnic and regional conflict, the military, and international factors (Diamond *et al.* 1995: 9–52).

G. Bingham Powell (1982: 30–52) tested some of the most widely accepted hypotheses about the effects of environmental conditions on democratic performance and found that factors like small population size, higher levels of development, and ethnic homogeneity make democracies easier to govern, but he emphasized that it is difficult to test hypotheses based on specific components of the social structure because their significance varies greatly from country to country. It should be noted that Powell's analysis concerns democratic performance, not the causes of democratization.

Samuel P. Huntington (1991) notes that his purpose is not to develop a general theory of the preconditions of democracy. He tries to explain why, how, and with what consequences a group of roughly contemporaneous transitions to democracy occurred in the 1970s and 1980s. However, he refers to numerous variables identified in theories of democratization to explain democratization and assumes that each variable is likely to have relevance in only a few cases. Huntington continues: 'The search for a common, universally present independent variable that might play a significant role in explaining political development in such different countries is almost certain to be unsuccessful if it is not tautological.' His conclusion is that the 'causes of democratization differ substantially from one place to another and from one time to another' (Huntington 1991: 38; cf. O'Regan 1992).

Axel Hadenius (1992) explored a number of theories on the requisites of democracy and tested the explanatory power of their independent variables by empirical evidence. His purpose was to separate the chaff from the wheat. He used a stepwise regression for this purpose and came to the conclusion that seven variables display significant associations with the level of democracy: literacy, commodity concentration, trade, capitalism, percentage of protestants, military expenditure, and average fragmentation. Taken together these explanatory factors explained some 60 percent of the

variation concerning the level of democracy, but a problem with this list is that the variables are not connected with each other by any theory (Hadenius 1992: 143–57).

Transition and consolidation studies

Guillermo O'Donnell *et al.* (1986) focus on the last phase of democratization in their four-volume study *Transitions from Authoritarian Rule*. They emphasize the crucial significance of political actors and choices in the transition process. They do not explore the causes of democratization. As Gabriel A. Almond (1992: 10) says: 'In their emphasis on the indeterminacy and reversibility of the democratization process they seem to have given up or postponed the search for causality, for explanation.' Because of this theoretical diffidence, they do not formulate or test any theory of democratization. Whitehead (1996a: 353) remarks that 'our chances of producing a strong predictive theory are slight.'

Consolidation studies represent another genre of transition studies. Juan J. Linz and Alfred Stepan (1996) use the following definition of consolidated democracy:

A democratic transition is complete when sufficient agreement has been reached about political procedures to produce an elected government, when a government comes to power that is the direct result of a free and popular vote, when this government *de facto* has the authority to generate new policies, and when the executive, legislative, and judicial power generated by the new democracy does not have to share power with other bodies *de jure*.

(Linz and Stepan 1996: 3)

Briefly stated, Linz and Stepan mean by a consolidated democracy a political situation in which democracy has become the only game in town. They explore in their book to what extent this situation had been reached in Southern Europe, South America, and post-communist Europe by 1995. Their attention is focused on political factors, especially on the significance of a strong state. Their argument is that 'modern consolidated democracies require a set of socio-politically crafted and sociopolitically [*sic*] accepted norms, institutions, and regulations, which we call *economic society*, that mediates between state and market' (ibid.: 11). A role for the state is needed in the economy because markets require, for example, corporation laws; the regulation of stock markets; regulated standards for weight, measurement, and ingredients; and the protection of property. Consequently, they argue that political reforms, especially state reconstruction, should precede economic reforms. In this point, they disagree with some free market enthusiasts who endorsed privatization as the most important component of the post-1989 process in post-communist Europe (ibid.: 434–57).

Yi Feng and Paul J. Zak (1999) explore the determinants of democratic transitions and come to the conclusion that 'democratic transitions are less likely when the level of development is low, income inequality is high, and citizens are poorly educated' (ibid.: 174). I think that these conditions reflect a low level of resource distribution. They add to the list of unfavorable conditions some cultural factors. According to their evidence, 'democratic transitions tend not to occur when democratic heritage is weak, the Muslim population is large, or Confucianism is widespread' (ibid.: 175–6).

Graeme Gill (2000) reviews transition and consolidation literature and discusses explanations given for democratization. He notes that there is a positive correlation between economic development and democracy. He asks why increased affluence leads to the replacement of authoritarian regimes by democracies and mentions eight aspects of the process of economic development which have been identified to explain the emergence of democracies. His second question concerns the breakdown of authoritarian regimes. There is no single explanation for regime breakdown. Gill's list include economic crisis, political mobilization, international pressure, and regime disunity. The point is that quite different factors may cause the breakdown of an authoritarian regime (for transition studies, see also Gómes Buendia 1996; Shin 1999; Siaroff 1999; Munck 2001).

Thomas Carothers criticizes the transition paradigm for its assumption that 'a country's chances for successfully democratizing depend primarily on the political intentions and actions of its political elites without significant influence from underlying economic, social, and institutional conditions and legacies' (Carothers 2002: 17). I agree with this criticism (see also Landman 2000: 143–71; Haynes 2001: 18–34; McFaul 2002). For counter-arguments, see O'Donnell 2002; Wollack 2002; Hyman 2002.

Political culture

Larry Diamond argues in his book *Developing Democracy: Toward Consolidation* that democracy should be viewed as a developmental phenomenon, because there 'is not now and has never been in the modern world of nation states a perfect democracy, one in which all citizens have roughly equal political resources and in which government is completely or almost completely responsive to all citizens' (Diamond 1999: 18; cf. Dahl 1971: 1–2). Diamond examines the process of democratic consolidation in numerous countries which are, after the 'third wave' of global democratization, above the threshold of electoral democracy. His attention is focused on political and cultural factors and civil society, but he refers also to economic structures and economic performance. Sustainable economic growth and the decrease of economic inequalities would support democratic consolidation as well as land reforms especially in Latin America (1999: 78–88). He emphasizes the significance of political culture as a central factor in the consolidation of democracy, because democracy 'requires a distinctive set of political values

and orientations from its citizens: moderation, tolerance, civility, efficacy, knowledge, participation' (ibid.: 161). Diamond thinks that the prospects for a fourth wave of democratization are gloomy, because almost 'all of the countries that had favorable economic, social, and cultural conditions for democracy have democratized.' For most of the 53 'not free' states, the prospects for democratization appear bleak because they share one or more of the following three characteristics: (1) they have a majority Muslim population and often strong Islamic fundamentalist pressures; (2) they have deep ethnic divisions without a single, dominant ethnic group; and (3) they have neocommunist or post-Communist regimes with a strong hangover of diffuse, one-party domination (ibid.: 261; see also Diamond 1994).

Ronald Inglehart says that culture plays a much more crucial role in democracy than the literature of the past two decades would indicate. According to his argumentation, economic development 'seems to bring gradual cultural changes that make mass publics increasingly likely to want democratic institutions and to be more supportive of them once they are in place' (Inglehart 2000: 95–6; see also Harrison 2000; Inglehart and Welzel 2003; Welzel *et al.* 2003). Huntington blames culture for the failure of democracy in Muslim societies. He says that this 'failure has its source at least in part in the inhospitable nature of Islamic culture and society to Western liberal concepts' (Huntington 1996: 114).

Christopher Clague *et al.* (2001: 36–7) argue on the basis of their empirical study that 'the probability of democracy in the postwar period is strongly affected by country characteristics that reflect cultural and institutional inheritances.' British colonial influence, island status, and a relatively low degree of ethnic fragmentation have been conducive to democracy, whereas Muslim heritage has had a negative effect on the probability of democracy. Göran Hyden (2002) pays attention to cultural pluralism and argues that ethnicity is much more compatible with democracy in Africa than it is in the other parts of the world.

The advocates of 'Asian values' have attempted to explain the lack of political freedom in some Asian countries by Asian cultural traditions which are said to emphasize community over individualism, to favor authoritarianism, and to include preponderance towards strong and stable leadership rather than political pluralism (see Inoguchi and Newman 1997; Khong 1997). Takashi Inoguchi and Edward Newman (1997: 7) note, however, that the problem with Asian arguments is that Asian values 'are too easily a façade behind which authoritarian leaders deny human rights and opposition.' Ian Marsh *et al.* (1999) focus on the same question about 'Asian values' and other arguments according to which democracy can impede growth and economic development, and they test these arguments by case studies covering eight East and Southeast Asian countries. On the basis of carefully made case studies, Blondel and Marsh come to the conclusion that 'there was no sign of a decline in rates of economic growth

in any of the countries which became democratic at the time' and that 'there is no manifest evidence that liberal democratic rule is directly and obviously detrimental to economic well-being' (Blondel and Marsh 1999: 348, 356).

Jan-Erik Lane and Svante Ersson (2002) test several hypotheses about cultural effects by quantitative data and are able to show some significant connections, although they are sceptical about the strong claims concerning the macro consequences of values in the literature. They believe 'that cultural analysis has not arrived at any definitive findings, supported by strong empirical evidence, concerning cultural causality, at least not in relation to macro outcomes' (ibid.: 261–2, 302).

Income inequality

Gerhard Lenski argued in 1966 that the transition from agrarian societies to industrial societies started to decrease economic inequalities and that this increased social equality created favorable conditions for the emergence of democracy. In industrial societies, 'the many can combine against the few, and even though individually the many are weaker, in combination they may be as strong or stronger' (Lenski 1984: 318; cf. Lenski and Lenski 1987: 331–3). I think that this is an important insight into the political significance of social equality. Since then several other researchers have explored the impact of income inequality on democratization, or vice versa (see, for example, Jackman 1974; Rubinson and Quinlan 1977; Bollen and Jackman 1985; Muller 1988; *Human Development Report 2002* 2002: 56–61).

Edward N. Muller (1997) argues that income inequality has a negative impact on the stability of democracy over time, although it does not explain variation in the level of democracy at a single point of time. Therefore, income inequality should be regarded as an economic determinant of democratization that is as causally relevant as the level of economic development. He tested his hypothesis by empirical evidence and found that countries at the middle levels of economic development failed to promote democratization during the 1965–80 period, because the level of income inequality was much higher for middle-income countries than for low-income countries or for upper middle-income and high-income countries. He concludes that 'income inequality hinders democratization, and this negative effect explains the paradoxical trend among countries at intermediate levels of economic development for democracy to decrease instead of increase.' Second, when this negative effect of income inequality is controlled, 'then economic development has the expected positive impact on democratization' (Muller 1997: 145). Muller stresses on the basis of his analysis that economic development and income inequality are the most important economic determinants of democracy, although he admits that there are also potentially relevant non-economic variables which should be taken into account. Muller's theory on the significance of income

inequality complements Lipset's economic development theory by showing that income inequality has a robust negative impact on democratization. So it explains why economic development has often failed to promote stable democracy. In sum, his argument is that high levels of income inequality are incompatible with the development of a stable democratic political system (*ibid.*: 151–2).

Miles Simpson (1997) notes that informational equality is a critical requisite for democratization and that informational inequality hinders democratization. His point is that democracy depends not only on wealth or power resources but more on cognitive capacity and societal values. In this connection, he emphasizes the significance of literacy and argues that the 'impact of literacy on the breakup of the communist countries and the speed at which they move toward democracy is dramatic' (1997: 170). His findings contradict Lipset's and Muller's 'conclusions that economic development underlies the modern expansion in democracy' (*ibid.*: 172). For the impact of inequality on democracy, see also Ember *et al.* (1997); Nee and Liedka (1997).

Manus I. Midlarsky's (1999) historical analysis of the evolution of inequality provides valuable historical evidence of the impact of inequality on the genesis of democracy. His basic argument is that a certain degree of inequality may be required for the initiation and maintenance of democracy, whereas an extreme inequality makes democracy impossible. Inequality emerges from scarcity and from genetic diversity of individuals. Midlarsky argues: 'There exists variability in the distribution of genetic characteristics that enable some to prevail more readily than others under conditions of scarcity' (1999: 19). He pays particular attention to land inequality and comes to the conclusion that the initiation of democracy in agrarian societies seems to demand an inequality in land possession, but 'extreme land inequality, on the order of a system of latifundia and very small peasant plots, is not likely to lead to democratic development' (Midlarsky *ibid.*: 185–7; cf. Midlarsky 1997; Midlarsky and Midlarsky 1997).

Modernization theory challenged

Michael Coppedge (1997) tries to test modernization theory's claim that developing countries are undergoing 'a process of political modernization whose end-state, stable democracy, would be achieved to the extent that they achieved socio-economic modernization – urbanization, the spread of mass media, and rising levels of education, wealth, and equality' (Coppedge 1997: 177). He notes that it has been maddeningly difficult to demonstrate which aspects of modernization are causes of democracy and which are effects, or only spurious associations. He used empirical variables to measure various aspects of modernization and found that relationships between modernization and the thresholds of polyarchy are largely the same in all

regions of the world. In other words, empirical evidence supports the basic theme of modernization theory: there is a common path to democracy and a common process causing countries to move along it.

Adam Przeworski *et al.* (2000) are not as sure about the predictive power of modernization theory. Their primary purpose is to explore the impact of democracy on development, more precisely of political regimes on material wellbeing, but before that they wanted to 'learn how countries happen to be living under particular regimes – the impact of development on democracy' (2000: 10). They start from Lipset's hypothesis and from the observation that the incidence of democracy is undoubtedly related to the level of economic development, but they found that the relative importance of economic development as compared with other factors remains controversial. Therefore, they explored the impacts of different factors, such as the political legacy of a country, its past history, its social structure, its cultural traditions, the specific institutional framework, and international political climate. The results of statistical analysis indicate that 'the level of economic development, as measured by per capita income, is by far the best predictor of political regimes,' although many countries deviate from this pattern. In most cases, 'as a country develops, its social structure becomes complex, new groups emerge and organize, labor processes require the active cooperation of employees, and, as a result, the system can no longer be effectively run by command' (*ibid.*: 88). These findings seem to support the modernization theory, but they ask whether it is possible to determine a level of development which is needed to produce a democracy. In other words, 'if modernization theory is to have any predictive power, there must be some level of income at which one can be relatively sure that the country will throw off its dictatorship' (*ibid.*: 88–9, 97). When they explored this question, they made a surprising finding: no level of income can predict when this should occur, because democracies have emerged at all levels of per capita income. However, the survival of democracy is strongly related to the level of development. Many democracies have failed in poor countries, whereas there is no doubt that democracy is stable in affluent countries. As a consequence, democracies are much more frequent in developed countries, and dictatorships in poor ones. They note that 'Lipset was right in thinking that the richer the country, the more likely it is to sustain democracy' (*ibid.*: 97–101). Przeworski *et al.* (*ibid.*: 137) conclude that 'wealthy countries tend to be democratic not because democracies emerge as a consequence of economic development under dictatorships but because, however they emerge, democracies are much more likely to survive in affluent societies.' Because they failed to detect any thresholds of development that would make the emergence of democracy predictable, their conclusion is that modernization theory appears to have little, if any, predictive power (see also Przeworski and Limongi 1997; van de Walle 2002: 70).

Other studies and theories

Dankwart A. Rustow (1970) complained that the scholarly debate about conditions of democracy has focused on the question how a democracy, already in existence, can best preserve or enhance its health and stability, not on the question how a democratic system comes into existence. He wanted to shift attention from functional to genetic inquiry. He emphasized in his methodological arguments that correlation is not the same as causation: a genetic theory must concentrate on the latter; not all causal links run from social and economic to political factors; and empirical data in support of a genetic theory must cover, for any given country, a time period from just before until just after the advent of democracy. He differentiates between four separate phases in transitions to democracy. National unity constitutes a single background condition. Therefore, 'no minimal level of economic development or social differentiation is necessary as a prerequisite to democracy' (Rustow 1970: 352). In the second phase, a prolonged and inconclusive struggle set off the dynamic process of democratization. The preparatory struggle may lead to the decision phase when political leaders accept the existence of diversity in unity and start to institutionalize some crucial aspects of democratic procedure. In the final habituation phase, democratic procedures become generally accepted. Thus Rustow's model differs from the socio-economic theory of democratization in many respects (see also Hadenius 2002).

In the research project on the breakdown of democratic regimes, led by Juan Linz and Alfred Stepan (1978), researchers attempted to explore why several democratic regimes failed in Europe and Latin America. Linz (1987) argues that structural characteristics of societies are not enough to explain the breakdown of democratic regimes. Structural characteristics act as a constraining condition, limiting the choices of political actors, but the actions and choices of political leaders constitute the true dynamics of the political process. Linz points out that in a crisis situation, leadership, even the presence of an individual with unique qualities and characteristics, can be decisive and cannot be predicted by any model. Therefore, in their research project, political variables and historical circumstances had a central role.

Zehra F. Arat (1991) emphasizes the significance of human rights as conditions of democracy in developing countries. She continues the analysis started by Linz and Stepan (1978) and focuses on the social, economic, and political conditions that lead to the decline of democracy. She challenges some assumptions of the socio-economic or modernization theory formulated by Lerner and Lipset and shows by empirical analysis that 'increasing levels of economic development do not necessarily lead to higher levels of democracy' (1991: 49). Further, she argues that most of the conditions usually pointed out as determinants of the democratic success are either ineffective or inconclusive. Her central argument is: 'Contrary to

the liberal theory, civil and political rights cannot prevail if socio-economic rights are ignored, and the stability of political democracy (liberal democracy) depends on the extent of balance between the two groups of human rights' (ibid.: 4). Because the level of socio-economic rights is low in many developing countries, she does not share others' optimistic expectations about the future of democracy in developing countries and predicts: 'As long as social and economic inequalities persist, developing countries that go through a process of democratization today are doomed to return to some form of authoritarianism' (ibid.: 103, 128–9). Arat seems to mean by 'socio-economic rights' socio-economic conditions that increase social, economic, and educational equality of people (see Arat 2001). So her human rights theory of democracy could be regarded as a slightly different version of modernization theory of democratization.

Jan-Erik Lane and Svante Ersson (1994: 209–28) specify three factors which improve prospects for a successful transition to democracy: (1) level of affluence, (2) type of economic system, and (3) choice and development of political institutions (such as parliamentarism, presidentialism, or federalism). They wonder whether the positive correlation between democracy and affluence could be interpreted theoretically as a causal relationship because affluence does not seem to be neither a necessary nor a sufficient condition for a viable democracy. They argue that it is not affluence *per se* that is the crucial factor, but the level of human development. A certain level of human development is a necessary but not a sufficient condition for democracy. Second, they argue that the structure of the economic system matters. The best chances for democracy are in the decentralized capitalist or in the mixed capitalist systems. State-capitalist and planned economy regimes are unfavorable for democracy because they defy the individual rights that are at the heart of democracy. Consequently, a move towards democracy without the introduction of a market economy will most likely not be successful. It is important to introduce economic institutions that decrease the concentration of economic power. Political institutions also matter. A parliamentary regime may be more conducive to democratic stability than a presidential one (see also Lane and Ersson 1990: 127–43).

Albert Somit and Steven A. Peterson (1995) explain democracy and autocracy by biological factors. They argue that 'evolution has given our species an inherent preference for hierarchically structured social and political systems' (1995: 22). For that reason, 'the overwhelming majority of political societies have been authoritarian,' and 'democratic states still remain very much a minority in the family of nations' (ibid.: 19–20). However, there are also democracies. Somit and Peterson explain the emergence of democracy by human capacity for indoctrinability. I agree with them that we have an evolved predisposition to hierarchical systems, but my explanation for democratization is quite different. Larry Arnhart (2001: 12) believes that 'a more adequate Darwinian social theory can explain the motivation for democracy as satisfying natural human desires,

while recognizing that democracy is compatible with the natural tendency to dominance hierarchies' (cf. Corning 2000).

Mick Moore (1996) argues strongly for the thesis that material prosperity does indeed lead to democracy. He refers to studies which have repeatedly confirmed the hypothesis about the connection between democracy and material prosperity and makes a surprising claim that no 'other feature of society or economy is associated with democracy in any significant or consistent way' (1996: 47). The connection between democracy and material prosperity is clear, but he pays attention to the fact that it has been difficult to explain how material prosperity generates democracy. Moore presents a long list of explanations given for this relationship in various studies and remarks that we are 'unable to assess the plausibility of these alternative theories on the basis of the kind of statistical analysis reviewed here' (ibid.: 57). He formulates a new 'revenue-bargaining' theory of democracy. According to this theory, democracy has better chances to emerge in societies in which state elites have to bargain with other sections of the population in order to satisfy their own revenue needs than in societies in which the revenues of state elites are more or less independent from the other sections of the population. In prosperous market economies, state elites realized 'that they can best meet their own revenue needs by permitting actual and potential taxpayers some control over state policy,' whereas in oil-rich economies state elites have no need to bargain with their subjects. The same concerns many sub-Saharan African countries, in which foreign aid is the main source of public revenue. From this perspective, it is ironic that foreign aid is intended to support democratization in sub-Saharan Africa, but, in fact, it may undermine democratization by relieving state elites from the need to bargain with their subjects (ibid.: 57–60). Donor governments have increasingly made 'adoption of democratic forms of rule a condition of eligibility for aid.' This is controversial for the reason that 'if democracy is indeed the consequence of economic development, rather than either a contributor to it or an unrelated phenomenon, then it would be perverse and unreasonable to require that developing countries adopt democracy in order to become eligible for the aid intended to help them develop economically' (ibid.: 37). This is an important observation (cf. Whitehead 1996b).

In the book *Conditions of Democracy in Europe 1919–39: Systematic Case-Studies* (2000), edited by Dirk Berg-Schlosser and Jeremy Mitchell, the causes of the survival and failure of democracy are explored by the method of systematic case-studies, which are based on the framework laid out in the introduction. In each case-study, attention is paid to the whole socio-political framework of a political system, including social system (social structure and political culture), intermediary structures (political parties, organized interests, and social movements), political system (political style and institutions), and output structures (bureaucracy, repressive apparatus, and social security system). Besides, the external factors shaping a country's

destiny are taken into account. The case-studies produced a wealth of detailed historical information about the survival and breakdowns of democracies, but it turned out 'that no single sweeping explanation could account for the multitude of cases analysed' (2000: 464). However, Berg-Schlusser and Mitchell argue that the underlying general socio-economic, social structural and political cultural conditions may provide satisfactory explanations for both extremes: the well-established and the merely superficial democracies. In several other cases, the outcome was much less predetermined and clear-cut. For example, the final results were strikingly different for cases such as Finland and Estonia, although at the outset they seemed to face very similar conditions and circumstances.

Manfred G. Schmidt (2000: 438–60) introduces and compares various theories about the causes and preconditions of democracy. The state of democracy in different parts of the world is also analyzed and described extensively in the *Human Development Report 2002*, although the report does not provide any theoretical explanation for democratization. Christian Welzel and Ronald Inglehart (2003) examine cultural foundations of democracy and argue that democracy is part of a broader syndrome of human development. According to their argument, there is a causal linkage between resources, emancipative values and aspirations, and participation (including effective rights and democracy).

Summary

The limited review of the literature discussing causes of democratization (or failures of democracy) presented here indicates that researchers have found many kinds of reasonable causes for democratization, but the problem is that there are too many and partly contradictory theoretical explanations. The members of the research community still disagree on the relative merits of competing explanations. Besides, a significant part, usually more than half, of the variation in the level of democratization has always remained unexplained.

It is true that most contemporary researchers seem to think that per capita income, or some other indicators of socio-economic development or modernization, explain democratization better than any other explanatory variables, but unfortunately this dominant explanation has been beset by many problems and controversies, as the above review of literature discloses. Controversies concern two questions in particular. What is the theoretical explanation for the connection between economic development and democratization? The second controversy concerns the relative significance of per capita income and various other indicators of economic development or modernization.

Originally, Lipset explained the connection between economic development and democracy by arguing that increased industrialization, urbanization, and education transform human values and attitudes conducive to

democracy. He emphasized the significance of education and regarded it as the basic requirement of democracy, because education 'broadens man's outlook, enables him to understand the need for norms of tolerance, restrains him from adhering to extremist doctrines, and increases his capacity to make rational electoral choices.' Briefly stated, 'The higher one's education, the more likely one is to believe in democratic values and support democratic practices' (Lipset 1960: 54–7). According to Diamond's interpretation, economic development gives rise to a more democratic political culture, due in part to increased education. As a consequence, citizens 'come to value democracy more and to manifest a more tolerant, moderate, restrained, and rational style with respect to politics and political opposition' (Diamond 1992: 116). However, there are other explanations for the connection between economic development and democracy. Diamond discovered that the level of human development is more strongly correlated with democracy than per capita income and argued that 'the contribution of economic development to democracy is substantially mediated through improvements in the physical quality of life' (*ibid.*: 107). Rueschemeyer *et al.* (1992) explained this connection by suggesting that economic development changes power relations and the balance of power between social classes more conducive to democracy. Gill (2000: 3–7) adds to the list of explanations the development of civil society forces. Moore discerns three mediating factors between material prosperity and democracy: 'the social, economic and political relationships associated with the competitive market economy; the connection between material prosperity and socio-economic structure; and the association of prosperity with distinctive values and attitudes' (Moore 1996: 53–6).

It is not self-evident how to measure economic development or modernization. What aspects of economic development should be taken into account and how should one determine their relative significance? Per capita income is the most widely used indicator, but there are several others. Lerner used urbanization, literacy, media participation, and political participation to measure the process of modernization. Lipset's variables included, in addition to per capita income, various indices of wealth, industrialization, education, and urbanization. Later researchers have multiplied the list of variables. The problem is how to select the most suitable variables and how to weight their relative significance. The use of different measures of economic development or modernization may lead to different results which are not directly comparable.

There are other theories on the causes of democratization, which compete with the economic development or modernization theory, or complement it. Multivariate models are based on the idea that it is not possible to explain democratization satisfactorily by any single or dominant factor. It is necessary to take into account several different factors. Lipset himself admits that economic development alone is not enough to explain democratization. Dahl's lists of essential conditions of democracy have always included

several and quite different conditions conducive or unfavorable to democratization. Diamond *et al.*'s list of conditions increasing or decreasing the likelihood of democracy is even longer in *Politics in Developing Countries*. (1995). Hadenius found seven variables that have an impact on the level of democracy. The problem with multivariate models is that most conditions are not measurable, and, even if it were possible to measure them, it would be difficult to agree on their relative significance. What are important and what are less important factors? For example, are the causes of democratization principally in economic development, modernization, political culture, values and attitudes, social structures, historical factors, religion, foreign interventions, the size of countries, or some geographical factors? References have been made to all of these and several other factors in multivariate models. Another serious problem is the lack of coherent theoretical justification for the selection of causal factors. Why and how are certain factors assumed to cause democratization? Because of these and other problems, Huntington comes to his extreme conclusion that it is impossible to find any common variable that could explain democratization in all countries and that the causes of democratization differ substantially from place to place and over time.

In transition and consolidation studies attention has been limited to the political transition process or to the process of consolidation after the initial democratization. Therefore, these approaches have not produced any significant hypotheses about the causes of democratization, except that they emphasize the crucial significance of political factors, especially the significance of the choices made by political leaders.

Many scholars, including Diamond, Inglehart, and Huntington, have explained democracy and the lack of democracy by political culture. A problem with cultural explanation is that it has been difficult, if not impossible, to measure 'political culture' satisfactorily. Scholars may mean by 'political culture' quite different matters. Another problem concerns the causal relation between political culture and democracy. Is political culture a really independent variable? Does it vary independently from a country's political system? Or would it be more reasonable to regard it as a dependent variable? It might be reasonable to argue that political culture becomes adapted to political circumstances and to the nature of a country's political system. I think that the relationship between political culture and democracy is so much interactive that it is problematic to use it as an independent variable (however, see Lane and Ersson 2002; Welzel and Inglehart 2003).

One research tradition stresses the significance of social equality or inequality to democracy and to the lack of democracy. This line of theoretical explanation can be traced to Aristotle and de Tocqueville. Lenski argues that industrialization increased social equality and thus created favorable conditions for the emergence of democracy. In later studies, attention has been focused especially on the negative impact of income

inequality on democracy. Muller argues that income inequality is as important explanatory factor as economic development. Because the degree of income or other social inequality may differ crucially from the level of economic development, the inequality hypothesis provides an alternative explanation for democratization and for the failures of democracy.

The results of Coppedge's (1997) study support the assumptions of modernization theory, whereas Przeworski *et al.* (2000) come to the conclusion that modernization theory appears to have only a little predictive power. This illustrates the fact that researchers have not been able to agree on any common theoretical explanation of democratization. The causal factors of democratization are different in Rustow's genetic model, but relatively few empirical studies have been made on the basis of it. It may be that it is too difficult to operationalize his concepts and to make comparative studies. His own preliminary study was limited to three countries. Arat (1991) and Berg-Schlosser and Mitchell (2000), among others, have continued the study of breakdown of democratic regimes started by Linz and Stepan (1978). Arat seeks out causal factors from the variation of human rights, whereas many types of structural and historical factors have been taken into account in the study project led by Berg-Schlosser and Mitchell.

I think that the causal factors used in the theories and studies reviewed in this chapter are relevant at least in some situations, but a theory which could cover various explanatory factors and explain their relevance is still lacking. Many scholars seem to think that it is impossible to find any common theoretical explanation for democratization or for the failure of democratization in all parts of the world, but I disagree. I have argued since the 1970s that because of the common behavioral characteristics of human nature, it is possible to find cross-cultural regularities in the process of democratization and cross-culturally valid causes of democratization.

2 Resource distribution theory of democratization

I have argued in my previous studies (see Vanhanen 1979, 1984, 1990, 1997) that it is possible to derive a common theoretical explanation for democratization from the evolved behavioral characteristics of human nature. My argument is based on the assumption that there must be regularities in human political behavior because all members of a species share the same evolved species-specific behavioral predispositions or epigenetic rules. However, many readers of my studies have found it difficult to understand or accept such a theory of democratization based on evolutionary argumentation, although they may accept, at least partly, the relevance of the empirical variables which have been used to test the theory and to explain the variation in democratization. In this chapter, I try to explain why evolved common characteristics of human nature are needed in the study of democratization and how a theory of democratization can be derived from them.

Evolutionary arguments

Let us start from some relevant principles of the neo-Darwinian theory of evolution. According to that theory, all important characteristics of life have evolved in the continual struggle for existence and they are more or less shared by all members of the species concerned, although it should be noted that, because of the genetic diversity of individuals, there is always variation between individuals. The struggle for existence is the major process by which various characteristics of life evolve. According to the Darwinian theory of evolution by natural selection, there must be a struggle for existence among the individuals of a population because more individuals are produced than can be supported by the available resources. This inference is based on the facts that:

- 1 all species have great potential fertility;
- 2 populations normally display stability; and
- 3 natural resources are limited and, in a stable environment, remain relatively constant.

On the basis of these facts, Darwin concluded that the permanent and universal scarcity of resources in nature makes a struggle for existence inevitable and continual. Only some members of a population are able to survive and reproduce. They become selected in the struggle for survival, although, of course, accidental factors also affect the survival and reproduction of individuals. Darwin concluded that the survival in the struggle for existence is not completely random but depends in part on the hereditary constitution of surviving individuals. The individuals in some respects even slightly better adapted to their environment have better chances to survive and reproduce than those whose characteristics are less adaptive in the same environment. This leads to evolution by natural selection. Ernst Mayr emphasizes that there is no agent in nature which deliberately selects. The 'selected' individuals are 'simply those who remain alive after all the less well adapted or less fortunate individuals have been removed from the population' (Mayr 1997: 189). For the Darwinian and neo-Darwinian theory and species-specific behavior patterns, see also Darwin 1981; Dobzhansky *et al.* 1977: 86–99; Wilson 1978; Alexander 1980: 15–22; Lorenz 1982: 1–11; Mayr 1982: 479–80; 1988: 215–32; 1997: 186–94; Eibl-Eibesfeldt 1984: 35–54; Brown 1991; Barkow *et al.* 1992; Dennet 1995; Morris 2001.

The Darwinian theory of evolution by natural selection explains why the struggle for existence is inevitable and incessant in nature. From our perspective, it is important to understand the inevitability of the struggle for existence; which is basically a competition and struggle for scarce resources of life. From this aspect of the evolutionary theory, I got the idea that the Darwinian theory provides a theoretical explanation for human politics and for the struggle for power, too. Politics can be interpreted as a forum and expression of the universal struggle for existence in nature. Politics is for us a species-specific way to compete for scarce resources and to distribute them among the members of a society. The permanent scarcity of some important resources and the need to distribute them by some means explains the necessity to struggle for power in politics and also the central theme of politics. The evolutionary roots of politics lie in the necessity to solve conflicts over scarce resources. Politics is basically a struggle for scarce resources. People and groups struggle for power in order to affect the distribution of some scarce resources. We should understand that the scarcity of resources makes this competition and struggle inevitable for us, just as in the other parts of nature, and that the basic rules of this struggle remain the same in all human societies. The Darwinian theory explains why the scarcity of resources is permanent and inevitable. Because everyone has equal right to available resources, and because they are scarce, we have to compete for them. It belongs to the nature of all living beings that they do their utmost to preserve their existence. Only those who have been successful in this struggle have been able to survive and reproduce. This kind of argumentation led me to the idea that politics evolved in the struggle for scarce resources and that it is still the evolutionary and constant theme

of politics. This theme constitutes a constant in politics and it connects human politics to the universal struggle for existence, which is explained by the Darwinian theory of evolution by natural selection (cf. Vanhanen 1979: 13–16; 1984: 15–17; 1990: 47–50; 1992: 18–25; 1997: 21–3).

I have tried to show by this argumentation that human politics has evolutionary roots which connect it to the general struggle for existence in nature and that the struggle for scarce resources is the constant theme of politics because the struggle for existence concerns scarce resources everywhere in nature. Thus this theme of politics is inevitable and determined by the fact that we constitute a part of living nature. It is reasonable to assume that it has been in the past and that it will remain in the future as the dominant theme of politics among all human populations. So it is a constant that can be used in universal hypotheses about human politics. My point is that there is a strong connection between human politics and the general struggle for existence in nature and that the principles of the evolutionary theory discussed here help us to understand why people in politics struggle for scarce resources and why they cannot change this dominant theme of politics.

Now we come to the question of democratization. What is the connection between the assumed evolutionary theme of politics and the variation of political systems from the perspective of democracy? Is there any plausible connection which could justify the use of evolutionary theory in the explanation of democratization? I think that there is. My idea is that power is used as an intervening mechanism in the political struggle for scarce resources. Ultimately, people and groups compete for power to obtain scarce resources and to affect their distribution, although there are, of course, many other more immediate (proximate) causes and targets in the political struggle for power. In general, the more one has power, the more one can acquire politically distributed resources. Power can be understood as the ability to compel or persuade others to do something that they would not otherwise do. This ability to compel or persuade others rests on sanctions. Consequently, it is plausible to assume that the distribution of power depends on the distribution of sanctions. Those with suitable sanctions are able to compel or persuade others in the struggle for power. Human desire for power and the fruits of power can be assumed to be constant, but in practice all people and their groups do not have the same chances to get power and the fruits of power because the abilities of people vary greatly and because the sources of power, or sanctions, are not equally distributed. If the resources used as sources of power are distributed widely among several groups, it is reasonable to expect that power also becomes distributed among several groups. If important resources are concentrated in the hands of the few or only in the hands of one group, it is plausible to expect that power also becomes concentrated. I assume that this relationship between power and power resources is regular. Those controlling most effective power resources have better chances to get power than those

whose power resources are meagre or who are without any significant power resources. This argumentation led me to hypothesize that *the concentration as well as the distribution of political power depends on the degree of resource distribution.*

My evolutionary resource distribution theory of democratization is derived from this proposition. The evolutionary interpretation of politics, formulated above, provides a theoretical explanation for the necessity of this relationship. Because politics constitutes a part of the general struggle for existence, in which struggle people tend to use all available resources, the distribution of political power must depend, to a significant extent, on the degree of the distribution of power resources. This hypothesis presupposes a causal link between resource distribution and power distribution, although this relationship does not need to be completely one-way from resource distribution to power distribution. To some extent, this relationship is interactive because power can be used and is used to get more resources. However, it is plausible to assume that in this relationship the distribution of power resources is a more independent factor than the distribution of power. Some important aspects of resource distribution seem to be outside the scope of conscious political power, which means that changes in resource distribution can occur independently from the will of power-holders. When such independent changes in resource distribution have accumulated over time to sufficient extent, they cause changes in power distribution. They are undercurrents which undermine old power structures. Technological changes, in particular, often have unpredictable impact on resource distribution in societies (cf. Vanhanen 1979: 16–18; 1984: 17–19; 1990: 50–1; 1992: 25–7, 151–2; 1997: 22–4). I want to emphasize that the question is not on a circular reasoning. Changes in resource distribution are always to some extent independent from political power.

The central hypothesis

The crucial point in my theoretical argumentation is that the distribution of power resources determines the distribution of political power to a significant extent and that the evolutionary interpretation of politics explains why it must be so. The variation of political systems from the rule of the few to the rule of the many follows from this constant relationship. In societies where relevant power resources are concentrated in the hands of the few, political power tends also to be concentrated in the hands of the few, and in societies where important power resources are widely distributed, political power tends also to become widely distributed. From this regularity, I have derived a Darwinian or evolutionary explanation for democratization and democracy. Briefly defined, democracy is the government of the many, and autocracy the government of the few. The concentration of power resources leads to autocracy, and the distribution of power resources among the many leads to democracy. This theory does no

presuppose an equal distribution of power resources. It is enough that significant power resources are widely distributed among competing groups, although they may be unequally distributed within groups and also between groups (cf. Midlarsky 1999). 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* (cf. Vanhanen 1984: 18; 1990: 50; 1992: 152; 1997: 24).

This hypothesis, which constitutes the core of my evolutionary resource distribution theory of democratization, has been derived from some principles of the neo-Darwinian theory of evolution by natural selection step by step as explained above. This is not a new version of the economic development or modernization theory, of a multivariate theory, of a class theory, of a cultural theory, or of some other explanatory theory discussed in the previous chapter. It can be understood only on the basis of the Darwinian interpretation of politics, which explains the necessity to struggle for scarce resources and our tendency to use all available means in this struggle. There is no need to limit the application of this theory of democratization to some particular historical period, cultural or geographical region, or civilization, because it is based on the assumption that all human populations share more or less similar politically relevant evolved behavioral predispositions or epigenetic rules. It can be applied to all human populations, which means that it can be tested by the same variables cross-culturally, but, of course, different operational variables would be needed if this theory is applied to the study of political systems of some earlier historical periods.

How to test the hypothesis?

The above hypothesis on democratization is testable. It can be tested by empirical evidence by operationalizing the hypothetical concepts. In other words, we should find variables to measure the degree of democratization as well as the degree of resource distribution. It is much easier to measure the variation in democratization than the distribution of politically relevant power resources. Many researchers have developed measures of democracy and democratization, whereas the 'degree of resource distribution' is a hypothetical concept unique to this theory of democratization. In my previous studies, I used two political variables to measure two crucial aspects of democracy – competition and participation – and combined them into an Index of Democratization (ID). The measures of democracy will be discussed and operationalized in Chapter 3. In this connection, I discuss preliminary possibilities to measure resource distribution.

The hypothesis implies that the explicans of democratization is to be found in social structures and conditions reflecting the relative distribution or concentration of crucial power resources because the distribution of power in a society is assumed to depend on the distribution of the most

important power resources. If relevant power resources are widely distributed among various sections of the population, environmental conditions are favorable for democratization; if they are concentrated in the hands of the few, conditions are unfavorable for democracy and favorable for autocratic political systems. Democracy emerges as a rational compromise between strong competing groups.

In all societies resources used as sources of power are to some degree unequally distributed among individuals and groups, and there may be great differences between societies in the way in which these resources are distributed among competing groups. The problem is to find out and determine what power resources can be regarded as important and crucial. It is extremely difficult to locate crucial power resources for the reason that nearly everything can become a resource in the struggle for power. As Carl J. Friedrich (1950: 22–3) noted, ‘anything can become the basis of power. A house, a love affair, an idea, can all become instruments in the hand of one seeking power.’ Friedrich understood the relationship between power and the sources of power.

The multiplicity of potential bases of power makes it impossible to identify and measure all different resources used as sanctions. I have limited my attention to only some types of power resources, to some most generally used power resources, which can be assumed to be relevant in all societies. This means that it is necessary to exclude many kinds of local and unique power resources. Although it is impossible to take into account all important power resources, or even to know them, I think that some aspects of resource distribution can be compared from country to country by using indicators whose meaning remains approximately the same across societies. I assume that economic resources, including wealth and control over the means of production and employment; knowledge and special skills; as well as ability to use physical force and the means of violence, are effective power resources everywhere and that they are used in all societies. They may represent the major part of the resources used in the struggle for political power. I have attempted to measure the dispersion or concentration of economic and intellectual power resources in particular, whereas I have not found suitable indicators to measure the significance and distribution of the means of violence. The aspects of power resources taken into account do not cover the whole arsenal of power resources, but it seems reasonable to assume that economic and intellectual power resources are important means of power in all societies. I think that they represent 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.

The necessity to restrict measurements to some general types of power resources leaves out many other possible power resources and, in particular, locally important factors, which means that the results of my measurements

indicate the real degree of resource distribution only incompletely. Measurement errors may vary from country to country depending on the significance of locally specific power resources. This method does not make it possible to take into account all important aspects of resource distribution, but I think that it is theoretically more justified to use few general indicators that remain the same from country to country than to use a different combination of explanatory variables for each country. The use of many different explanatory variables would make it impossible to test the hypothesis satisfactorily. In my previous studies, I used five or six variables to measure the distribution of economic and intellectual power resources and combined them into an Index of Power Resources (IPR), which was used as the principal measure of resource distribution. The explanatory variables of this study will be discussed and defined in Chapter 4 (cf. Vanhanen 1979: 25–7; 1984: 33–7; 1990: 50–2; 1997: 24–5, 42–3).

The operationalization of the hypothetical concepts of ‘democratization’ and ‘resource distribution’ makes it possible to test the hypothesis by empirical evidence. Political and explanatory variables are expected to be positively correlated, and correlations should be relatively strong. Weak or negative correlations would falsify the hypothesis.

Units of analysis

Data on variables given in my previous studies cover nearly all independent countries from 1850 to 1998 (data on political variables since 1810). In this study the attention is focused on the situation in 1999–2001, but, in a more limited longitudinal analysis, the relationship between variables will be taken into account since 1850.

This study includes as units of analysis 170 countries whose population was 200,000 inhabitants or more in 1996. The smallest countries were excluded for the reason that the nature of their political systems may depend to a significant extent on external factors and power resources. Besides, it would be difficult to get necessary statistical data on variables from some small countries. The group of excluded countries includes, in addition to dwarf states, Antigua & Barbuda, Dominica, Grenada, Kiribati, the Marshall Islands, Micronesia, Nauru, St Kitts & Nevis, St Lucia, St Vincent & the Grenadines, Sao Tome and Principe, Seychelles, Tonga, Tuvalu, Vanuatu, and Samoa (Western). The Turkish Republic of Northern Cyprus, whose population was 184,000 inhabitants in 1996, is also excluded (see Banks *et al.* 1997: 213–15). Some of these excluded states were taken into account in my previous studies. In addition to independent states, the group of 170 countries includes Taiwan (Republic of China on Taiwan), which is a Chinese province, controlled by the government of the Republic of China, whose authority since 1949 has been limited to the island of Taiwan and some other offshore islands (Banks *et al.* 1997: 171).

Comparison with some other explanatory theories

The evolutionary resource distribution theory of democratization formulated and discussed above differs from the other explanatory theories reviewed in Chapter 1 at least in one important respect. The selection of explanatory variables is derived from the evolutionary interpretation of politics, according to which the distribution of resources used as sanctions in the struggle for power determines to a significant extent whether a country's political system develops toward a democratic or autocratic pattern. Because the ultimate explanation of democratization is traced to evolved characteristics of human nature, the same explanation is assumed to apply to all countries and populations, whereas the other theoretical explanations discussed in Chapter 1 seek explanations from various more proximate factors whose significance usually varies geographically, culturally, or from one period to another.

Another significant difference between my theory of democratization and several other theories concerns the question whether there is only one dominant explanatory factor or two or more equally important and alternative causal factors. My argument is that there is only one dominant causal factor – the distribution of power resources – and that it is enough to explain a major part of the variation in democratization, although several alternative variables can be used to indicate this causal factor. Most other explanatory theories are based on the assumption that there are several different causal factors and that they can vary from place to place.

Huntington (1991: 38) and some others have argued that it is practically impossible to find any common independent variable which could explain democratization in all countries and that causes of democratization differ substantially from one place to another and from one time to another. My point is that there is and there must be a common dominant explanation for democratization because all human populations share the same evolved behavioral predispositions that affect political behavior, too. This study tries to show to what extent it is possible to explain the variation in the level of democratization by this assumed dominant explanatory factor.

Some of the empirical variables used in my studies and in other studies of democratization are the same or similar, but the theoretical interpretations attached to these variables may differ significantly. All my explanatory variables are intended to measure various aspects of the same explanatory factor, the degree of resource distribution, whereas some of these variables in other studies have been used to indicate economic development, modernization, inequality, or something else.

Besides, I would like to argue that the resource distribution theory of democratization provides theoretical explanations for some relationships proposed in other theories. For example, a theoretical explanation for the fact that economic development correlates positively with the level of democracy can be derived from this theory. When the level of economic

development rises, various economic resources become usually more widely distributed and the number of economic interest groups increases. Thus the underlying factor behind the positive correlation between the level of economic development and democracy is in the distribution of power resources. Economic development is only a special case of the underlying causal factor (resource distribution). The same concerns the observation that democracy is more probable in the countries where the level of education is high than in the countries where it is low. When the level of education rises, intellectual power resources become more widely distributed than in the countries where the level of education is low. The level of education represents one aspect of resource distribution, which is the underlying causal factor of democratization. Income and other social inequalities can also be interpreted to reflect the underlying unequal resource distribution. Sometimes external factors affect the resource distribution in a country. Some political actors may resort to external support in the struggle for power, or external actors themselves intervene in the politics of another country. The question is again on the impact of power resources on politics, although resources are not domestic. Moore's 'revenue-bargaining' theory of democracy does not contradict my theory, because the situation of revenue-bargaining reflects the fact that some important power resources are so widely distributed in the society that state elites have to take other groups into account and to bargain with them.

In other words, my theory and those other theories of democratization do not necessarily contradict each other. They concentrate on explanatory factors at different levels of explanation. My theory focuses on resource distribution as the ultimate underlying factor of democratization, whereas those other theories are concerned with various more proximate or local factors of democratization, and many of those proximate or local factors can be regarded as special cases of the underlying common factor. I assume that a significant part of the variation in democratization can be explained by the common explanatory factor of my theory (the distribution of power resources), whereas other factors and variables of other theories may explain a part of the residual or remaining variation that is due to various local, historical, and other unique factors.

Various theories and variables can be used in the study of democratization, but they may lead to different causal conclusions. A theoretical explanation based on a common and constant factor can produce a more coherent theoretical explanation for democratization than theories based on different and varying explanatory factors and provide a basis for predictions and theoretically grounded recommendations of policies intended to support democratization, which may not be possible if democratization is assumed to depend on more or less different factors in each case. In the end, I would like to emphasize that a part of variation is always due to random factors, which cannot be explained or taken into account by any theory (cf. Vanhanen 1997: 25–6).

Debate on Vanhanen's theory and previous studies

Several scholars have commented on my previous studies in books, journal articles, and conference papers since the 1970s. In the following, I refer especially to comments which draw attention to assumed shortcomings in my theory and variables or indicate that some aspects of my studies have led to misunderstandings.

Bilbab Dasgupta (1970) commented on the methodology used in my article 'On the Conditions of the Multi-party System in Ten Commonwealth Countries' (Vanhanen 1970a). In this article, I already used the hypothesis that power is based on sanctions and the distribution of power on the distribution of sanctions used as sources of political power. Dasgupta argued that my conclusions regarding the association between the pluralism of a party system and social pluralism did not follow from statistical exercises because the sample was so small (10) that correlations did not pass the statistical tests of significance. I defended my conclusions by remarking that those ten countries were not intended to form a random sample from any larger universe, but I agreed with him that in order to make more general conclusions a larger and more representative sample of countries would be needed (Vanhanen 1970b). The sample size was not a problem in later studies because I extended my study to cover practically all independent countries. Consequently, it has not been necessary to pay attention to statistical significance of correlations (for the tests of significance, see de Vaus 2002: 166–70).

Gláucio Ary Dillon Soares (1988: 17) admits that Vanhanen's 'theoretical orientation is coherent with his methodology,' but he argues that Vanhanen's predictions are better in the Core countries, and much poorer in the Latin American ones: 'Thus, whereas Vanhanen's theory achieves impressive results when applied to the Core countries, in Latin America it fails to explain democracy better than random probability' (Soares 1988: 15). I think that there is a technical explanation for this paradox. Correlations based on a small subset of countries, within which the value of the explanatory variable (IPR) does not vary much, may become low. Besides, the number of deviant non-democracies was exceptionally high (11) in Latin America in the 1970s, and I predicted (Vanhanen 1984: 132) that nearly all of these countries will have crossed the threshold of democracy by the end of the twentieth century. In fact, this prediction was correct. Democratization in Latin America started in the 1980s (cf. Seligson 1988, who also pays attention to non-conforming cases in Latin America).

Robert A. Dahl (1989) uses my measures of democracy to illustrate the number of polyarchies by decades. He notes that ID does not necessarily reflect the legal and constitutional situation of a country, but, nevertheless, 'as an inspection of the table shows, a classification based on legal suffrage and the institutions of polyarchy would probably not greatly alter the countries in the table or the decades of their emergence as "democracies"'

(1989: 240). I agree. Dahl refers to my central hypothesis of democratization and seems to accept it, but he complains that I have not taken into account the second factor of democratization (attitudes and beliefs favorable to democratic ideas). He says that Vanhanen 'assigns no independence to the second factor and appears to believe that it is simply a product of the first' (ibid.: 363). Yes, I am inclined to think that attitudes and beliefs favorable to democracy are mostly products of democracy, although I admit that they may be partly independent of democracy. Another and more important reason for their exclusion is that it would be difficult to measure them and that, from most countries, we do not have any reliable data on them.

Kenneth A. Bollen (1990) criticizes my political variables (Vanhanen 1979), especially the measure of participation. His argument is that 'voter turnout reflects factors that have little to do with measuring political democracy,'

because 'in some countries voters are legally obligated to vote, that high turnouts can occur in elections with no choice or under conditions of fraud, and that turnout is affected by many things, ranging from voter satisfaction or apathy to whether it rains on the election day'.

(Bollen 1990: 8; see also Bollen 1993)

Therefore, he does not use electoral participation in his own measures of democracy. I agree that voter turnout alone would be a highly unreliable measure of democracy, but Bollen did not pay attention to the fact that my Index of Democratization eliminates most of the unsatisfactory aspects of voter turnout because the Participation and Competition variables are multiplied.

Alfred Stepan and Cindy Skach (1993) review the results of my study (Vanhanen 1990) and focus on an attempt to explain the unexplained variance – democratic over- and underachievers – by taking into account the impact of constitutional frameworks. They note that when they analyze democratic underachievers in Vanhanen's set, 'we find that presidential systems had a democratic underachiever rate 3.4 times greater than did the parliamentary systems. Further, parliamentary systems in Vanhanen's set were 1.8 times more likely than presidential systems to be democratic overachievers' (Stepan and Skach 1993: 7; see also Stepan and Skach 1994; Stepan 2001: 262–5). It may be that institutional differences in governmental systems explain a part of the unexplained variation.

Donald E. Whistler's (1993) review of my arguments indicates that some researchers have understood and accepted my theory of democratization as well as consequent strategies of democratization. Whistler *et al.* (1993) refer to two basic strategies of democratization, which I had outlined (Vanhanen 1990: 165). These strategies recommend changing social conditions which affect the distribution of power resources and adapting political institutions

to their social environment in such a way that it becomes easier for competing groups to share power and institutionalize the sharing of power (see also Whistler 1991).

Dirk Berg-Schlosser and Gisèle De Meur (1994), in their analysis of conditions of democracy in interwar Europe, tested my hypothesis, among some others, by the Boolean method. The results of their analysis indicate that none of the cases ‘corresponds to ‘pure’ version of Vanhanen’s hypothesis (scoring identically on all his indices, the case of Germany stands in blatant contrasts to his expectations)’ (1994: 258). Then they turn to my explanation (Vanhanen 1984: 85) that the rise of Hitler and his Nazi party is an example of incalculable stochastic processes in politics and that there is no way that we can predict or explain such events by the explanatory variables of this study. They remark that such considerations ‘remain ad hoc and after the fact’ (Berg-Schlosser and De Meur 1994: 258–9); cf. Berg-Schlosser 1998; Berg-Schlosser and Mitchell 2000: 4–5). It is true, but my point is that because the autocracy in Germany in the 1930s contradicted the hypothesis so clearly, it would have been reasonable to predict democratization in Germany. Thus my variables did not predict the rise of Hitler’s dictatorship in Germany, but they predicted correctly the downfall of autocracy in Germany.

Robert H. Dix (1994) found it useful to use my ‘ratings of democracy’ in his historical analysis of democracy. He says that ‘Vanhanen’s ratings of democracy are the most thoroughgoing and empirically based ever attempted,’ but he also pointed out some defects of my indicators. In particular, he complained that the 1850–1979 ‘ratings are by decade for each country, rather than annual’ (Dix 1994: 102). I have corrected this defect. Now the ratings of democracy are annual over the period 1810–2000 (see *The Polyarchy Dataset* 2001). Jan-Erik Lane and Svante Ersson (1990, 1994) have used my political and explanatory variables in their studies without any special comments.

John Mukum Mbaku (1994: 280) examines democratization strategies for Africa and seems to accept my central thesis that ‘concentration of power resources is a constraint to democratization.’ He also agrees with my argument that federalism is better suited than a unitary state to all geographically large countries and to ethnically divided countries, and he supports my suggestion that ‘a parliamentary system combined with a proportional electoral system should provide an effective system for equal participation in political decision-making by all relevant groups in the African countries’ (Mbaku 1994: 280–1). I still support these institutional reforms for African countries.

Ian McLeon (1994) argues that it would have been better to use multiple regressions instead of simple regressions in my 1990 study. He says that my regression analysis ‘as a whole is impaired by a wrong-headed decision to rely on simple regressions of democratization on a (dubiously composed) index of “power resources” rather than letting multiple regression take the

place of arbitrary index construction' (McLeon 1994: 29). I want to point out that I am not primarily interested in the explanatory power of any particular social variables. I am interested in the explanatory power of my theoretical explanatory factor, which is the degree of resource distribution. Because all single explanatory variables are intended to measure relative differences between countries in the degree of resource distribution, they are combined into an index. However, in this study the results will be checked also by multiple regressions.

Jean Blondel (1995) refers to the variables and results of my studies measuring the strength of the relationship between broad socio-economic conditions and liberal democracy. He accepts my conclusion that one explanatory variable, the Index of Power Resources, seems to explain the major part of variation in political systems from the aspect of democratization. His conclusion is that Vanhanen's method 'helps to predict which countries are likely to be liberal democracies (and vice versa); it also identifies exceptions and accounts for a high proportion of them' (Blondel 1995: 82-7). Indeed, this is what I have attempted to do.

Malak Poppovic and Paulo Sérgio Pinheiro (1995) introduce the central principles of my theory of democratization. They seem to accept the proposition that 'resource distribution is the real causal factor' and that it helps to explain the non-linearity between economic development and democracy. They refer to the rich Middle East oil countries where income is highly concentrated and the level of democracy is low. They conclude: 'Contrary to the widespread view which maintains that a fairly high level of national wealth is necessary to foster democracy, Vanhanen's ideas offer a degree of hope for poor nations' (Poppovic and Pinheiro 1995: 78). That is exactly what I mean. Structural reforms which further the distribution of economic and intellectual power resources would make democracy possible in poor countries, too. Unfortunately it is extremely difficult to carry out such reforms in many poor countries.

Mick Moore (1995) introduces my 1990 study and variables, but he comes to the conclusion that

one can put no faith in his overall results, because his method of measuring democracy is unacceptable. He constructs a very simple measure fashioned from the two most controversial of the many indicators used in this business: changes in the share of votes cast for the largest party; and electoral participation.

Moore notes that 'the use of the vote share index can easily generate misleading figures about short term changes.' In the case of electoral participation, he refers to Bollen's (1980) arguments against the use of participation and concludes that it may be acceptable to use electoral turnout as one of several components of a democracy score, but to use it 'only with one other, equally unsatisfactory measure is not acceptable' (Moore 1995: 9; cf. Moore

1996: 45–7). I admit that Moore is right in his observation that these two variables may produce unexpected short-term changes which do not necessarily reflect changes in the political system. This is one weakness in my political variables, but I still believe that these two variables are good approximate indicators of democracy's most important dimensions. In another connection, Moore (1996: 52) admits that 'ideas, such as Vanhanen's attempt to measure the social distribution of power and see if this explains varying degrees of democracy, merit more attention.'

Christian Suter (1995) compares different measures of democracy in his study of Latin America and sees some merits in Vanhanen's operationalization of democracy, but he notes that neglecting human rights aspects is a major shortcoming of Vanhanen's index of democracy. Therefore, he composed democracy measures which include, in addition to electoral participation and party competition, human rights violations. This may be one shortcoming in my measures of democracy, but I assume that they measure, implicitly, human rights, too. It is reasonable to assume that human rights violations would have a strong negative correlation with the Index of Democratization (ID).

Erik Allardt (1996) refers to my study on the process of democratization (Vanhanen 1990) and notes:

The original inspiration for his work came from Lipset's studies, but he has since gone in another direction by trying to give biological explanations to the relationships found. His data is valuable but both the operational definitions of his variables and the theoretical interpretations of them are exceedingly speculative.

(Allardt 1996: 12)

In this new study, I again try to explain the evolutionary roots of politics and to show how my variables are derived from theoretical arguments, not randomly selected, but I am afraid that it may still be difficult for many social scientists to understand and to accept my biological argumentation.

Lauri Karvonen (1997: 37–41) discusses my theory, including sociobiological argumentation, and variables (Vanhanen 1984, 1990) and notes of the results that most countries have crossed the threshold of democracy at a certain level of the index of power resources. There are exceptions, but if power resources are distributed widely, it becomes difficult to prevent democratization. Karvonen concludes that Vanhanen has succeeded in showing the crucial importance of resource distribution in the process of democratization. He complains that my measures of democracy are rough and that the threshold values of democracy are probably too low. I shall return to this point in the next chapter. His most serious criticism concerns my theoretical argumentation: that it is possible to explain the variation in democratization by human nature, which is assumed to have remained

constant, and by environmental conditions, which vary greatly. I have claimed that

the struggle for power follows a regular pattern, based on the constant behavioral tendencies engraved in our genes, but that it produces widely different power structures depending on environmental conditions, i.e. the way in which crucial power resources are distributed among competing groups.

(Vanhanen 1984: 19–20)

Karvonen argues that if biological factor is constant, it cannot explain anything of the varying power structures, and, consequently, the causal connection is only between environmental factors and political consequences like democracy and nondemocracy. In other words, because environmental factors are enough to explain what is possible to explain, the whole sociobiological argumentation is irrelevant and could be excluded from the theory. My counter-argument is that constant behavior patterns engraved in human nature explain what is regular in power structures, whereas environmental differences explain the variation around the average pattern. The phenotype is always the product of both the genotype and environment. In this case, the constant behavioral tendencies engraved in human nature explain why resource distribution tends to lead to democratization everywhere and resource concentration to autocracy. Without this constant, there would be no theoretical ground to hypothesize that resource distribution leads to democracy and resource concentration to autocracy. So my point is that there is no contradiction in my theoretical explanation between behavioral constants and environmental variation.

Edward Greshaw (1997) examines the impact of technoecological factors on the growth of political and civil rights and pays attention to my theory, too. He says that although Vanhanen posits that democracy arises when resources are well dispersed, ‘an evolutionary-functionalist account would note that social stratification is a function of *social differentiation and integration*, and therefore social complexity should be a crucial predictor of political democracy’ (1997: 82). According to his interpretation, Vanhanen’s explanation of democratization ‘is perfectly consistent with modernization theory’s emphasis on the differentiation incumbent on industrialization’ (ibid.: 88). I would like to add that social complexity may be a crucial predictor of democracy just because it reflects resource distribution. Furthermore, Greshaw notes that Vanhanen’s ‘theory really provides no *systematic* explanation for resource distribution independent of socio-economic modernization’ (ibid.: 88). I agree that I have not attempted to explain why there is so much variation in resource distribution, but my intention is to return to this important question in a later study.

Miles Simpson uses my measures of democracy in his study, although he assumes, referring to Bollen’s (1993) arguments, that my participation and

competition variables 'may have serious flaws and be poor measures of democracy' (Simpson 1997: 166). In the next chapter, I shall describe my measures of democracy and explain why I think that it is necessary to take into account both participation and competition. His argument that informational equality (measured by literacy) 'is the critical requisite for democratization' (*ibid.*: 157) is interesting. It is in harmony with my assumption that the distribution of intellectual power resources is conducive to democratization.

Michael Coppedge (1997) uses some of my explanatory variables in his study, but he criticizes my index of concentration of non-agricultural power resources very strongly. Its correlation with his polyarchy scale for 1985 is -0.83 . He says: 'This index is too good to be true. . . . After examining Vanhanen's coding criteria, I concluded that this variable is too soft to be useful in serious research in its entirety.' He used only 'its 90–100 range as a modified dummy variable for extensive state control of the economy' (Coppedge 1997: 199). I agree that this variable has been much softer than my other explanatory variables, but I regard it as a highly relevant explanatory variable. The 1997 version of this variable is probably better than the first 1990 version to which Coppedge refers. In this new study, I use a thoroughly revised version of this variable, and I think that the revised variable is not any longer 'too soft to be useful in serious research.'

I invited several scholars to comment on and criticize my 1997 book manuscript. Mitchell A. Seligson, Ilter Turan, Samuel Decalo, John W. Forje, and John Henderson wrote comments, which are published in the book. Zehra F. Arat (1999: 741) says that all commentators are very critical of the model and that by highlighting 'the complexity of issues and providing rich examples, these essays constitute the most interesting segment of the book.'

Seligson says about his critique that it 'should be viewed as one that is coming from an analyst who applauds the method but disagrees with some of its specific points and applications' (Seligson 1997: 277). He complains that political culture and income distribution have been left out of the analysis and that some values of IPR for Latin American countries are anomalous. He argues that the percentages of urban and non-agricultural populations are poorly suited to measure resource distribution. I am inclined to agree with this argument. These two variables are excluded from the IPR used in this book, and income distribution has been taken into account in the new version of the DD variable.

Turan (1997) focuses on deviant cases, which are most frequent in the regions of North Africa, the Middle East, and Central Asia; sub-Saharan Africa; and East and Southeast Asia. He discusses various factors which might help to explain the appearance of democratic anomalies in these regions and pays attention, in particular, to colonialism, the lack of political community, and the role of various external political factors. The factors discussed by Turan may be relevant. However, I would like to note that I

have not attempted to present a complete explanation for democratization. My study is limited to testing the significance of some variables intended to measure the degree of resource distribution. So it leaves room for anomalous cases and for other factors needed to explain them.

Decalo (1997), as a regional specialist, analyzes the process of democratization in sub-Saharan Africa and argues that my two electoral variables are not enough to measure democracy in Africa. He also points out that the reliability of statistical data on many variables is poor. He emphasizes the significance of the personal variable in African political life (political style, personality dynamics, motivations of African leaders), which is excluded from my study. I admit the relevance of personal and cultural factors, but, for theoretical reasons, my analysis is limited to measuring the relevance of only few global explanatory variables.

Forje evaluates the applicability of my variables and method to African countries. His central argument seems to be that 'the indicators deployed by the author are good and valid as long as these indicators are used within the ethnocentric framework or time space' (Forje 1997: 316), but he believes their validity decreases outside the ethnocentric framework. Forje thinks that each transition nation should be analysed in its specific context and he discusses numerous obstacles and handicaps of democratization in Africa. It may be that the validity of my variables is not as good in all parts of the world, but I would like to point out that my simple variables have been able to explain relatively well the low level of democratization in Africa and that, because I assume all human populations to share the same epigenetic rules, I cannot use different variables or criteria for African countries.

Henderson focuses on the Pacific Island states included in my 1997 study. He agrees with my central thesis – 'that the degree of democracy depends principally on the distribution of economic, intellectual and other power resources' – but he does not agree 'with several of my predictions relating to Pacific Island states' (Henderson 1997: 335). He is not as optimistic as me about the future of democracy in Oceania. He pays attention to factors that decrease the relevance of my two electoral variables in the circumstances of very small states and suggests that in future studies it might 'be wise to establish a maximum opposition vote – say 70 per cent' (*ibid.*: 339). In this new study, 70 percent will be used as the upper limit for the Competition and Participation variables, and the population of 200,000 inhabitants in 1996 as the cut-off point for countries to be included. Consequently, the number of Pacific Island states decreased from five to three.

Peter Calvert (1998) reviews my 1997 book and notes that Vanhanen 'firmly rejects the view of Huntington and others that the individual causes of democracy are more important than the general ones.' Indeed, this is one of the central arguments of my book. Calvert concludes, 'In sum, this is an essential book for students of democracy and democratization' (Calvert 1998: 140–1).

Clark D. Neher (1998) reviews my 1998 book on the prospects of democracy in Asia, explains my theoretical arguments, and comes to the conclusion that Vanhanen's thesis 'helps to explain the unexpected success of democracy in poor countries and the failure of democracy in some relatively wealthy countries' (Neher 1998: 141) I agree. My intention has been to show that democracy can also succeed in a poor country in which important power resources are widely distributed.

Stephen Chan (1998: 453) is deeply dissatisfied as to some aspects of my 1997 book. He regards it as a curiosity, an odd work,

giving rise to the clearly cheap point that the world cannot be mapped from Helsinki; and the scarcely more palatable point that Vanhanen has simply provided a range of predictions to which fieldworkers will refer whenever these predictions are proven wrong.

He says he believes that Vanhanen 'is merely wrong in many if not most of his conclusions and predictions' (Chan 1998: 452). Well, I think that it would be useful to examine my predictions, for example, my predictions for African and Asian countries. This is an empirical question. Some predictions have been wrong, but I feel that most of them have been, until now, quite correct.

Zehra F. Arat (1999) seems to be as dissatisfied with my book as Chan. Her review is interesting in many respects. She refers to my theoretical approach and remarks: 'Only briefly mentioned and not very well explained, the connection of his theory to that of Darwin remains mysterious, yet it is still objectionable to some readers (for assuming a historically inevitable/universal evolution of all political systems into democracies)' (1999: 740). I am sure that Arat is not the only reader to whom my evolutionary theory has remained 'mysterious.' Therefore, in this chapter, I have attempted to explain the connection of my theory to that of Darwin's as clearly as possible. Her claim that I assume a historically inevitable evolution of all political systems into democracies seems to be based on a misunderstanding. I have never presented such an assumption. She notes that Vanhanen's resource distribution indices explain 66 percent of the variance in democratization, but claims that 'his measurements of the dependent and independent variables erode confidence in his findings.' She argues that my measures of democracy are poor and probably unreliable and continues that similar 'concerns of validity, reliability, and manipulation apply to the indicators employed in measuring the degree of resource distribution.' Her conclusion is that because of these measurement problems, the statistical analyses are problematic: 'At best, they confirm Lipset's argument that more economically developed countries are more likely to be democratic.' She admits that the use of a more complicated measure of economic development may have improved Lipset's analysis a little, but this improvement, 'being too little too late, does not add much to

the research accumulated by different schools of thought during the last four decades' (ibid.: 741). I agree that the results of my analysis confirm Lipset's argument that more economically developed countries are more likely to be democratic, but she does not seem to have understood that my theoretical interpretation of this relationship is different. This relationship exists because important power resources are usually, although not always, more widely distributed in more economically developed countries than in less developed countries. Economic development represents only one aspect of resource distribution. The degree of resource distribution may differ from the level of economic development, and these deviations explain the success of democracy in many poor countries as well as the failure of democracy in several rich countries, as I indicated in my study. I do not explain democratization by economic development, as Arat seems to assume, but by the distribution of power resources, and this explanation is derived from my 'mysterious' theory. I think that, ultimately, the explanatory and predictive power of theories will decide the value of competing theories.

Arend Lijphart describes the structure of the Index of Power Resources and notes that although 'Vanhanen's index is an indirect and obviously rough measure, it has the great advantage that it can be calculated for many countries' (Lijphart 1999: 283–4). Yes, my intention has been to construct an index of power resources that can be calculated for all countries of the world.

James Mahoney (1999: 212) introduces my theoretical arguments and variables and says that distribution of power resources 'explains 66 percent of the variation in degree of democracy across the full range of cases.' However, he sees important shortcomings associated with both the overall evolutionary theory and specific quantitative indicators. For example, he complains that the measures of democracy do not include civil liberties and rights and that the main explanatory variables seem to represent generic features of modernization more than power resource distribution. I admit that they indicate features of modernization, but, as I have attempted to explain, they measure, at least indirectly, the distribution of power resources, too. Despite his criticism, Mahoney regards my work 'as one of the most extensive analyses available of the causes of democratization' (ibid.: 211).

Obioma M. Iheduru (1999) uses my Index of Democratization in his study of sub-Saharan Africa, in which he tries to explore the impact of structural adjustment on democratization in 31 sub-Saharan African countries over the period 1980–91. His purpose is also 'to use Vanhanen's ideas to test how changing economic and social institutions may be contributing to democratization in Africa' (1999: 31). One of his conclusions is that 'levels of democracy, as measured by Vanhanen's index, are still relatively low in sub-Saharan Africa, and further social engineering through groups and a market-oriented economic system, are necessary prerequisites that will harness the future advancement of democratization in the region' (ibid.: 104). I can agree with these recommendations, but I

have to stress that it will be extremely difficult to carry out necessary social and economic reforms in Africa.

Several researchers discuss my measures of democracy and explanatory variables in *Demokratiemessung: Konzepte und Befunde im Internationalen Vergleich* (2000), edited by Hans-Joachim Lauth, Gert Pickel, and Christian Welzel. Rusanna Gaber (2000) compares my indicators of democracy (Vanhanen 1990, 1992, 1997; Vanhanen and Kimber 1994) to the Polity Index and Freedom House ratings. She pays attention to conceptual and operational differences between the three measures and finds out that despite such differences the results of measurements are highly intercorrelated, although there are also some cases in which measurements differ from each other clearly. She notes that one difference between the three measures is that my measures of democracy are based on quantitative data, whereas the two other measures are based on qualitative data. Christian Welzel (2000) describes the structures of my Index of Power Resources and Index of Democratization and uses them in his analysis concerning the relationship between human development and democracy.

Martin Traine (2000) analyzes my variables and theory thoroughly. It is difficult for me to understand all his arguments, but his conclusion seems to be that it is not possible to measure the degree of democratization by my two simple indicators. He discusses the premises of my evolutionary resource distribution theory of democratization and argues that it is based on a metaphysical axiom about the struggle for existence. According to his interpretation, my hypothesis is immune against falsification, whereas I think that it is falsifiable because weak or negative correlations would falsify it. According to Traine, my theory of democratization is teleologic, i.e. that it predicts that all countries will democratize. This interpretation may be based on a misunderstanding. It is possible that all countries might become democracies, but only if important power resources become widely distributed in all countries. We do not know whether the distribution of power resources is going to increase or decrease in the future, although, according to my variables, the degree of resource distribution has increased since the nineteenth century (see also Berg-Schlösser 2000: 305–6).

Fares Braizat (2000) investigates my theory and tests its explanatory power compared to other theories and explanatory variables. His hypothesis is that 'IPR is a successful general indicator of levels of democratisation, but a nuanced understanding of democratisation in individual countries requires historical investigation and local interpretation, and needs to take into account other relevant and local dynamics' (2000: 220). He introduces my theory and methodology correctly and says that 'Vanhanen developed Darwin's theory of evolution into a theory of human politics and the struggle for power,' but he does not accept it. He argues that Hegel's theory 'provides a foundation for a thicker explanation of democratization than Vanhanen's neo-Darwinian theory,' although he notes that 'Hegel's theory does not contradict Vanhanen's notion of a link

between democracy and the distribution of power resources in societies.' Consequently, he rejects Vanhanen's neo-Darwinian theory but agrees 'with his contention that there are similarities in behavior that enable comparisons to be made across countries and cultures' (ibid.: 224, 228). Then he connects Hegel's philosophy with the theory of capitalist development and democracy formulated by Rueschemeyer *et al.* (1992) and argues that it provides a better explanation for democratization than does my theory. The core of this explanation is that 'capitalist development is linked to democracy because it transforms class structures, empowering the working and middle classes and weakening the landed upper class' (Braizat 2000: 230). Braizat concludes on the basis of statistical analyses that the 'theoretical preference for Rueschemeyer *et al.*'s theoretical approach was vindicated through the discovery that even using Vanhanen's data, capitalism as an independent variable correlated more highly than IPR with democratisation' (ibid.: 231). A problem with this conclusion is that he used my DD variable (the degree of decentralization of non-agricultural economic resources) as a measure of capitalism. However, this variable measures only partly capitalism. Principally it is intended to measure the decentralization of economic resources, which is not the same thing as the extent of capitalism (see also Lauth 2000; Emminghaus and Nord 2000; Pickel 2000).

Todd Landman (2000) introduces my theory of democratization as well as dependent and explanatory variables in his textbook *Issues and Methods in Comparative Politics: An Introduction* and refers to the arguments and results of my studies in several contexts. He notes, for example, that Vanhanen does seek to identify causal explanation for democratization that holds across the globe and for all time. The independent variable is the index of power resources, which includes indicators of economic development as well as measures that capture the distribution of resources in a society. Thus, it 'leaves room for poor countries with well-distributed resources and rich countries with concentrated resource distribution.' Vanhanen 'argues that the distribution of power resources is the most important single causal factor to account for democratization in the world since 1850' (Landman 2000: 148–9). I think that Landman has presented my theoretical arguments and some of the central results quite well in his textbook (see also Pennings *et al.* 1999: 325–7; Wagschal 1999: 36).

Manfred G. Schmidt (2000: 442–5, 450–60) introduces the explanatory variables of my resource distribution theory of democratization, correlates the Index of Power Resources with various measures of democracy, and comes to the conclusion that Vanhanen's Index of Power Resources explains the degree of democratization at least as well as traditional indicators of economic development. All correlations are highly significant: the less concentrated power resources are, the higher the degree of democratization, and the more power resources are concentrated, the lower is the degree of democratization, or the smaller the probability of democracy.

Schmidt combines Vanhanen's 'power resources' into his standard explanatory model of democracy's preconditions and pays attention to the fact that Vanhanen's Index of Power Resources explained 61 percent of the variation in the degree of democratization in 1993.

Stephen K. Sanderson (2001: 315) says about my 1997 book that it is 'perhaps the most detailed cross-national, quantitative study of democracy ever carried out.' He accepts my theoretical explanation for democratization but complains that I assume all six subvariables within IPR to be of equal significance in producing democracy. Sanderson decomposed the IPR into its six dimensions and found that DD and the literacy rate are clearly the strongest explanatory variables. He complemented my variables by creating a new measure of democracy ('Superdemocracy'), which combines the Index of Democracy and the Freedom House measures of political rights and liberties, and found that DD and the literacy rate were able to explain a huge 85 percent of the variance in this new 'Superdemocracy' variable. His conclusion is that 'it is the decentralization of nonagricultural economic resources that is by far the best predictor of democracy' (Sanderson 2001: 315–16). Sanderson has made highly interesting reanalyses and also attempted to assess the direction of causation. I have also noticed that DD is the strongest explanatory variable, but I do not pay particular attention to the explanatory power of single components of IPR because I assume that their combination is theoretically a more valid substitute for the hypothetical concept of 'resource distribution' than any of single variables separately. Besides, for the most part they are overlapping. Because DD was a relatively 'soft' variable, I did not use it directly in the Index of Power Resources (see Vanhanen 1997: 51–6). It was combined with the Family Farms variable into a sectional Index of the Distribution of Economic Power Resources (DER).

Christopher Marsh (2001) has applied my resource distribution theory of democratization to the study of democracy in the context of Russia's 87 regions. Results are interesting. The correlation between his Index of Power Resources and the Index of Democratization is negative, contrary to the hypothesis, but he found that the decentralization variable is positively correlated with the dependent variable. Marsh assumes that this decentralization variable is probably 'the most reliable indicator of Vanhanen's theory of resource distribution used in this study.' Consequently, he comes to the conclusion that the 'positive correlation of this variable with the ID supports the resource distribution theory of democratization and, given the importance of this variable as discussed above, bodes well for the consolidation of Russian democracy' (Marsh 2001: 79).

Gerardo L. Munck and Jay Verkuilen (2002a, 2002b) evaluate the relative merits of nine existing data sets on democracy from the perspectives of conceptualization, measurement, and aggregation. They see some merits in my measures of democracy, but they found also several defects in them (see also Komarov 2000; Barber 2000; Urdal 2001; Ward 2002).

The above review of the debate about my theory of democratization and studies shows that researchers have quite different opinions on the value of my theory and appropriateness of the empirical variables used in my studies. Most comments have been more or less critical. I think that some critical evaluations have helped me to improve my theoretical argumentation and to correct some shortcomings in the variables. There are also many commentators who seem to accept the idea, although not always without reservations, that the degree of resource distribution is the crucial factor of democratization and that my simple political variables can be used to measure democratization. Several researchers have used my theoretical arguments and variables in their own studies, especially the measures of democracy, and some researchers have attempted to develop the theory and variables and to apply them to the studies of different problems.

3 Measures of democracy

The testing of the hypothesis of democratization formulated in Chapter 2 presupposes variables that measure the degree of democracy. Researchers have formulated various ways to measure democracy, but it has been difficult to agree on the most suitable measures of democracy and democratization. These difficulties are partly related to the fact that definitions of democracy vary to some extent and that researchers have attempted to measure democracy from different perspectives. As a consequence, various measures of democracy have been formulated. In this chapter, I shall first refer to some definitions of democracy and give my own definition of democracy, after which I review some measures of democracy used by other researchers, explain my own perception of the crucial aspects of democracy, formulate the measures of democracy which will be used in this study, and explain the origin and evolution of my measures of democracy. Finally, the measurements of democracy are briefly compared with the Polity scores over the period 1818–1998 and with the Freedom House ratings over the period 1978–98.

Democracy

There are plenty of definitions of democracy. Manfred G. Schmidt's (2000) book on theories of democracy reviews extensively various interpretations of democracy since Plato and Aristotle. Larry Diamond notes that a key element in all disagreements and debates about democracy 'is lack of consensus on the meaning of *democracy*. So serious is the conceptual disarray that more than 550 subtypes of democracy are identified in David Collier and Steven Levitsky's review of some 150 (mostly recent) studies' (Diamond 1999: 7). It is not necessary in this connection to discuss the numerous definitions of democracy in greater detail. It seems to me that Lipset's definition of democracy illustrates the term's contemporary interpretation. He defines democracy 'as a political system which supplies regular constitutional opportunities for changing the governing officials, and a social mechanism which permits the largest possible part of the population to influence major decisions by choosing among contenders for political

office' (Lipset 1959: 71). Lipset's definition follows the ideas of Joseph A. Schumpeter (1942), according to whom 'democratic method is that institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of competitive struggle for the people's vote' (Schumpeter 1975: 269). The same ideas of competitive and participatory democracy are repeated in the Inter-Parliamentary Union's definition of democracy: 'Democracy is a political system that enables people to freely choose an effective, honest, transparent and accountable government' (*Human Development Report 2002* 2002: 55).

Many researchers have used more or less similar terms to describe general characteristics of democracy, although they may emphasize different aspects of democracy (see, for example, Dahl 1971, 1998; Popper 1977, Vol. I: 124–5; Sartori 1987; Huntington 1991: 5–13; Hadenius 1992; Diamond *et al.* 1995: 6–9; Apter 1998: 372–3; Diamond 1999: 7–17; Przeworski *et al.* 2000: 15; Reilly 2001: 3; Mainwaring *et al.* 2001: 38; Stepan 2001: 102; Levitsky and Way 2002: 53). I think that traditional definitions express the idea of democracy sufficiently well. Consequently, *I mean by democracy a political system in which ideologically and socially different groups are legally entitled to compete for political power and in which institutional power holders are elected by the people and are responsible to the people* (cf. Vanhanen 1984: 9–11; 1990: 6–11; 1997: 28–31).

Differences in operational definitions of democracy are more important than conceptual definitions. My point is that we should apply the same criteria of democracy to all countries because it is reasonable to assume that human nature and evolved behavioral predispositions are approximately similar across all human populations. It means that it is justified to apply similar indicators of democracy to all contemporary countries.

Different approaches to measuring democracy

It has been easier for researchers to agree on the general characteristics of democracy than on the operational measures of democracy. Various operational measures of democracy have been formulated and used in empirical studies (see, for example, Fitzgibbon 1951; Lipset 1959; Cutright 1963; Banks 1972; Coulter 1975; Bollen 1979, 1980, 1990, 1993; Coppedge and Reinicke 1990; Arat 1991; Hadenius 1992; Jagers and Gurr 1995; Gasiorowski 1996; Anckar 1998; Przeworski *et al.* 2000; Lauth *et al.* (eds) 2000; Karatnycky *et al.* 2001). Munck and Verkuilen (2002) refer to nine datasets on democracy (see also Schmidt 2000: 389–413). It is not possible nor necessary to examine all these and other operational measures of democracy in this connection. I refer only to some recent examples, which illustrate the rich variety of approaches to measuring democracy (cf. Vanhanen 1984: 24–7; 1990: 11–16; 1997: 31–4).

Kenneth A. Bollen (1979, 1980) defines political democracy 'as the extent to which the political power of the elite is minimized and that of the

nonelite is maximized' (Bollen 1980: 372). His index of political democracy measures two dimensions of democracy – political sovereignty (political rights) and political liberties – by six indicators: (1) fairness of elections, (2) effective executive selection, (3) legislative selection, (4) freedom of the press, (5) freedom of group opposition, and (6) government sanctions. Bollen excluded voter turnout from his indicators of democracy referring to Lipset's (1960: 32–3, 180–1, 216–19) arguments that a low level of participation may indicate that the people's will is expressed in government policy and that 'neither high nor low rates of participation are in themselves good or bad for democracy.' Bollen came to the conclusion that 'voter turnout does not necessarily indicate the level of political democracy' (Bollen 1980: 374). In a later article (1990), he regards voter turnout as an invalid measure of democracy, because 'turnout figures are influenced by many other factors, some of which are only marginally related to political rights and civil liberties' (*ibid.*: 14). For him political rights and liberties represent the two most important dimensions of political democracy (see also Bollen and Grandjean 1981; Bollen 1993).

Robert A. Dahl (1971) differentiated between two theoretical dimensions of polyarchy (democracy): public contestation and the right to participate in elections and office, but he did not operationalize these concepts. Michael Coppedge and Wolfgang Reinicke (1988) constructed a scale of polyarchy to measure the variation of polyarchy. Their Polyarchy Scale includes 'five simple indicators of freedom of expression, freedom of organization, media pluralism, the extent of the suffrage, and the holding of fair elections.' They excluded Dahl's participation dimension from their scale and focused on contestation: 'Dropping the suffrage dimension leaves us with a unidimensional scale of polyarchy that is identical to the scale of public contestation' (Coppedge and Reinicke 1988: 101, 108; see also Coppedge and Reinicke 1990; Coppedge 1997; Dahl 1998; Doorenspleet 2000).

Diamond *et al.* (1995: 6–9) did not construct any operational measures of democracy, but they emphasize that democracy has three essential dimensions: (1) meaningful and extensive competition, (2) a highly inclusive level of political participation, and (3) civil and political liberties secured through political equality under a rule of law. They stress that the boundary between democratic and undemocratic regimes is often blurred and imperfect and that there are several ambiguous cases. They thought it possible to classify regimes that do not satisfy their criteria of democracy into five categories: semidemocracies, low-quality democracies, hegemonic party systems, pseudodemocracies, and totalitarian regimes. Larry Diamond (1999: 7–17) differentiates between liberal democracies, electoral democracies, pseudodemocracies, and non-democracies. He does not provide operational measures of democracy, but he argues that there are three important dimensions of democracy: opposition, participation, and civil liberty. All of them should be taken into account in measures of democracy or polyarchy.

Przeworski *et al.* (2000: 14–36) focus on contestation, as the essential feature of democracy, in their measurement of democracy. According to their definition, ‘Democracy is a regime in which government offices are filled by contested elections’ (2000: 19). They use the following operational rules in the classification of regimes into democracies: (1) the chief executive must be elected, (2) the legislature must be elected, and (3) there must be more than one party. The regimes which do not satisfy these criteria are regarded as dictatorships. They point out that some degree of political freedom is a *sine qua non* condition for contestation, but democracy cannot be sufficiently defined in terms of ‘liberties’ or ‘freedom,’ or human rights, which underlie the Freedom House scales. They also exclude participation as a definitional feature of democracy by referring to studies which imply that ‘even when suffrage is highly restricted, divergent interests are being represented’ (2000: 34). Their approach is theoretically akin to those of Bollen and of Coppedge and Reinicke, but they ‘have tried to the extent possible to avoid subjective judgements by relying only on observables’ (Przeworski *et al.* 2000: 56). It is an important methodological difference.

The Freedom House’s *Comparative Survey of Freedom*, established by Raymond D. Gastil in the 1970s, has rated countries in accordance with their political rights and civil liberties since 1972–3 (see Gastil 1985, 1988; Karatnycky 1998). These ratings have been used in many studies to measure, indirectly, the degree of democracy, too. The Survey employs checklists for political rights and civil liberties to help determine the degree of freedom present in each country and to help assign each country to a comparative category. The Survey rates political rights and civil liberties separately on a seven-category scale, 1 representing the most free and 7 the least free. The ratings are based on responses to the checklists and the judgements of the Survey team. By averaging the ratings for political rights and civil liberties, countries are divided into three categories: ‘free,’ ‘partly free,’ and ‘not free.’ Countries whose ratings average 1–2.5 are generally considered ‘free,’ 3–5.5 ‘partly free,’ and 5.5–7 ‘not free’ (Karatnycky 1998: 592–9; cf. Karatnycky *et al.* 2001).

The Polity project, initiated by Ted Robert Gurr in the 1970s, developed a different method for measuring authority characteristics of all larger countries from 1800 on. One of their authority characteristics concerns institutionalized democracy. They measure democracy by an additive ten-point scale derived from codings of the competitiveness of political participation (1–3), the competitiveness of executive recruitment (1–2), the openness of executive recruitment (1), and constraints on chief executive (1–4). Similarly, they measure autocracy by an additive ten-point scale, which measures the lack of regulated political competitiveness (1–2), regulation of political participation (1–2), the lack of competitiveness of executive recruitment (2), the lack of openness of executive recruitment (1), and the lack of constraints on chief executive (1–3). These two scales can be

combined into a single summary measure by subtracting a state's autocracy score from its democracy score. This summary measure varies from positive ten to negative ten (see Gurr *et al.* 1990; Jagers and Gurr 1995: 472–9). In addition to contemporary states, Polity data cover several former states, especially former German and Italian states of the nineteenth century. The smallest countries (fewer than 500,000 inhabitants) are excluded. Besides, it should be noted that democracy and autocracy scores have not been coded for the periods of transition, interregnum, and interruption (Jagers and Gurr 1995; Gurr and Jagers 1999; cf. Vanhanen 2000a, 2000b).

Robert L. Perry and John D. Robertson (2002: 166–85) have combined the Freedom House and Polity measures into four indicators of qualitative and quantitative dimensions of democracy. They are intended to measure (1) the scope of institutional democracy, (2) the scale of institutional democracy, (3) the scope of liberal democracy, and (4) the scale of liberal democracy. Larry Diamond (2002) pays attention to the existence of numerous hybrid regimes and pseudodemocracies. He classified regimes into a sixfold typology at the end of 2001: (1) liberal democracy, (2) electoral democracy, (3) ambiguous regimes, (4) competitive authoritarian, (5) hegemonic authoritarian, and (6) politically closed authoritarian. Gary Reich (2002) emphasizes the need of a meaningful intermediate category between democracies and autocracies and classifies political regimes into three categories of democratic, semi-democratic, and authoritarian regimes (for measures of democracy, see also Mainwaring *et al.* 2001; Schedler 2002; Levitsky and Way 2002; *Human Development Report 2002* 2002: 36–45).

The above review of some measures of democracy indicates that researchers have constructed ingenious ways to measure democracy from different perspectives, but I have not adopted any of these measures because it seems to me that all of them have, in addition to their great merits, certain disadvantages which I hope to be able to avoid. I think that the measures of Bollen and of Coppedge and Reinicke (as well as many others not discussed above) are unnecessarily complicated and that they include too many variables, which makes the gathering of empirical data from all countries of the world and especially from earlier periods difficult or impossible, and find that they presuppose subjective evaluations and qualitative data in too many places. Besides, I think that it would also be useful to take into account, in addition to contestation, the extent of participation as an essential dimension of democracy. Diamond *et al.* (1995) refer to three important dimensions of democracy, but they do not say how it might be possible to operationalize them and to measure the variation of political systems from the perspective of democracy. Przeworski *et al.*'s three simple rules may be enough to separate democracies from non-democracies, but their dichotomous classification is not suited to measuring variation in the degree of democracy or in the degree of autocracy. The Freedom House's ratings of political rights and civil liberties measure

indirectly important aspects of democracy, but their ratings are principally based on judgmental data, and they are limited to the period since 1972. It would be difficult for others to check their ratings. The Polity project's scores are also based on subjective evaluations in most points, not on operationally defined empirical variables, and the extent of electoral participation is excluded from their variables. My idea has been to measure democratization by simple quantitative indicators, which can be applied to all countries of the world since the nineteenth century, and to see how well they are able to indicate crucial differences between political systems from the perspective of democracy.

Origin and evolution of Vanhanen's variables

I have attempted to measure variation in the degree of democratization since the 1960s, although I did not use specifically the concept of democracy in my first comparative studies. In my doctoral thesis (Vanhanen 1968), which covered ten new Commonwealth countries, I sought an explanation for pluralist party systems from social structures. The basic assumption was that pluralism of the party system depends on the distribution of human, economic, and other resources that can be used as sources of power. The largest party's share of the votes cast in parliamentary elections, or of the seats in parliament, was taken as the yardstick of the pluralism in the party system. In this first comparative study, I did not pay attention to the degree of electoral participation. The study focused on the pluralism of the party system, not directly on democratization. However, the first of my later indicators of democratization, the share of the largest party, originates from this 1968 study.

In the next phase in years 1969–71, comparison was extended to 114 independent countries of the 1960s. In this study (Vanhanen 1971), my attention was focused on the distribution of power inside independent states. Referring to Darwin's arguments on the necessity of the struggle for survival in all parts of the living world, I hypothesized that the distribution of power depends on the distribution of sanctions. Two political variables were formulated to measure the distribution of power: (1) the percentage share of the smaller parties and independents of the votes cast in parliamentary elections, or of the seats in parliament, and (2) the percentage of the adult population that voted in elections. The smaller parties' share was calculated by subtracting the largest party's share from 100 percent. The two variables were combined into an index of power distribution by multiplying the two percentages and by dividing the product by 100. The second basic indicator of democratization, the degree of electoral participation, originates from this 1971 study as well as the later index of democratization (cf. Vanhanen 2000a, 2000b). I can still accept the arguments presented for the selection of these three political variables in the 1971 study:

The selection of the smaller parties and independents as the indicators of the distribution of power is based on the assumption that in contemporary states parties represent the most important centers of power and that the share of the smaller parties and independents most realistically measures the distribution of power. It is reasonable to assume that the higher the share of the smaller parties of the votes cast in parliamentary elections or of the seats in parliament, the more widely power is distributed. But because the distribution of votes and seats does not measure the degree of electoral participation, the involvement of the population in politics, an index of power distribution was constructed which combines the share of the smaller parties of the votes cast or of the seats in parliament with the degree of participation. This index is based on the assumption that the higher the level of participation (as indicated by the percentage share of the adult population voting in elections), the more the population is involved in the struggle for power. However, a high level of participation in elections indicates a distribution of power among the population only on the condition that the share of the smaller parties is also high.

(Vanhanen 1971: 32)

Later on I noticed that Robert A. Dahl had come to more or less similar conclusions on the two crucial dimensions of democracy. In his book *Polyarchy: Participation and Opposition* (1971), Dahl speaks of two different theoretical dimensions of democratization. He used the terms 'public contestation' and 'the right to participate.' I was pleased to note that Dahl conceptualized the core of democracy in a similar way as I had done in my formulation of two political variables to measure the distribution of power. This observation strengthened my confidence that the two simple electoral variables that I had used in my study were enough to measure the most crucial aspects of democracy. In subsequent studies, I have always referred to Dahl's two theoretical dimensions of democratization in connection with my basic political variables (cf. Vanhanen 2000b).

In the next study covering American countries over the period 1850–1973 (Vanhanen 1975), longitudinal historical data were used to test the theory according to which the distribution of political power depends on the distribution of sanctions used as sources of power. The same two electoral variables, (1) the smaller parties' share of the votes cast in parliamentary or presidential elections (= votes) and (2) the degree of electoral participation (= participation), and the index of power distribution were used to measure the distribution of political power. However, now the degree of electoral participation was calculated from the total population, not from the adult population, because I assumed that historical statistical data on total populations are more reliable than estimations on adult populations. Since then I have used the percentage of the total population that actually voted to measure the degree of electoral participation.

The same variables were used in the next longitudinal comparative studies which concerned European countries in 1850–1974 (Vanhanen 1977a), Asian and Australian countries in 1850–1975 (Vanhanen 1977b), and 119 Asian, European, American, and African states in 1850–1975 (Vanhanen 1979). In the 1979 study, I explained why I thought it necessary to combine the two basic variables into an index of power distribution:

Though the two basic variables can be used separately, it is reasonable to assume that a combination of them would be a better and more realistic indicator of power distribution. If only a small fraction of the adult population is allowed to take part in elections, the distribution of power among competing parties loses much of its meaning, and if one party or group gets all the votes in elections, a high degree of participation hardly indicates that political power is widely distributed. There would be many ways to combine the two basic political variables into an index of power distribution, depending on how we weight the importance of the smaller parties' share and the degree of participation. It may be argued that smaller parties' share is a more important factor, or vice versa. But because I am not sure which of the two is more important and how much more important, I have weighted them equally . . . It gives high values for a country if the values of both basic variables are high, and low values if the value of either one of these variables is low. Multiplication of the two variables is based on the assumption that real power distribution presupposes concurrence of both open competition and mass participation.

(Vanhanen 1979: 24–5)

In these studies, political variables were intended to measure the distribution of power, not democracy directly, although I used them also to describe the process of democratization. In the 1984 book *The Emergence of Democracy: A Comparative Study of 119 States, 1850–1979*, terminology was changed from 'the distribution of power' to democracy and democratization. That book summarizes the results of the previous longitudinal studies and extends the analysis to the year 1979. My aim was to provide a theoretical explanation for the emergence of democracy. The political and explanatory variables remained the same, but my attention focused on democratization instead of the distribution of political power. The names of political variables were reformulated. I referred to Dahl's (1971) two theoretical dimensions of democratization (polyarchy) and argued that the degree of competition and the degree of participation are the two most important dimensions of democracy. The smaller parties' share of the votes cast in parliamentary or presidential elections, or both, was used to measure the degree of competition (Competition), and the percentage of the population who actually voted in these elections was used to indicate the degree of participation (Participation). The index of power distribution was now

called an index of democratization (ID). These terms have been employed to describe the political variables used in my recent works (Vanhanen 1990, 1997, 1998; see also Vanhanen 1993, 2000a, 2000b, for further details of these variables).

I think that Dahl's (1971) two theoretical dimensions of democratization – public contestation and the right to participate – encapsulate the most important characteristics of democracy. I have called these dimensions competition and participation. My basic argument is that they represent the most crucial aspects of democracy and that, therefore, their combination may constitute the most realistic measure of democratization. The existence of legal opportunity to compete for the control of political institutions through elections indicates that people and their groups are free to organize themselves and to oppose the government. It also indicates, indirectly, the existence of some political rights and liberties as well as certain political equality in the sense that different groups can compete for power. The degree of participation indicates the extent of 'the people' taking part in politics. A political system can be regarded to be the more democratized, the higher the degrees of competition and participation are. To measure these two theoretical dimensions of democratization, I have used two simple quantitative indicators based on electoral data since the 1970s (cf. Vanhanen 2000b).

Measures of democracy in this study

In this study, my intention is to use the same two simple political variables, with some modifications, to measure the two crucial dimensions of democratization (competition and participation) as in my previous comparative studies, but now the Participation variable will be complemented by taking into account referendums as an additional dimension of political participation. The two basic political variables are combined into an Index of Democratization, which will be used as the principal measure of democracy.

Competition and participation

The value of the Competition variable is calculated by subtracting the percentage of votes won by the largest party from 100. If data on the distribution of votes are not available, the value of this variable is calculated on the basis of the distribution of seats in parliament. This will be done also in cases in which the distribution of seats in parliament seems to reflect the power relations between parties more realistically than the distribution of votes. The value of the Participation variable is calculated from the total population, not from the adult or enfranchised population. I selected the total population because more statistical data are available on total populations than on age structures of electorates. In principle, these two empirical variables are very simple and easy to use. In practice, however,

there are several points on which more detailed rules of interpretation are needed.

It is necessary to define what is meant by 'a party' and 'the largest party' in these calculations. My basic assumption is that the relative strength of political parties provides the most realistic indicator of the distribution of political power in modern states. Competing groups have formed more or less permanent political parties, or corresponding organizations, since the nineteenth century, although it is not always obvious which groups should be regarded as 'parties' (see Duverger 1954; LaPalombara and Weiner 1966; Sartori 1976; von Beyme 1984; Blondel 1995: 129–52). Usually it is relatively easy to distinguish between parties taking part in elections, but party alliances are problematic. It is not always clear whether the alliance or its individual member parties should be regarded as 'parties.' In such cases, a party's behavior in elections is used as the decisive criterion. If a party belongs permanently to a larger alliance, then it should not be regarded as a separate party. Przeworski *et al.* (2000: 20) have used a similar rule as a criterion of 'party.' In parliamentary elections, the 'largest party' refers to the party which receives the largest share of the votes or of the seats in parliament (legislature). Besides, it should be noted that only elections to the lower house (the more important house) are taken into account. A constituent assembly is taken into account if it has also ordinary legislative powers (cf. Przeworski *et al.* 2000: 19). In presidential elections, the 'largest party' refers to the presidential candidate who won the election. Because, in some countries, there are two rounds of presidential elections, it is necessary to decide whether the votes of the first or of the second round are taken into account. Usually the calculations of Competition and Participation are based on the votes cast in the second round, but in some cases the results of the first round may reflect power relations more realistically than the results of the second round.

Interpretation is needed in indirect elections as well. How should we calculate the degree of participation in such elections? My basic rule has been that only votes cast in the final election are counted. When a president is elected by indirect elections, usually by the parliament, only the number of actual electors is taken into account – which means that the degree of participation drops to zero. The same interpretation is applied to indirect parliamentary elections (in China, for example). However, if the real election takes place at the popular vote of electors, as in US presidential elections, I have taken into account the number of votes in that election. Przeworski *et al.* (2000: 19) note about executive elections that 'indirect elections qualify as popular only if the electors are themselves elected.'

Another problem of interpretation concerns countries where members of parliament (legislature) are elected but political parties are not allowed to take part in elections, or to form party groups in parliament after elections. Such election results are interpreted to mean that one party has taken all the votes or the seats. The situation is different in countries where

parties are not banned, but only independent candidates participate in elections, although it would be legally possible to establish parties. It is plausible to argue that elections are competitive in such countries and that the elected members of parliaments are not controlled by any particular political group or by the government. In such cases, the share of the 'largest party' is assumed to be only 30 percent (cf. Karatnycky 1998: 595). However, it was not necessary to apply this rule to any of the 170 countries of the period 1999–2001.

A different question of interpretation arises when the composition of a governmental institution using the highest executive or legislative power is not based on popular election. According to my interpretation, the share of the smaller parties and the degree of electoral participation will be zero in such cases. Power is concentrated in the hands of the ruling group. This interpretation applies to military and revolutionary regimes, to other non-elected autocratic governments, and to monarchies in which the ruler and the government responsible to the ruler dominate and exercise executive and often also legislative power. In all these cases, the share of the 'largest party' is assumed to be 100 percent and the degree of participation zero.

The values of Competition and Participation variables can be calculated on the basis of parliamentary or presidential elections, or both. Which election should be taken into account will depend on the assumed importance of the two governmental institutions. Depending on how power is divided between them, we can speak of parliamentary and of presidential (or executive) forms of government. In the former, the legislature is dominant; in the latter, the executive branch is dominant. However, their powers may also be so well balanced that neither has clear dominance. Thus, we can distinguish three institutional power arrangements at the national level: (1) parliamentary dominance, (2) executive dominance, and (3) concurrent powers. In the first case, the values of Competition and Participation are calculated on the basis of parliamentary elections; in the second, they are calculated on the basis of presidential or other executive elections (or the lack of elections); and in the third, both elections are taken into account. If the support of competing parties is approximately the same in both elections (USA, for example), it does not make much difference how the governmental system is classified in order to calculate the values of Competition and Participation, but if the electoral systems are significantly different in parliamentary and presidential elections, an incorrect classification of the country's governmental system would distort the results of the measurement. The same is true if the powers of the two institutions differ drastically. I have attempted to classify each country's governmental institutions as realistically as possible. All classifications are indicated in datasets (cf. Vanhanen 2000a, 2000b).

Furthermore, when both elections are taken into account (concurrent powers), it is necessary to weight the relative importance of parliamentary and presidential elections. Usually it is reasonable to give an equal weight

(50 percent) to both elections, but in some cases it may be more realistic to give a weight of 75 or 25 percent to parliamentary elections and 25 or 75 percent to executive elections, or to the executive branch of the government. Finally, there are some problems with these two variables. Differences in electoral systems account for some of the variation in the smaller parties' share of the votes. Proportional electoral systems are assumed to promote the multiplication of political parties, but this factor has significantly affected the share of the smaller parties in relatively few countries. The competition indicator is biased to produce somewhat higher values for countries using proportional electoral systems than for those with plurality or majority electoral systems. Arend Lijphart (1999: 277–80) argues that my index of democratization 'necessarily suffers from the bias that two-party systems tend to get lower scores than multiparty systems' and that 'its sizeable bias in favor of multiparty systems makes the Vanhanen index a less credible index of democratic quality than the Dahl index' (cf. Bollen 1990: 15; Moore 1995: 8–9; Schmidt 2000: 402). Lijphart may exaggerate the significance of this bias, but I admit that there is some bias. In order to restrict the effects of this bias, I decided to determine the upper limit of the smaller parties' share that will be used in the calculation of the values of Competition. This upper limit is 70 percent. In several countries using proportional electoral systems, the smaller parties' share rises higher than 70 percent, but the value of Competition will not be higher than 70 percent for any country. I think that this cut-off point diminishes the bias caused by electoral and party systems (cf. Vanhanen 2000a, 2000b).

Manfred G. Schmidt (2000: 398–402) introduces my measures of democracy and discusses the results of measurements. In most cases, the results of measurements are reasonable, but there are some anomalous results. He wonders why the value of the Index of Democratization in 1993 was higher for Russia (27.0) than for Switzerland (23.7) and the United States (20.7) and for Yugoslavia (20.7) as high as for the United States (cf. Wagschal 1999: 36–7). These and some other anomalous and confusing results of measurement are consequences of my decision to apply the two basic measures of democracy mechanically to all countries without any *ad hoc* modifications. I agree with Schmidt that my measures of democracy produced systematically too low values of ID for Switzerland and the United States. He emphasizes that because of referendums the actual degree of participation in these two countries has been much higher than the Participation variable indicates. In this new study, referendums are taken into account, and consequently the values of ID for Switzerland and the United States rise to the level of other Western democracies.

A disadvantage of Participation is that it does not take into account the variation in age structures. The percentage of the adult population is significantly higher in developed countries than in poor countries in which people die younger and in which, therefore, the relative number of children is higher. This factor exaggerates differences in the degree of electoral

participation between developed and developing countries. The degree of participation has rarely risen above 70 percent. However, because we already have the 70 percent cut-off point for Competition, the same 70 percent cut-off point will be applied to Participation, too. Another shortcoming is that Participation does not take into account the variation in the nature and importance of elections – only the number of votes. This insensitivity to the significance of elections reduces its ability to measure the degree of democracy.

Some scholars, as indicated in the previous chapter, have criticized the use of voter turnout as a measure of democracy. Bollen (1990, 1993) speaks of invalid measures of democracy and does not accept the use of voter turnout as a measure of democracy, and for Moore (1995) my basic measures of democracy are simply unacceptable. Munck and Verkuilen (2002) continue the same line of argumentation. They say that

Vanhanen's decision to measure his attribute 'competition' in terms of the percentage of votes going to the largest party and his attribute 'participation' in terms of voter turnout has been criticized on the ground that these indicators not only constitute, at best, poor measures of the pertinent attribute but also introduce systematic bias into the measurement exercise.

(Munck and Verkuilen 2002: 16–17)

In another connection, they describe my measures of democracy as 'questionable indicators' (ibid.: 28). If I were using 'participation' alone as the measure of democracy, it would be justified to regard it as an invalid measure of democracy, but I am not measuring democracy directly by the degree of participation; I am using it together with the degree of competition (cf. Schmidt 2000: 398–9). I think that the level of popular participation matters, but it does not matter independently from the level of competition. *Human Development Report 2002* (2002: 14) emphasizes that political participation and freedom are fundamental parts of human development and that no form of accountability is more direct than elections. Besides, there 'is also no more egalitarian form of participation' (ibid.: 54).

Competition and Participation are assumed to measure two crucial dimensions of democratization, but they do not cover all important aspects of democratization. For example, I have not attempted to measure the level of civil and political liberties, which Coulter (1975), Bollen (1979, 1980), the Freedom House's *Comparative Survey of Freedom* (1999), Hadenius (1992), Diamond *et al.* (1995), Diamond (1999) and many other researchers regard as the third important dimension of democracy. I agree that political rights and liberties represent essential characteristics of democracy, but I have omitted them from my measures because I think that it would not be possible to measure their existence and relative importance by any reliable

empirical variables. Besides, I think that Competition measures the existence of political rights and civil liberties indirectly. There are hardly any countries in which legal competition for power through elections takes place without the existence of civil and political liberties. It would be equally difficult to imagine a country where individuals and groups enjoy civil and political liberties but political power is concentrated in the hands of one group. In fact, my political variables, especially ID and Competition, are strongly correlated with the Freedom House's ratings of political rights and civil liberties (see, for example, Jagers and Gurr 1995: 475; Vanhanen 1997: 38; Schmidt 2000: 414), which implies that, to some extent, they measure also political rights and civil liberties (cf. Przeworski *et al.* 2000: 34).

Referendums

There may be some important aspects of democratization which are not sufficiently covered by Competition and Participation variables, which focus on the institutions of representative democracy. They do not measure, for example, direct forms of democracy. This observation turned my attention to referendums, which represent the most important form of direct democracy in contemporary states (cf. Beyle 2000: 25). Referendums have been used in some countries, especially in Switzerland and the United States, since the nineteenth century, and their frequency has increased during the last decades throughout the world (see Butler and Ranney 1994; Butler 1995; Gallagher 2001). As David A. Butler notes, referendums in Switzerland and some American states 'have become a way of life, accepted as an essential part of democratic process' (Butler 1995: 1044). Generally speaking, referendums are used to deal with major issues or issues that seem to transcend the regular party alignments (see Gallagher 2001). It is reasonable to argue that referendums increase the degree of democracy, because they give voters possibilities to decide some issues directly. Consequently, referendums can be regarded to represent an additional dimension of democracy, and I found it useful to complement my measures of democracy by taking into account the relative significance of referendums in political systems. Democracy should not be regarded as a closed system permanently tied to the representative institutions now existing. It is more reasonable to regard it as an evolving system producing new forms that may extend or reduce the content of democracy.

It is strange that political scientists have until now paid very little attention to referendums and to their significance for democracy. There is not much research literature on referendums, and they are only briefly discussed in textbooks, or not mentioned at all. *The Encyclopedia of Democracy* (1995), edited by Lipset, includes a brief article on referendums (Butler 1995), whereas in *A New Handbook of Political Science* (1998), edited by Robert E. Goodin and Hans-Dieter Klingemann, referendums are not

mentioned. Manfred G. Schmidt's book *Demokratietheorien* (theories of democracy) is an exception. He discusses the forms of direct democracy and especially referendums in Switzerland in a separate chapter (Schmidt 2000: 355–75). Referendums represent a new stage of democratization, just like the extension of the right to vote a century ago, although most political scientists have not yet noticed it.

The problem is how to combine referendums with Competition and Participation variables and how to determine their relative significance compared to the existing Competition and Participation variables. In principle, there would be many ways to combine them with the two previous variables and to calculate their relative significance. My argument is that because the institutions of representative democracy are still dominant in all contemporary states, it is plausible to conclude that referendums are less significant than competition and participation in national elections. Furthermore, because referendums are not held in all countries and because their frequency varies greatly from country to country, it would not be justified to establish, in addition to Competition and Participation, a third variable, based on referendums, to measure democratization. It is more sensible to combine referendums with the existing variables.

Referendums are added to the Participation variable in such a way that each national referendum adds the degree of participation by 5 points and each state referendum by 1 point for the year when the referendum took place. However, it seems reasonable to limit the impact of referendums to 30 points for a year, because it should not rise higher than the degree of electoral participation, and the combined score of participation and referendums to 70 (the same 70 percent limit is used in the case of Competition). Six national referendums add the degree of participation by 30 percent for a year. If the number of referendums is higher than six, the percentage remains the same 30. Correspondingly, 30 state referendums add the degree of participation by 30 percent for a year. This percentage remains the same, although the number of state referendums were higher than 30. The value of the combined degree of participation cannot be higher than 70 percent, although the sum of Participation and referendum variables were higher than 70. As a consequence, the impact of referendums on the Participation variable will depend not only on the number of referendums but also on the degree of electoral participation. If the degree of electoral participation is lower than 40 percent, the impact of referendums may rise to 30 percent, but if the degree of electoral participation is higher than 40 percent, the maximum impact of referendums will be less than 30 percent, and, if electoral participation rises to 70 percent, the impact of referendums drops to zero.

Only the number of referendums is counted in this measurement. No attention is paid to the percentages of 'yes' and 'no' votes, nor to the number of voters. Measurement is focused on the number of cases when the people gets an opportunity to decide political issues by direct vote (mandatory

referendum), or to affect the fate of an issue (advisory referendum). I have not attempted to exclude formal plebiscites without any real choice from the category of referendums for the reason that such plebiscites have usually been held in non-democratic countries for which the value of Competition is zero or near zero. It means that the Index of Democratization for such countries remains in zero or near zero despite the number of plebiscites and the value of Participation variable. Referendums do not affect the value of Competition variable. They affect only the Participation variable and through it the Index of Democratization, but the effect of referendums (Participation) on the Index of Democratization depends crucially on the degree of Competition. If Competition is in zero, the Index of Democratization cannot rise from zero, even if the value of the Participation variable were high. In other words, the higher the value of Competition, the more the same number of referendums increases the value of ID. I think that the incorporation of referendums into the Participation variable improves the quality of the measures of democracy and corrects some anomalous results of previous measurements, especially in the cases of Switzerland and the United States.

The Index of Democratization (ID)

The two basic indicators of democratization can be used separately to measure the level of democracy. However, because they are assumed to indicate two different dimensions of democratization, it is reasonable to argue that a combination of them would be a more realistic indicator of democracy than either of them alone. They could be combined in many ways, depending on how we weight the importance of Competition and Participation. Some researchers (see Bollen 1979, 1980; Coppedge and Reinicke 1988) have excluded the degree of electoral participation from their measures of democracy because they feel that it does not represent a significant differentiating aspect of democracy. My argument is that participation is as important a dimension of democracy as competition. If only a small minority of the adult population takes part in elections, then the electoral struggle for power is restricted to the dominant stratum of the population, and the bulk of the population remains outside national politics. Power-sharing is certainly more superficial in such countries compared to societies where a majority of the adult population takes part in elections (presupposing, of course, that elections are competitive). So the degree of participation separates oligarchical democracies from more complete democracies. Because I see both dimensions of democratization as necessary for democracy, I have weighted them equally in the Index of Democratization (ID) (cf. Vanhanen 2000a, 2000b).

Weighting the two basic variables equally does not solve the problem of how to combine them. One alternative would be to calculate their arithmetic mean; another would be to multiply them – or we could use a

mixture of adding and multiplying. The first combination would be based on the assumption that both dimensions indicate the degree of democracy independently and that a high level of competition can partly compensate for the lack of participation, or vice versa. The second combination is based on the assumption that both dimensions are necessary for democracy and that a high level of competition cannot compensate for the lack of participation, or vice versa. The latter assumption seems theoretically more reasonable than the former. So I have combined the two variables into ID by multiplying them and dividing the product by 100. Weighting indicators equally and multiplying them means that a low value for either of the two variables is enough to keep the index value low. The Index of Democratization will get high values only if the values of both basic variables are high. Multiplication of the two percentages corrects one weakness in the Participation variable mentioned above – that this indicator does not differentiate between important and formal elections. There are countries where the level of electoral participation is high but the level of democracy low because elections are not free and competitive. Multiplication of the two percentages cancels the misleading information provided by Participation in such cases and produces a low ID value. The same correction takes place in the opposite case when the level of competition is high but the degree of electoral participation very low (cf. Vanhanen 2000a, 2000b).

This index of democracy is simpler than any of the alternative measures of democracy (cf. Munck and Verkuilen 2002). It differs from other measures in two important ways: (1) it uses only two indicators, and (2) both of them are based, in principle, on quantitative data. Most other measures of democracy include more indicators, and most are based on more or less qualitative data. I think that it is scientifically more justified to use simple quantitative indicators than more complicated indicators loaded with weights and estimates based on subjective judgements if those simple quantitative indicators are as valid measures of the phenomenon as the more complicated and less quantitative indicators. However, some subjective judgements are also needed in the use of my measures of democracy, but it is possible for other researchers to see from the dataset what those subjective interpretations have been. One advantage of this Index of Democratization is that empirical data on the two basic variables are available from different sources, that statistical data on elections are in most cases exact and reliable, and that the role of subjective judgements in the use of electoral data is relatively limited. Further, I would like to emphasize that because the two basic variables do not take into account all important aspects of democracy, they are better adapted to indicate significant differences between political systems from the perspective of democracy than more detailed differences among democracies or non-democracies (cf. Vanhanen 2000a, 2000b).

Threshold values of democracy

Empirical data on the two basic variables and the Index of Democratization make it possible to compare countries and to rank them according to their level of democracy. However, because this ranking forms a continuum from very high index values to zero values, it does not tell us directly at what stage political systems cease to be democracies and begin to be hegemonic or autocratic systems, or vice versa. Countries with high index values are democracies and countries with low index values non-democracies, but there is no natural or clear index level for differentiating between them. We have to select threshold values. In the following, I introduce the threshold values that were used in my previous studies and that will be used in this study.

If the share of the smaller parties is very low, for example, less than 30 percent of the votes cast (or of the seats in parliament), the dominance of the largest party is so overpowering that it is doubtful whether such a country could be regarded as a democracy. I agree with Gastil (1988: 15), who argues that 'any group or leader that regularly receives 70 percent or more of the votes indicates a weak opposition, and the probable existence of undemocratic barriers in the way of its further success' (see also Cutright 1963). Levitsky and Way (2002: 55) express the same idea by noting that 'regimes in which presidents are reelected with more than 70 percent of the vote can generally be considered noncompetitive.' So a reasonable minimum threshold of democracy would be around 30 percent for Competition.

In the case of Participation, it is sensible to use a lower threshold value because the percentage of electoral participation is calculated from the total population. In my 1984 study, I used 10 percent for Participation as another minimum threshold of democracy because historically it has been difficult for many countries to reach the 10 percent level of electoral participation (cf. Przeworski *et al.* 2000: 34). This threshold was raised to 15 percent in my later studies. Now, when nearly all countries have adopted the rule of universal suffrage, it seems reasonable to raise this threshold to 20 percent.

The selected threshold values of Competition (30 percent) and Participation (20 percent) are arbitrary, but I believe that they are suitable approximations for distinguishing more or less autocratic systems from political systems that satisfy minimum criteria of democracy. Because both dimensions of democracy are assumed to be equally important, a country must cross both threshold values if it is to be classified as a democracy. It would not be enough to define a threshold value of democracy merely for the ID. In the previous studies, I used 5.0 index points as the minimum threshold of democracy for ID. In this study for years 1999–2001, the minimum threshold of ID produced by the minimum thresholds of Competition and Participation is 6.0 index points. In fact, we need only the threshold values of Competition (30 percent) and Participation (20 percent). When these

two criteria are satisfied, the ID value is at least 6.0 but can be much higher. Countries that have reached the two minimum threshold values are regarded as democracies. Other researchers could experiment with other minimum threshold values of democracy (cf. Vanhanen 2000a, 2000b). Of course, countries which satisfy only the minimum criteria of democracy do not necessarily satisfy more demanding standards of liberal democracy (see Diamond 2002).

One problem in the measurement of democracy concerns the question whether the contrast between autocracy (or dictatorship) and democracy is dichotomous or continuous. Many researchers argue that political regimes constitute a continuum from autocracy to democracy and that, therefore, it is justified to measure the degree of democracy or of autocracy. The measures of democracy used by Bollen (1980, 1990), Coppedge and Reinicke (1988), Hadenius (1992), the Freedom House, and Polity project, for example, are continuous. My variables are also continuous. Sartori (1987) stresses that first we 'are required to decide whether a given polity is *either* democratic *or* not. This also entails that the differences sorted out by such treatment are of *kind* (not of degree).' However, he continues that 'there is no incompatibility between the classificatory and the degree treatments; within democracy as a *class* (type), one can assess as many variations *in degree* (of more-and-less democracy) as one sees fit.' Thus, his stand is that variations of democracy require that 'we first establish to what they apply, that is, that we first decide what is, and what is not, a democracy' (Sartori 1987: 183–5).

Przeworski *et al.* (2000) focus on to Sartori's first task, to classify regimes into democracies and autocracies. Therefore they prefer in their measurement of democracy a nominal classification, rather than a ratio scale. They say to believe 'that although some regimes are more democratic than others, unless the offices are contested, they should not be considered democratic. The analogy with the proverbial pregnancy is thus that whereas democracy can be more or less advanced, one cannot be half-democratic' (Przeworski *et al.* 2000: 57). They continue that it is one thing to argue that some democracies are more democratic than others, but it is another to argue that democracy is a continuous feature over all regimes. I agree with these arguments. My three measures of democracy are continuous, but they continue from autocracy to democracy. The minimum threshold values of democracy can be used to classify regimes into democracies and non-democracies, and below the threshold values my variables measure the degree of autocracy, not democracy. It is clear that political systems slightly above or below the threshold of democracy do not necessarily differ drastically from each other. Consequently, the borderline between democracies and non-democracies is to some extent ambiguous, but the same borderline can be applied to all cases. Thus, my measures of democracy fulfil Sartori's both tasks; they establish classes of democracies and non-democracies and, within classes, measure the degree of democracy and of non-democracy.

Data on variables

Empirical data on the share of the smaller parties, the degree of electoral participation, referendums, and other data needed to calculate the values of Competition, Participation and the Index of Democratization are given for years 1999–2001 in Appendix 1, and for the period 1810–1998 they are available from *The Polyarchy Dataset* (2001).

Appendix 1 includes a separate table for each of the 170 countries covered by this study in alphabetical order. Each table indicates how the country's governmental system is classified (parliamentary dominance, executive dominance, or concurrent powers) and provides data needed to calculate the values of Competition and Participation. Data include the year of election (or of other political change), the name of the largest party and/or the name of elected president or other chief executive, the percentage of the votes won by the largest party (or the percentage of the seats in parliament), total population in the years of elections, and total (usually valid) votes as a percentage of the population. If governmental institutions are not based on elections, table provides other information on the nature of regimes, for example, on traditional rulers, *coups d'état*, revolutions, or civil wars. Zero values of Competition and Participation are based on such empirical information. Possible national or state referendums are listed at the end of tables. The values of Competition and Participation are calculated for each year on the basis of the situation as of 31 December that year. Empirical data on the results of elections are published in national statistical reports, but there are also several historical studies on election results and international compilations of contemporary electoral and other political data. All data are documented.

It was possible to find the necessary electoral data from nearly all countries. If electoral data were not available from some election, the values of Competition and/or Participation were estimated on the basis of other data. Estimations are indicated in Appendix 1. The most useful sources for the years 1999–2001 include *Chronicle of Parliamentary Elections*, published by the Inter-Parliamentary Union; *Elections Today*, published by the International Foundation for Electoral Systems (IFES); and *Keesing's Record of World Events*, but other sources have also been used. Data on total populations are from the United Nations' *1999 Demographic Yearbook*.

Data on earlier referendums are in most cases based on data given in Butler and Ranney's *Referendums around the World: The Growing Use of Direct Democracy* (1994). It is probable that data on referendums and on state referendums in particular are not complete. Data on referendums concerning the years 1999–2001 are mainly from *Keesing's Record of World Events*, IFES Election Guide Org., and *Chronicle of Parliamentary Elections*. In the cases of Switzerland and the United States, all data are from national sources.

Comparison with alternative datasets

The existence of alternative datasets on measures of democracy makes it possible to compare the results of measurements at the level of single countries. To what extent have different measurements produced similar or different results? Which are the cases in which measurements differ from each other clearly? The Freedom House (1999) ratings of political rights and civil liberties from 1972–3 and the Polity democracy and autocracy scales (Gurr and Jagers 1999; Jagers and Gurr 1995) from 1800 are the most extensive alternative datasets on measures of democracy that can be compared with my measurements (cf. Munck and Verkuilen 2002). Correlation analysis provides an answer to the first question, whereas a comparison of the measurements at the level of single countries helps to answer the second question. This comparison of the three datasets is limited to one year from each decade since the 1810s (since the 1970s in the case of the Freedom House ratings). The year 1998 is used as the latest year of comparison, and the same eighth year of each decade has been taken into account since 1818. In this comparison, my dataset covers 184 contemporary countries and their predecessors, including also countries whose population was less than 200,000 in 1996 but more than 50,000 inhabitants. The Freedom House datasets covers the same contemporary countries, whereas the Polity dataset excludes the countries whose population is less than 500,000 inhabitants (cf. Vanhanen 2000b).

Unfortunately it is not unproblematic to determine whether a country should be regarded as a democracy or non-democracy in the Polity and the Freedom House datasets because the threshold of democracy is not clearly defined in these datasets. So I had to define the threshold values of the Polity scores and the Freedom House ratings that separate democracies from non-democracies for the purposes of this analysis. In the case of the Polity dataset, I defined as democracies countries for which the scores of the transformed Democracy minus Autocracy variable (DA) are 15–20. The Democracy and Autocracy variables vary from 0–10, and the transformed Democracy–Autocracy (DA) variable was constructed by subtracting Autocracy from Democracy and adding 10 points. Thus it varies from 0–20. The Freedom House’s combined ratings for political rights and civil liberties vary from 2–5 (free) to 11–14 (not free). The Freedom House category of ‘electoral democracies’ includes, in addition to ‘free’ countries, more than half of the ‘partly free’ countries (see Karatnycky 1998: 3–16, 607–8). Therefore, I decided to include in the Freedom House list of democracies all countries for which the combined ratings of political rights and civil liberties were 7 or less, although this list of democracies is not fully identical to the Freedom House list of ‘electoral democracies’ (cf. Karatnycky 1998: 607–8; Reich 2002: 3–4). In the case of my dataset, the category of democracies includes the countries that crossed the three threshold values of democracy – Competition 30 percent, Participation 10 percent, and ID

5.0 index points – over the period 1818–1978, and the countries that crossed the three threshold values of democracy – Competition 30 percent, Participation 15 percent, and ID 5.0 index points – over the period 1988–98. It should be noted that several countries for which ID is higher than 5.0 are excluded from the list of democracies for the reason that the value of Competition or Participation was below the threshold value (cf. Vanhanen 2000b).

Let us first compare the three datasets by correlating the Polity and Freedom House measures of democracy with my ID over the period 1818–1998. Because the Polity and Freedom House measures are at the ordinal level, it is plausible to use Spearman rank correlations. The results of correlation analysis given in Table 3.1 show that the ID was in most cases strongly or moderately correlated with the Polity98 transformed DA over the period 1818–1998 and strongly correlated with the FH combined ratings of political rights and civil liberties over the period 1978–98. How to interpret the results of correlation analysis? The covariation between ID and the Polity DA was 53–74 percent in the period 1928–98, and covariation with the Freedom House ratings in 1978–98 was 47–65 percent. Thus, in most cases results corresponded each other, but a significant part of the variation remained unaccounted for. In the period 1818–1918, the covariation between the Polity DA and ID was less than 50 percent in all years of comparison and 30 percent or less in the period 1818–78. The

Table 3.1 Index of Democratization (ID) correlated with the Polity Democracy–Autocracy (DA) scores and the Freedom House combined ratings of political rights and civil liberties

<i>Year</i>	<i>N</i>	<i>Polity DA</i>	<i>N</i>	<i>FH ratings</i>
1818	19	0.551	–	–
1828	26	0.433	–	–
1838	34	0.469	–	–
1848	40	0.476	–	–
1858	39	0.482	–	–
1868	41	0.437	–	–
1878	45	0.454	–	–
1888	46	0.563	–	–
1898	47	0.613	–	–
1908	49	0.612	–	–
1918	49	0.681	–	–
1928	63	0.851	–	–
1938	64	0.761	–	–
1948	71	0.731	–	–
1958	86	0.843	–	–
1968	124	0.821	–	–
1978	134	0.815	151	–0.688
1988	139	0.830	161	–0.778
1998	158	0.861	184	–0.811

measurements differed considerably from each other until 1918, and have been closer to each other since 1928.

The strong relationship between my measures of democracy and Polity and Freedom House measures remained the same in 2000. The Pearson correlations between Polity IV scores for 2000 (see *Human Development Report 2002* 2002: 38–41) and my measures of democracy for 2000 are: Competition 0.887, Participation 0.625, and ID 0.818 (N=147). Corresponding correlations between the Freedom House combined scores of civil liberties and political rights (*Human Development Report 2002* 2002: 38–41) are: Competition –0.792, Participation –0.603, and ID –0.800 (N=162). Polity and Freedom House data are even more strongly correlated with each other (–0.906) (cf. Reich 2002: 14–17).

The results of correlation analysis indicate the general correspondence of measurements, but they do not show whether the same countries were regarded as democracies or non-democracies in the alternative measurements. This can be disclosed by examining the results of dichotomous classifications into democracies and non-democracies. Table 3.2, in which the number of democracies is presented according to the three alternative measurements, shows that the relative number of democracies has increased nearly continuously since the 1840s and that the trends of change have

Table 3.2 Number of democracies according to three alternative datasets over the period 1818–1998

<i>Year</i>	<i>Vanhanen dataset</i>			<i>Polity98 dataset</i>			<i>Freedom House</i>		
	<i>Democracies</i>		<i>Total</i>	<i>Democracies</i>		<i>Total</i>	<i>Democracies</i>		<i>Total</i>
	<i>N</i>	<i>%</i>	<i>N</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>N</i>	<i>%</i>	<i>N</i>
1818	0	0	22	1	4.3	23	–	–	–
1828	0	0	28	2	6.5	31	–	–	–
1838	0	0	35	1	2.6	39	–	–	–
1848	2	5.0	40	3	6.7	45	–	–	–
1858	1	2.5	40	4	8.7	46	–	–	–
1868	1	2.3	43	7	14.0	50	–	–	–
1878	3	6.5	46	8	15.4	52	–	–	–
1888	4	8.7	46	10	18.9	53	–	–	–
1898	5	10.6	47	12	22.6	53	–	–	–
1908	11	21.2	52	14	26.4	53	–	–	–
1918	14	24.1	58	21	37.5	56	–	–	–
1928	28	43.1	65	24	34.8	69	–	–	–
1938	20	30.3	66	21	30.4	69	–	–	–
1948	30	39.4	76	25	33.8	74	–	–	–
1958	40	44.4	90	33	37.9	87	–	–	–
1968	49	36.8	133	41	32.8	125	–	–	–
1978	48	31.6	152	41	30.4	135	53	34.6	153
1988	68	42.2	161	51	36.7	139	65	40.4	161
1998	116	63.0	184	85	53.8	158	100	54.3	184

been more or less similar, according to all datasets. We can also see that there was a small 'wave' of democratization in the 1920s and again since the 1980s (cf. Huntington 1991). There is one clear difference between the Polity and my datasets: until the 1910s, the Polity dataset indicates a significantly higher relative number of democracies than my dataset, whereas my dataset indicates a slightly higher relative number of democracies for most decades since the 1920s. The difference is greatest for 1998 (Cf. Vanhanen 2000b).

Comparison with Polity scores

It is interesting to explore for which countries dichotomous classifications were different. Some differences in the number of democracies are due to the fact that all countries are not the same in the Polity and my datasets. In the following, I will take into account only the cases in which a country is regarded as a democracy in one dataset and as a non-democracy in another dataset. The results of measurements contradict each other in such cases. The results will be explored from decade to decade starting from 1818. It should be noted that this exploration is limited to one year from each decade. The number of contradicting classifications would be much higher if all years had been taken into account.

1818–38. According to the Polity dataset, the United States was a democracy already in 1818–38, whereas it remained below my Participation and ID thresholds of democracy. Besides, Peru was slightly above the Polity threshold of democracy in 1828, whereas the values of my variables were in zero.

1848. France and the United States were democracies according to both datasets, but the Polity dataset regarded Switzerland as a democracy also, whereas it remained below all my thresholds of democracy in 1848 (Competition 22.0, Participation 5.0, and ID 1.1).

1858. According to my variables, the United States was the only democracy in 1858, but, in the Polity dataset, Switzerland and Belgium were also democracies as well as New Zealand, which was not included in my dataset in 1858. Because Participation was only 1.6 percent for Belgium and 5.0 percent for Switzerland, they remained below my threshold of democracy. The Polity criteria of democracy do not seem to presuppose any minimum level of electoral participation, whereas my argument is that countries in which less than 10 percent of the population voted in elections cannot be regarded as democracies.

1868. The United States is still the only democracy in my dataset, but the Polity list of democracies includes also Belgium, Colombia, Costa Rica, Greece, and Switzerland (and New Zealand). These countries were below my thresholds of democracy, especially below the Participation threshold.

1878. France, Switzerland, and the United States are democracies in both datasets. In my dataset, Canada is above the threshold of democracy but not in the Polity dataset. Other contradicting cases were the same as in 1868 (Belgium, Colombia, Costa Rica, and Greece).

1888. Canada is added to the list of democracies in the Polity dataset, too. In addition to Belgium, Colombia, Costa Rica, and Greece (and New Zealand), the Polity list of democracies includes Chile and the United Kingdom. They remained below my threshold of democracy because the values of Competition (1.8 percent) and Participation (3.6 percent) were extremely low for Chile and because the value of Participation (7.6 percent) was slightly below the threshold of democracy for the United Kingdom.

1898. Belgium crossed the threshold of democracy in my dataset, too. In addition to Costa Rica, Greece, and the United Kingdom (and New Zealand), Honduras, Luxembourg, and Norway are new democracies in the Polity dataset, but Luxembourg (4.0 percent) and Norway (7.7 percent) were below the Participation threshold of democracy and Honduras below the Competition threshold of democracy (17.5 percent) in my dataset.

1908. The common list of democracies includes nine countries (Australia, Belgium, Canada, France, New Zealand, Norway, Switzerland, the United Kingdom, and the United States). Denmark and the Netherlands are above the threshold of democracy in my dataset but not in the Polity dataset. Costa Rica, Greece, Honduras, Luxembourg, and Spain are democracies in the Polity dataset but not in mine. Participation was only 0.2 percent for Costa Rica, 5.0 percent for Greece, and 6.0 percent for Luxembourg. The values of all variables were in zero for Honduras and below the threshold values for Spain (Competition 20.0, Participation 7.9 and ID 1.6).

1918. Denmark, Finland, and the Netherlands were added to the common list of democracies, which includes 12 countries. Italy and Sweden had crossed the threshold of democracy in my dataset but not in the Polity dataset, whereas Costa Rica, Czechoslovakia, Estonia, Honduras, Iceland, Luxembourg, Poland, Portugal, and Spain are democracies in the Polity dataset but not in mine. Of these countries, Iceland, Czechoslovakia, and Poland are not contradictory cases because they were not yet in my dataset. My variables for Estonia were in zero in 1918 because the country was controlled by a provisional government after the German occupation ended in November 1918. In the case of Portugal, Participation (6.0 percent) was below the threshold of democracy in 1918.

1928. The list of common democracies increased by Austria, Costa Rica, Czechoslovakia, Estonia, Germany, Greece, Honduras, Ireland, Latvia, Luxembourg, and Sweden. Argentina, Nicaragua, Poland, Uruguay, and Yugoslavia are democracies in my dataset but not in the Polity dataset. They had governments based on elections, but they were only slightly above the

minimum threshold of democracy. The clearly lower Polity estimates for these countries in 1928 may emphasize the fragility of these regimes and later breakdowns of democratic systems in all these countries.

1938. The common list of democracies includes 18 countries. The number of contradicting classifications had decreased to three. Finland and Uruguay are democracies in my dataset but not in the Polity dataset, whereas Colombia is a democracy in the Polity dataset but not in mine. Finland had a normal parliamentary government in 1938 (Competition 70.0, Participation 31.6), but it had fallen below the Polity criteria of democracy (7–3); Uruguay had even more (3–3) below the Polity criteria of democracy. Colombia did not satisfy my criteria of democracy, because president Eduardo Santos had been elected without opposition (99.7 percent) in 1938 and because the value of Participation was not higher than 5.9 percent.

1948. The common list of democracies includes 21 countries. The list of contradicting cases is much longer than in 1938. Argentina, Colombia, Cuba, Japan, South Korea, Lebanon, Panama, and the Philippines are democracies in my dataset but not in the Polity dataset. The much lower Polity scores for these countries may reflect the fact that democracy collapsed in most of them some years later. Burma, Costa Rica, and Guatemala are in the Polity list of democracies but not in mine. Burma remained below my criteria of democracy because the Anti-Fascist People's Freedom League was practically the only party in the 1947 parliamentary election (91.0 percent of the votes). My variables dropped to zero for Costa Rica in 1948 because the country was temporarily ruled by a provisional government, after a brief civil war in 1948, until November 1949 when Ulate Blanco, elected in February 1948, was able to assume the presidency. All my variables were below the threshold of democracy for Guatemala in 1948.

1958. The common list of democracies had risen to 30 countries, but the number of contradicting cases is even higher than in 1948. Argentina, Ecuador, Greece, Guatemala, South Korea, Lebanon, Panama, Peru, and Turkey are democracies in my dataset but not in the Polity dataset, whereas Colombia, Laos, and Malaysia are democracies in the Polity dataset but not in mine. According to my variables, Argentina (ID 24.9), Greece (ID 22.0), South Korea (ID 18.1), Lebanon (ID 16.0), and Turkey (ID 19.1) were relatively well established democracies in 1958, whereas Ecuador (11.1), Guatemala (ID 8.3), Panama (ID 8.6), and Peru (8.4) were only slightly above the minimum threshold of democracy. There were breakdowns of democracy in all these countries later on, but in 1958 they fulfilled my criteria of democracy. In my dataset, Colombia and Malaysia remained in the category of non-democracies because Competition for these countries was below 30 percent in 1958. My variables for Laos were in zero because there was no elected government.

1968. The number of common democracies had risen to 38, but the classifications deviated for the Dominican Republic, Guatemala, Guyana, South Korea, Lebanon, and Sierra Leone, which were democracies in my dataset, and for Botswana and Colombia, which were democracies in the Polity dataset but not in mine. According to my variables, the Dominican Republic (ID 15.6), Guyana (ID 19.1), South Korea (ID 20.0), Lebanon (ID 13.9), and Sierra Leone (ID 14.8) were clear democracies, and Guatemala (ID 7.0) was slightly above the minimum threshold of democracy. Botswana and Colombia did not satisfy my criteria of democracy. Competition was too low.

1978. The classifications of the two datasets were nearly identical for 1978. The number of common democracies was 40. El Salvador (ID 9.3) and Suriname (ID 18.1) were democracies in my dataset but not in the Polity's, whereas Botswana satisfied the Polity criteria of democracy but was below my threshold values of democracy (ID 2.2).

1988. According to both datasets, 49 countries were democracies in 1988. When the 13 small democracies which are not in the Polity dataset are excluded, there are eight countries for which classifications are different. According to my measures, Guatemala, Liberia, Mexico, Nicaragua, Singapore, and Thailand were above the threshold of democracy in 1988 but not according to the Polity criteria, and Jamaica and Sudan were democracies in the Polity dataset but not in mine. Guatemala was only slightly above the threshold of democracy (ID 6.6). Liberia had crossed the threshold of democracy in the 1985 elections, but in practice democratic institutions were collapsing in 1988 because of domestic conflicts. According to my measures, Mexico crossed the threshold of democracy in the 1988 presidential election (ID 11.4). Nicaragua had been above the threshold of democracy since the 1984 competitive elections. Singapore was regarded to be a democracy because the ruling party's share of the votes was not more than 61.8 percent in the 1988 parliamentary election. However, it won 69 of the 70 contested seats. Therefore the quality of Singapore's democracy was dubious from the perspective of my criteria, too. Thailand crossed my threshold of democracy for the first time in the 1984 parliamentary election and remained above the threshold in 1988. Jamaica dropped below the threshold of democracy in the 1983 parliamentary election, which was boycotted by the opposition. However, because the basic characteristics of the political system did not change, my measures based on election results led to a misleading conclusion. In this case the classification of the Polity dataset is clearly more correct. This indicates that sometimes the mechanical use of election results may lead to misleading results. Sudan had a competitive parliamentary election in 1986, but because the president was elected without opposition, the country remained below my threshold of democracy (ID 3.8).

1998. My list of democracies (116) includes 31 more countries than the Polity list (85), but 20 of them are small countries excluded from the Polity dataset. The common list of democracies includes 79 countries. The number of contradictory classifications rises to 23. According to my measures Algeria (ID 19.9), Bosnia & Herzegovina (27.1), Croatia (20.3), Gambia (10.2), Georgia (ID 19.8), Guinea (ID 12.4), Guyana (ID 19.6), Kenya (ID 8.4), Lebanon (ID 25.8), Malaysia (ID 11.6), Niger (7.3), Peru (ID 11.2), Russia (ID 29.5), Senegal (ID 6.9), Singapore (ID 8.5), Togo (ID 17.7), and Yugoslavia (ID 5.9) were democracies, whereas they were not in the Polity list of democracies. According to the Polity measures, Guatemala, Guinea-Bissau, Haiti, Mali, Namibia, and Pakistan were democracies in 1998 but not according to my measures. It should be noted that nearly all of these countries are developing countries in which democratic systems have not yet stabilized, or they are recently established new democracies. Guatemala was slightly below the Participation threshold of democracy; I did not regard Guinea-Bissau as a democracy in 1998 because the military rebellion started in June 1998 had paralyzed the government; Haiti remained below my threshold of democracy because René Préval had been elected president in 1995 by 94.8 percent of the votes; Mali remained below the threshold of democracy because Alpha Oumar Konare had been elected president in 1994 by 84.4 percent of the votes; Namibia remained below the Competition threshold of democracy because Sam Nujoma had been elected president in 1994 by 76.3 percent of the votes; and Pakistan remained below the Participation and ID thresholds of democracy (cf. Vanhanen 2000a, 2000b).

Comparison with Freedom House ratings

It is easier to compare the correspondence between my measures and the Freedom House combined ratings because both datasets include the same countries. In the following, my attention is limited to the cases in which the classifications into democracies and non-democracies differ from each other.

1978. Classifications contradict each other only in seven cases. According to the Freedom House ratings, Botswana, Comoros, Djibouti, Guyana, Morocco, and Samoa (Western) were democracies, but they remained below my criteria of democracy. The degree of competition was too low in Botswana (24.6), Comoros (0), Djibouti (0), Guyana (29.9), and Morocco (13.5); and Participation was too low in Samoa (4.0). On the other hand, Burkina Faso was a democracy according to my measures but not on the basis of FH ratings.

1988. Contradictory classifications had risen to 11 in 1988. Jamaica, Nepal, Samoa (Western), and Senegal were democracies according to FH ratings but not on the basis of my variables. As noted above, my measures are misleading in the case of Jamaica because the nature of the political system

did not change, although the opposition boycotted the 1983 parliamentary election. Nepal remained below my measures of democracy because political parties were not allowed to take part in elections. Senegal had competitive presidential elections, but Competition remained slightly below the threshold of democracy (26.8 percent) in the 1986 presidential election. South Korea, Liberia, Malaysia, Mexico, Nicaragua, Pakistan, and Singapore were democracies according to my variables but not on the basis of FH ratings. South Korea, Liberia, Mexico, Nicaragua, and Pakistan had crossed the threshold of democracy only recently or in 1988, but they satisfied my minimum criteria of democracy.

1998. The number of contradictory classifications increased to 23 in 1998. Guatemala, Mali, Namibia, and Seychelles were democracies according to FH ratings but not on the basis of my variables. Guatemala was below my Participation threshold of democracy. Mali and Namibia remained below my criteria of democracy because of too low a degree of competition in their presidential elections. Seychelles dropped below the Competition threshold of democracy in the 1998 parliamentary election in which the ruling Seychelles People's Progressive Party won 88.2 percent of the votes. According to my variables, Albania (ID 13.7), Algeria (ID 19.9), Bosnia & Herzegovina (ID 27.1), the Central African Republic (ID 11.1), Colombia (ID 18.9), Comoros (ID 10.9), Croatia (ID 20.3), Gambia (ID 10.2), Guinea (ID 12.4), Kenya (ID 8.4), Lebanon (ID 25.8), Malaysia (ID 11.6), Niger (ID 7.3), Peru (ID 11.2), Senegal (ID 6.9), Singapore (ID 8.5), Togo (ID 17.7), Turkey (ID 31.8), and Yugoslavia (ID 5.9) were democracies, although most of them were only slightly above the threshold, whereas they were not democracies on the basis of FH ratings. However, the discrepancy in measurements may not be as large as this list indicates, for some of these countries (Albania, Bosnia & Herzegovina, the Central African Republic, Colombia, Croatia, and Turkey) satisfied the Freedom House criteria of 'electoral democracy' in 1998. The other 13 countries are more seriously deviating cases. These 13 countries illustrate cases in which the restriction of political rights and civil liberties may matter significantly from the perspective of democracy. Despite competitive elections, there were serious shortcomings in the nature of democracy in several of these countries. The Freedom House survey (Karatnycky 1998) refers to civil wars, to human rights abuses, to electoral manipulation and fraud, to violence and intimidation in elections, to limited ability to change governments through elections, to the lack or curtailment of the freedom of assembly and expression, and to various other factors that restrict political rights and freedoms. My two electoral variables do not take into account such factors and, as a consequence, they may exaggerate the level of democratization in some cases. However, despite their shortcomings, 15 of these 19 countries were above the threshold of democracy in 2001, too. Comoros dropped below the threshold of democracy in 1999 because of a *coup d'état*; Guinea in 2000

because parliamentary elections were postponed to indefinite future; Singapore dropped below the threshold of democracy in the 2001 parliamentary elections in which the ruling People's Action Party won 73 percent of the votes; and Togo in 1999 as a consequence of the parliamentary elections in which the Togolese People's Rally won 97.5 percent of the seats.

Summary

In the first part of this chapter, I discuss definitions of democracy, introduce my measures of democracy, and explain their origin and evolution. I have attempted to explain why I think that the two basic variables are sufficient to measure the most important dimensions of democracy and why they are combined into an index of democratization by multiplying the basic variables. The two basic variables of this study are the same as in my previous studies, but Participation is complemented by taking into account referendums as a factor that raises the level of participation. My measures of democracy are continuous variables, but they can also be used to classify countries dichotomously into two categories of democracies and non-democracies. For this purpose, it was necessary to define the threshold values of Competition and Participation to separate democracies from non-democracies.

In the latter part of this chapter, three alternative measures of democracy (ID, the Polity DA, and FH ratings) were compared. The comparison of the three datasets indicates that, despite different operational criteria of democracy and different methods to measure democracy, the results are basically similar for most countries, although there are also many clearly contradicting cases. The covariation between the Index of Democratization and the Polity98 measures was less than 50 percent before World War I. The correspondence between measurements has been stronger since the 1920s, but it is not complete. It is clear that the three alternative measures of democracy differ from each other in many respects. My intention has been to produce simple quantitative variables that can measure crucial differences between political systems from the perspective of democracy. The ID measure has four major advantages (cf. Vanhanen 2000a):

The ID measure is *parsimonious*. Only two quantitative variables are used to measure two important dimensions of democracy, and they are combined into the Index of Democratization (ID). Because ID combines two crucial dimensions of democracy, I think that it is theoretically a better measure of democracy than either of its two components used separately.

My basic electoral variables rely on *documented* electoral and other data on political events. The subjective characteristics of the Polity data and the Freedom House ratings make it difficult for other researchers to check their codings.

The process of generating the ID measure is *transparent*. The data needed to calculate the values for Competition and Participation are given and documented in the datasets. Whatever subjective interpretations have been made concerning the classification of governmental systems and some other matters are presented in the datasets, so that other researchers can check the data and interpretations.

My datasets are extremely *flexible*. Although the ID measure reflects my considered preference for combining the two basic variables into an index and setting the threshold values of democracy, other researchers can easily experiment with different combinations and threshold values. Other researchers might also classify governmental systems differently or interpret the nature of non-elected governments and the significance of civil wars and various other political events differently. My datasets are not inextricably linked to my interpretations; they provide data for many alternative formulations (cf. Vanhanen 2000a, 2000b).

Some significant structural differences between the three alternative measures of democracy are likely to account for a considerable part of the measurement and evaluation differences. The most conspicuous difference between the Polity measures and the ID concerns the role of electoral participation. The *extent* of electoral participation is excluded from the Polity measures of democracy and autocracy, although the *right* to participate is taken into account. This difference may have caused significant measurement differences before World War I in particular. The Polity project's concentration on the executive branch of government and on the election of the chief executive officer may also have caused some measurement differences. The Freedom House ratings concern political rights and civil liberties, not electoral competition and participation as such. Several researchers (see, for example, Bollen 1979; Coulter 1975; Diamond *et al.* 1995) view freedom and political rights as an independent dimension of democracy that should be taken into account. Political rights and civil liberties are not directly included in my indicators of democracy. My argument is that it is not necessary to measure them separately because the indicators of electoral competition and participation, indirectly at least, reflect the existence of freedom and political rights. Moreover, it seems difficult to invent quantitative indicators to measure the degree of political rights and freedoms. The persistent strong correlation between ID and Freedom House ratings indicates that they mostly measure the same phenomenon – what I call ‘democracy’ and Freedom House calls ‘political rights and civil liberties.’ However, there may be cases in which they differ from each other significantly, and where adding a rights-based indicator would yield a more realistic measure of democracy (cf. Vanhanen 2000a, 2000b; Sanderson 2001: 316).

4 Explanatory variables

According to the evolutionary resource distribution theory of democratization, formulated in Chapter 2, 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. This theoretical explanation of democratization was derived from the Darwinian interpretation of politics according to which competition for scarce resources is the central and permanent theme of politics. The scarcity of resources makes this competition inevitable in all parts of the living nature. People and groups struggle for political power in order to affect the distribution of important resources. Because power is based on sanctions, it is reasonable to assume that the success in the struggle for power depends on the distribution of sanctions used as sources of power. This kind of Darwinian interpretation of politics led me to formulate the theoretical explanation for democratization presented in Chapter 2. Democracy means that power is shared by the many and not concentrated in the hands of the few. When important resources used as sources of power are widely distributed, environmental circumstances are favorable for the distribution of political power and for the emergence of democracy.

The problem is how to measure the relative degree of resource distribution. This is a serious problem because many types of resources can be used as sanctions in the struggle for power. It is impossible to know all relevant power resources and to take them into account in the measurement of resource distribution. My strategy in the previous studies was to focus on some types of resources that can be assumed to be important in all contemporary societies and to leave locally and temporarily significant resources out of measurements. As a consequence, I was able to operationalize the theoretical concept of 'resource distribution' only partly. Basically, I have attempted to measure the relative distribution of some aspects of economic and intellectual power resources. There are other types of generally used power resources, especially the means of violence, but I have not found any satisfactory variables to measure their relative significance and distribution or concentration within societies.

Previous explanatory variables

In my previous global study (Vanhanen 1997: 42–60; cf. Vanhanen 1979, 1984, 1990), I had six explanatory variables to measure the distribution of economic and intellectual power resources from various perspectives:

- 1 Urban population as a percentage of the total population (Urban Population);
- 2 The percentage of non-agricultural population (NAP);
- 3 Students in universities and other institutions of higher education per 100,000 inhabitants (Students);
- 4 The percentage of literates from the adult population (Literates);
- 5 The area of family farms as a percentage of the total area of holdings (Family Farms);
- 6 The degree of decentralization of non-agricultural economic power resources (DD).

Urban Population

Urban Population is assumed to measure indirectly the distribution of economic and organizational power resources. The higher the percentage of urban population, the more diversified economic activities and economic interest groups are in a society and, consequently, the more economic power resources are distributed among various groups. In many other comparative studies, Urban Population has been used to indicate economic or socio-economic development (see, for example, Lerner 1958; Lipset 1959; Cutright 1963; Russett *et al.* 1964; Neubauer 1967; Olsen 1968; Smith 1969; Pride 1970; Flanigan and Fogelman 1971; Coulter 1975; Banks 1981; Hadenius 1992; Diamond *et al.* 1995). Of course, urbanization measures some aspects of economic development, but my point is that usually, although not always, economic development leads to the diversification of economic power resources. Therefore, I used this variable to measure indirectly the relative differences between societies in the distribution of economic and organizational power resources. My argument is that socio-economic development itself is an indicator of resource distribution. Usually economic resources are the more distributed among various groups, the higher the level of socio-economic development.

Non-agricultural population (NAP)

NAP is also assumed to measure some aspects of the distribution of economic and human resources. The higher the percentage of non-agricultural population, the more diversified the occupational structure of the population is and, consequently, the more economic and human power resources are distributed. This assumption is based on the fact that there are more varied economic activities and interest groups in a society in which a considerable

part of the population works in non-agricultural occupations than in a traditional agricultural society. The percentage of non-agricultural population is calculated by subtracting the share of agricultural population from 100 percent. This variable is closely related to Urban Population. Both variables measure the same phenomenon from slightly different perspectives.

In several other studies, the percentage of non-agricultural population has been used to indicate the level of socio-economic development (see, for example, Lipset 1959; Deutsch 1961; Cutright 1963; Russett *et al.* 1964; Neubauer 1967; Olsen 1968; Smith 1969; Pride 1970; Flanigan and Fogelman 1971; Coulter 1975; Hadenius 1992). My argument is that, just as in the case of Urban Population, usually the level of socio-economic development also indicates the degree of resource distribution. Therefore I used this variable to measure, indirectly, the distribution of economic and human power resources.

Students

The number of students in universities and other institutions of higher education per 100,000 inhabitants is used to indicate the distribution of intellectual power resources. The assumption behind this variable is that the higher the number of students per 100,000 inhabitants, the more widely intellectual resources are distributed. The selection of this variable is based on the idea that knowledge is a very important source of power, especially the higher knowledge and skills needed in modern societies. If the number of educated people is small, intellectual power resources based on higher knowledge and skills are concentrated, and it would be easier to control those resources than in a society in which the number of educated people is large. Of course, it is impossible to measure the distribution of 'intellectual resources' directly, but I assume that this variable is a good indirect indicator for this purpose. In some form, this variable has been used in several other studies to indicate the level of socio-economic development or education (see, for example, Lipset 1959; Deutsch 1961; Cutright 1963; Russett *et al.* 1964; Neubauer 1967; Olsen 1968; Smith 1969; Hadenius 1992). It certainly measures the level of education and of socio-economic development, but my argument is that it indicates also the relative distribution of intellectual power resources based on higher education. Modern societies need educated people with special skills and training. Such people are involved in politics, too. If their relative number is high, it is more difficult for the government to control them or to employ all of them, and it becomes easier for opposition groups to recruit them.

Unesco's *Statistical Yearbooks* were used as the principal sources of data on the number of students, but because they do not give data from all countries, some other sources were also used. Data on the number of students per 100,000 inhabitants can be regarded as relatively reliable, although the definitions of 'universities and other degree-granting institutions' vary. In

the 1997 study, absolute numbers were transformed into percentages by taking 5,000 students per 100,000 inhabitants to represent 100 percent. If the number of students was higher than 5,000 per 100,000 inhabitants, the percentage remained the same.

Literates

The relative number of literates is assumed to measure the distribution of intellectual power resources from a different perspective, from the perspective of basic intellectual skills needed in modern societies. The higher the percentage of literate population, the more widely basic intellectual resources are distributed. Literate persons can be assumed to be more capable of taking part in modern politics than illiterates. If only a small minority of the population is able to read and write, the preconditions for democracy are much more unfavorable than in a society in which nearly all adults are literate. This variable, just like Students, has been used in many other studies to indicate the level of socio-economic development or of educational development (see, for example, Lerner 1958; Lipset 1959; Deutsch 1961; Cutright 1963; Russett *et al.* 1964; Neubauer 1967; Olsen 1968; Smith 1969; Cutright and Wiley 1969–70; Marquette 1974; Hadenius 1992; Sanderson 2001). I use it to measure one aspect of the distribution of basic intellectual resources. It is reasonable to assume that the higher the level of educational development, the more widely intellectual resources are usually distributed.

To some extent, the definitions of 'literates' vary from country to country, which may reduce the comparability of data. Usually the percentage of literates has been calculated from the population ten or fifteen years of age and over. Empirical data on literacy were taken principally from Unesco's *Statistical Yearbooks*, UNDP's *Human Development Reports*, and World Bank's *World Development Reports*. It should be noted that original data given in these sources are estimations in many cases, especially so for African countries.

Family Farms

The area of family farms as a percentage of the total area of holdings is assumed to measure the relative distribution of economic power resources based on the ownership or control of agricultural land. The higher the percentage of family farms, the more widely economic power resources based on the ownership or control of agricultural land are usually distributed. My argument is that it is easy to use the ownership or control of agricultural land as a sanction in politics. The concentration of landownership makes a large part of the agricultural population dependent on those controlling the use of land. It is difficult for an economically and socially dependent agricultural population to take part in politics independently, to

form its own economic and political interest organizations, and to participate in national politics. It is much easier for independent farmers, particularly if they are literate, to participate in national politics independently and to form their own interest organizations. *World Development Report 2003* stresses the significance of 'the rules sanctioning property ownership' and that countries 'that have distributed rural property equitably before urbanizing have developed more egalitarian and democratic societies than those that put assets in the hands of relatively few rural elites.' Consequently, 'creating widespread land ownership is critical to the later development of inclusive institutions' (2003: 84).

Family Farms in this form has not been used by other researchers, although some researchers have used different indicators to measure the distribution of agricultural land (see Russett *et al.* 1964: 237–8; Russett 1968: 154–5; Midlarsky 1999). In the country studies included in *Conditions of Democracy in Europe, 1918–39* (Berg-Schlosser and Mitchell 2000), the category of 'family farms' is used extensively to describe one aspect of class structures. I have used this variable since 1968 (Vanhanen 1968), although in slightly different forms, to indicate the relative distribution of economic resources based on landownership. My argument is not that democracy presupposes an equal distribution of land; it is that the ownership and control of land should be so widely distributed among the agricultural population that the bulk of them would become able to take part in politics independently. Dirk Berg-Schlosser (1989: 142) recognizes the significance of this variable: 'There can be no doubt that widespread small-scale farming in predominantly agrarian countries is an important factor in the emergence of democratic social and political structures,' whereas Axel Hadenius (1992: 100–1), on the basis of some weak correlations, comes to the conclusion 'that the distribution of wealth in the agrarian sector in our time has very little significance in the context.' My point is that weak correlations do not necessarily prove that the distribution of agricultural land has become insignificant from the perspective of democracy. Weak correlations may be due to the fact that a high percentage of family farms is not alone enough to produce and support democratic politics if other types of power resources are highly concentrated.

The problem is how to measure the share of family farms. It has been difficult to invent a suitable indicator because the size and nature of 'family farms' vary considerably from country to country and also within a country. Depending on the level of technology, the quality of land, and climatic conditions, the size of family farms varies greatly: from less than one hectare to thousands of hectares. It is also problematic to define the 'ownership or control' of family farms. It is clear that the farms owned by cultivator-families should be included in the category of family farms, but what about various forms of tenancy and of partially owned land under communal tenure systems? My basic criterion has been that the category of family farms includes farms that provide employment for not more than

four people, including family members. This criterion has been used to separate large farms cultivated mainly by hired workers from family-size farms. It should be noted that this criterion is not fixed to any particular size of farms. By 'family farms' I mean holdings that are mainly cultivated by the holder family itself and are owned by the cultivator family or held in ownerlike possession. If farms are leased, tenancy should not make the tenant family socially and economically dependent on the landowner (cf. Vanhanen 1979: 48–9; 1990: 57–8).

The criteria of 'family farms' are such that it is impossible to apply the same hectare limit to all countries. It has been necessary to define 'family farms' separately for each country, on the basis of the general criteria discussed above, and to change the country definitions over time when the level of agricultural technology has changed. Consequently, the upper hectare limit and other criteria of family farms vary from country to country and over the period of comparison. However, I have attempted to keep the concept of family farms the same over time and across countries.

Empirical data on the distribution of landownership were collected from various sources, but it was not possible to find statistical data from all countries and periods. In such cases, I resorted to estimations based on other types of information (see Vanhanen 1979: 297–330; 1984; 1990: 240–51; 1997: 215–32). For the 1997 study, FAO's reports on the 1960, 1970, and 1980 world agricultural censuses were the principal sources of data, but many other sources were also used. Principally an upper hectare limit was used to separate family farms from larger holdings, but it was necessary to use also other criteria of family farms. In the case of socialist and former socialist countries, the share of private farms was used to indicate the percentage of family farms. It was difficult to decide how to classify communally owned land in sub-Saharan Africa but also in some other parts of the world. In such land tenure systems, the ownership and control of land is divided between individual cultivators and larger communities (see Riddell and Dickerman 1986). I decided to include 60 percent of the land under *de facto* indigenous tenure and collective tribal lands into the category of family farms. The selection of 60 percent is arbitrary, but I assumed it to be reasonable. My argument is that African farmers are not economically and socially as dependent from the ultimate owners or owner-communities as the peasants and workers of socialist collective farms, but they can be regarded to be economically and socially less independent than individual owner-cultivators.

The degree of decentralization of non-agricultural economic power resources (DD)

This variable was first used to measure the relative distribution of non-agricultural economic power resources in my 1990 study covering the years 1980–9 (see Vanhanen 1990: 59–64). In the 1980s, I started to develop a

method to measure or estimate the relative concentration and distribution of the means of production in non-agricultural sectors of economy. I referred to some theoretical attempts to define 'concentration' and 'decentralization' or to differentiate between economic systems on the basis of the distribution of economic power (see Mohnot 1962: 17–21; Carson 1973: 42; Dahl 1982: 108–16; Lindblom 1977: 112–13). The ideas of Mohnot, Carson, Dahl, and Lindblom helped me to focus on the most important aspects of economic systems that should be taken into account in attempts to measure or estimate the concentration or distribution of non agricultural economic power resources.

I came to the conclusion that the most crucial characteristic of an economic system is whether economic power resources are highly concentrated in the hands of one group, whatever that group is, or whether they are widely distributed among several relatively autonomous groups. I meant by 'economic power resources' principally the ownership and/or control over the means of production and employment. By 'decentralization' I meant that the means of production, and through them the means of livelihood, are owned or effectively controlled by several relatively independent groups, which may include individuals, corporations, public enterprises, local and regional governments, and the central government. By 'concentration' I meant that important economic resources are owned or controlled by the few, usually a more or less coherent social or political group. The controlling group may be a group of individuals, a group of big corporations (domestic or foreign-owned), a group of public enterprises, or a party controlling the state and through it the means of production owned by the state. Thus 'decentralization' and 'concentration' are inversely related to each other, which means that either of them can be used to measure the degree of resource distribution. In the study covering the years 1980–8, I tried to take into account three characteristics of economic systems indicating the degree of concentration:

- 1 The public sector's share of productive capacity or of employment in non-agricultural sectors of economy, or in its most important sector (Public Sector);
- 2 The share of foreign-owned enterprises of productive capacity or of employment in non-agricultural sectors of economy, or in its most important sector (Foreign Sector);
- 3 The share of big private enterprises (domestically owned or controlled) of productive capacity or employment in non-agricultural sectors of economy, or in its most important sector (Concentrated Private Sector).

The three characteristics were combined into an index of the concentration of economic power resources by adding the percentages. In most cases, however, data or estimates were given only for one or two of these variables that were assumed to characterize the economic system concerned. Only

one variable (often together with Foreign Sector) was taken into account in the cases in which either Public Sector or Concentrated Private Sector was considered to dominate economy. The inverse percentage of the combined percentage of resource concentration was used to indicate the degree of decentralization of non-agricultural economic resources (see Vanhanen 1990: 59–64, 252–74).

In the 1997 study, an attempt was made to simplify this index and to make it conceptually more coherent than the original index. Economic systems were classified into four categories from the perspective of resource distribution (cf. Lane and Ersson 1990: 230–44):

- 1 Centrally planned economy with a high degree of public ownership;
- 2 Public sector-dominated economy with a significant private sector and/or with significant foreign ownership;
- 3 Market-oriented economy with a concentrated private sector and/or with a large public sector and/or with significant foreign ownership;
- 4 Market-oriented economy with diversified ownership.

It was assumed that the degree of resource concentration is the highest in the first and the lowest in the fourth category, but categories are to some extent overlapping. The degree of concentration can vary from 0 to 40 in the fourth category of diversified market economies, from 40 to 80 in the third category of market-oriented economies, from 60 to 80 in the second category of public sector-dominated economies, and from 80 to 100 in the first category of centrally planned economies. Each country was classified into one of these categories, and, after that, the degree of concentration was determined within the category ranges given above. The inverse percentage of resource concentration represents the degree of decentralization (DD). I think that the new index is conceptually more coherent than the original one. It takes into account both the nature of economic systems in the continuum from centrally planned economies (command economies) to diversified market economies and the variation in the degree of resource concentration within each category. Data on variables are my estimations based on various information about the nature of economic systems. Several estimations are based on relatively reliable statistical information on some key sectors of non-agricultural economy, whereas many other estimations are based on more or less general information on the nature of economic systems. Consequently, the main weakness of this explanatory variable is that it is based on ‘soft’ data and estimations to a much greater extent than the five other explanatory variables (see Vanhanen 1997: 51–5, 233–50).

One could wonder why I linked democratization to the decentralization of economic power resources and not to capitalist economic development. John A. Hall, for example, argues that because every contemporary democratic society is capitalist, capitalism ‘is a base condition for democracy’

(1993: 287–8). David Potter concludes, referring to evidence from Asia, ‘that capitalist development (and its internal contradictions) is a necessary condition for democratization’ (ibid.: 371; see also Arat 1994). I have not used the concept of ‘capitalism’ because economic power resources may be highly concentrated or distributed in economic systems called ‘capitalist.’ According to a Marxist definition of capitalism, given by Paul Cammack, ‘capitalism is a mode of production in which a minority who own the means of production confront a majority who do not’ (1994: 178). I think that his definition applies even better to socialist systems in which the means of production are controlled and *de facto* owned by the leaders of the ruling Communist Party. Consequently, I estimated the degree of concentration to be the highest in centrally planned command economies, but it may be high in many ‘capitalist’ systems, too. On the other hand, the degree of concentration was assumed to be the lowest in the type of capitalist systems described as diversified market economies. So my argument is that capitalism is conducive to democratization only in cases in which it is connected with the distribution of economic resources among competing groups. From the perspective of democratization, socialism and capitalism are not the opposing poles; the theoretically relevant continuum is between the concentration and decentralization of economic power resources. Centrally planned economies (command economies) and market-oriented economies reflect this contrast, although not completely. Lane and Ersson have come to a similar conclusion: ‘What matters is the introduction of economic institutions that decrease the concentration of economic power. Decentralized capitalism and mixed capitalism tend to enhance democracy, whereas a planned economy and a state-capitalist system is detrimental’ (1994: 228).

Index of Power Resources (IPR)

The six explanatory variables defined above measure crucial economic and intellectual power resources from different perspectives, but because they are assumed to measure the same ultimate explanatory factor, resource distribution, a combination of them might be a better explanatory variable than any of them alone. But how to combine the six explanatory variables into an index? There would be many ways to combine the six variables depending on how we weight each of them. Because they seem to reflect three different dimensions of resource distribution, I decided to combine them into three sectional indices.

Urban Population and NAP indicate the degree of occupational diversification and the level of socio-economic development. They are assumed to measure the decentralization of economic and organizational power resources indirectly. Because both of them indicate the same dimension of power resources, I decided to combine them into an Index of Occupational Diversification (IOD) by calculating their arithmetic mean.

Students and Literates indicate the distribution of knowledge and intellectual power resources from two different perspectives. These two educational variables were combined into an Index of Knowledge Distribution (IKD) by calculating their arithmetic mean. It is assumed that the higher the value of IKD, the more widely intellectual power resources are distributed.

Family Farms (FF) and DD (the degree of decentralization of non-agricultural economic power resources) indicate the degree of resource distribution in agricultural and non-agricultural sectors of economy. They were combined into an Index of the Distribution of Economic Power Resources (DER), but not simply by calculating their arithmetic mean. Because the relative significance of agricultural and non-agricultural sectors of economy varies greatly from country to country, I decided to weight the values of FF and DD by the percentages of agricultural and non-agricultural populations. Consequently the two variables are combined by multiplying the value of FF by the percentage of agricultural population (AP) and the value of DD by the percentage of non-agricultural population (NAP), after which the weighted values of FF and DD are simply added up. In other words, $DER = (FF \times AP) + (DD \times NAP)$.

Each of the three sectional indices is assumed to measure a different dimension of resource distribution. Because I had no method for estimating what differences there might be between IOD, IKD, and DER in their relative significance, I decided to give them equal weight in the construction of a combined index of power resources. Moreover, I assumed that even a high level of resource distribution in two dimensions cannot compensate for the lack of resource distribution in one dimension. Therefore, I decided to combine these three sectional indices into an Index of Power Resources (IPR) not by calculating their mean but by multiplying them and by dividing the product by 10,000. It is assumed that the higher the value of IPR, the more widely politically relevant power resources are usually distributed among various sections of the population and the more favorable social conditions are for democratization. This index was used as the principal explanatory variable and operational substitute for the hypothetical concept of 'resource distribution.'

In addition to IPR, I constructed another combination of sectional indices, which takes into account imbalances between the three sectional indices. The idea behind this alternative IPR is that 'unbalanced components of IPR' make not only democracies but also autocracies vulnerable. The unexpected democratization of Eastern Europe led me to the idea that it might be possible to find a systematic explanation for the collapse of hegemonic political systems and the emergence of democracy in Eastern Europe from discrepancies in explanatory variables. The first four explanatory variables had predicted democratization in those countries for decades, and only the concentration of economic power resources had been in harmony with the concentration of political power (see Vanhanen and

Kimber 1994). So I formulated an Index of Structural Imbalance (ISI) to measure the extent of discrepancy between various explanatory variables. ISI is based on the mean deviation of the three sectional indices (IOD, IKD, and DER); this is the arithmetic mean of the absolute differences of each score from the mean. The higher the ISI value is, the more single dimensions of resource distribution differ from each other. I assumed that political systems are exceptionally insecure in countries with high ISI values because some structural factors are conducive to democracy and others conducive to autocracy. Finally, the values of ISI were combined with IPR into a new Index of Power Resources and Structural Imbalances (IPRI) by adding a quarter of the value of ISI to the value of IPR. Thus the new IPRI was calculated by the following formula: $IPRI = IPR + 1/4 \text{ of ISI}$ (Vanhanen 1997: 57–9; see also Vanhanen 1991; Vanhanen and Kimber 1994).

Explanatory variables of this study

The basic explanatory variables and the Index of Power Resources (IPR) used in my previous studies have been able to explain statistically a significant part of the variation in the Index of Democratization (ID). The correlation between IPR and ID is 0.813 in the group of 1,139 decennial observation units over the period 1850–1993 and 0.768 in the group of 172 countries in 1993. The corresponding correlations between IPRI and ID are 0.809 and 0.772 (Vanhanen 1997: 68–72). The explained part of variation rises to 66 percent in the group of 1,139 decennial observation units and to 60 percent in the group of 172 countries in 1993. These rates of explanation are high, but now I am going to explore whether it might be possible to achieve even higher rates of explanation by taking into account new explanatory variables, by improving old basic variables, and by reconstructing aggregated indices of power resources. The theoretical explanation remains the same, but the operationalization of the hypothetical concept of ‘resource distribution’ will be changed to some extent.

First, Urban Population and NAP are excluded from the group of explanatory variables for the reason that they are strongly correlated with some other explanatory variables (Students and Literates) and that they are not able to increase the explained part of variation in ID to any significant extent independently from the four other explanatory variables. Besides, it could be argued that the degree of urbanization and the level of non-agricultural population are not any longer good indicators of resource distribution (cf. Seligson 1997). Second, the other four explanatory variables are retained, but there are changes in their operational definitions, especially in the case of DD. Thus we have four basic explanatory variables: (1) Students, (2) Literates, (3) Family Farms, and (4) DD. All of them reflect social conditions and social and economic structures in contemporary societies. The principal difference between them is that Students and Literates measure the distribution of intellectual power resources, whereas

Family Farms and DD variables are principally intended to measure the distribution of economic power resources from various perspectives. Third, an indicator of per capita income will be used as an additional explanatory variable. Per capita income has been widely used to indicate the level of socio-economic development, but I will use it as an indicator of resource distribution. In the following, the five explanatory variables of this study are introduced and operationally defined.

Students

This variable is in principle the same as in the 1997 study, but now only universities are taken into account in calculating the number of students per 100,000 inhabitants. In the previous study, other institutions of higher education were also taken into account. This change decreases the number of students per 100,000 inhabitants to some extent. Another change concerns the transformation of absolute numbers into percentages. In the 1997 study, absolute numbers were transformed into percentages by taking 5,000 students per 100,000 inhabitants to represent 100 percent. In this study, percentages will be calculated from 4,000 students per 100,000 inhabitants. The number of students per 100,000 inhabitants is less than 4,000 in all 170 countries.

Unesco's *Statistical Yearbook 1999* is used as the principal source of data on the number of students in universities, but because it does not give data from all countries, some other sources are also used, especially *The Europa World Yearbook 2001*. In most cases data concern years 1995–6 or 1996–7, but if data are not available from these years, data were taken from some other years of the 1990s. In the absence of any data, the number of students per 100,000 inhabitants was estimated to be in Bosnia & Herzegovina the same as in Macedonia. In the cases of Belgium, the Dominican Republic, Ecuador, Guatemala, Hungary, North Korea, Kyrgyzstan, Latvia, the Netherlands, the Philippines, Sweden, Taiwan, Turkmenistan, Uzbekistan, Venezuela, and Vietnam, only the number of students in all institutions of higher education is available. For these countries, the number of students in universities was estimated to be 70 percent of the total number of students in all institutions of higher education. Data on the number of students per 100,000 inhabitants are biased against very small countries for the reason that it is difficult to establish and maintain universities in small countries. In such cases, I attempted to correct data by taking into account the number of students in all institutions of higher education and also the number of students studying abroad. Because definitions of 'universities' and 'higher education' may differ considerably from country to country, there is a certain margin of error in data on the number of students per 100,000 inhabitants. In some cases, the margin of error may rise to 10–20 percent.

Data on the absolute number of students in universities were transformed into number of students per 100,000 inhabitants by using population data

from the United Nations' *1998 Demographic Yearbook*. Data on the number of students per 100,000 inhabitants can be regarded as relatively reliable, although data from very small countries may be less reliable than data on larger countries. Empirical data on the number of students in universities per 100,000 inhabitants are given and documented in Appendix 2. This variable is used to measure the distribution of intellectual power resources from the perspective of the relative size of intellectual elite. It is assumed that *the higher the number of students per 100,000 inhabitants, the more widely intellectual power resources are distributed and the better the chances of democracy.*

Literates

This variable is virtually the same as in my previous studies. The percentage of literates concerns adult literacy rate (age 15 and above). Nearly all data are from UNDP's *Human Development Report 2000* and they concern the year 1998. However, UNDP's *Human Development Report* is not the only source of data on adult literacy rate. Similar data are available, for example, from Unesco's statistical yearbooks, the United Nations' statistical yearbooks, the World Bank's *World Development Report*, CIA's *The World Factbook*, and from several other international yearbooks. In nearly all cases, adult literacy rates given in different sources are more or less the same, but there are some cases in which data differ significantly from each other. In such cases, I calculated the mean of adult literacy rates given in different sources. It should be noted that the original data given in these sources are in many cases estimations. Data on adult literacy rates are given and documented in Appendix 2.

This variable is used to measure the distribution of intellectual power resources from the perspective of the total adult population. The argument behind the selection of this variable is that literate persons have some basic intellectual resources which can be used in local and national politics and that, therefore, literates have better chances to organize themselves, acquire information, and to take part in politics more effectively than illiterates. It is assumed that *the higher the adult literacy rate, the more widely basic intellectual resources are distributed in a society and the better the chances of democracy.*

Family Farms (FF)

The definition of this variable is basically the same as in the 1997 study, but data on the share of family farms were updated as far as possible. The major problem with this variable is to find reliable information about land tenure systems and to classify agricultural holdings and the area of agricultural land into the categories of family farms and other holdings. It is relatively easy to find reliable and comparable statistical data on Students, Literates, and per capita national income, whereas there are no international compilations of data which would include necessary information

about family farms from all countries of the world. I had to gather data from various sources, and, unfortunately, there are several countries for which it was not possible to find any reliable statistical data on family farms. In such cases, the share of family farms was estimated on the basis of available information.

The best and principal information about family farms is based on data produced by agricultural censuses in various countries and published in the FAO's reports on the 1960, 1970, 1980, and 1990 world agricultural censuses. The *Report on the 1990 World Census of Agriculture* (1997) includes some data from 59 countries of this study, but, in many cases, the published data are not sufficient to calculate the share of family farms. The data published in the 1990 world census report were complemented by data published in the previous 1980, 1970, and 1960 census reports. In more than 50 cases, calculations on the share of family farms are principally based on FAO's reports on world censuses of agriculture. The latest data are from the years 1986–95 of the 1990 world census of agriculture, but in several cases data are based on earlier agricultural censuses. Because changes in land tenure systems are usually slow, it does not make much difference if data are 10, 20, or 30 years old.

Another useful source is *Land Concentration in the Third World: Statistics on Number and Area of Farms Classified by Size of Farms* (1979), published by Land Tenure Center, University of Wisconsin-Madison. It is used as the principal or as an important additional source of data in more than 30 cases. It covers nearly 100 countries of this study and it has been especially useful in the case of Latin American countries.

Because of their community-based land tenure systems, the sub-Saharan African countries constitute the most problematic region from the perspective of this variable. Agricultural censuses have been carried out in some sub-Saharan African countries and reported by FAO, but their results do not provide sufficient basis to calculate the share of family farms because the extent and nature of indigenous tenures have not been discussed in these reports. In the 1997 study, I included 60 percent of the land under *de facto* indigenous tenure and communal tribal lands into the category of family farms, but now I think that it is necessary to decrease that percentage. It is noted in *Country Profiles of Land Tenure: Africa, 1996*, edited by John W. Bruce (1998), that community-based tenure systems still dominate in Africa: 'In 1960, over 90% of Africa's land was held under indigenous land tenure systems, and the figure is certainly not lower than 80% today' (Bruce 1998: 144). In most countries producers have need of greater security of tenure. The lack of security makes community-based African land tenure systems, from the perspective of cultivator families, weaker than land tenure systems based on private ownership. Besides, because of the scarcity of land, tenancy and sharecropping as well as massive land-grabbing are spreading in Africa (see Lastarria-Cornhiel and Melmed-Sanjak 1999: 35–50). Therefore, I decided to include only 50

percent of the land under *de facto* community-based land tenure systems into the category of family farms.

The estimations of the share of family farms in sub-Saharan African countries are principally based on information provided by the above mentioned Bruce's (1998) book, which includes separate chapters on 43 African countries. Various other sources were used to complement information about sub-Saharan land tenure systems and the size of farms, including FAO's reports on world censuses of agriculture. According to my estimates, the share of family farms varies from 30 to 45 percent in most African countries.

Statistical data on the results of privatization programs in more than 20 former socialist countries are scarce, but some sources include estimations or statistical data on the percentage of private farms. On the basis of available information, I attempted to estimate the area of family-size private farms. In the cases of Albania, Estonia, Hungary, Poland, Bosnia & Herzegovina, Croatia, Macedonia, Slovenia, and Yugoslavia data are based on the results of agricultural censuses.

Data on the share of family farms are more diversified and 'softer' than data on the two preceding explanatory variables, because they are derived from many different sources and because it was necessary to use estimations in the absence of reliable statistical data. Moreover, the concept of 'family farms' had to be defined separately for each country, although the same criteria have been applied to all countries. Consequently, the margin of error in these data and estimations may rise to 10–20 percent in several cases. However, I think that data reflect relative differences between countries in the distribution of land into the categories of Family Farms and other holdings. Statistical data on the percentage of Family Farms of the total area of agricultural holdings in 170 countries are presented and documented in Appendix 3. In most cases these new data do not differ much from the data used in my previous study (Vanhanen 1997: Appendix 3). If new information was not available, I resorted to data or estimations given in previous studies.

It is assumed that *the higher the share of Family Farms, the more widely economic resources based on the ownership or control of agricultural land are distributed among the agricultural population and the better the chances of democracy.*

The degree of decentralization of mainly non-agricultural economic power resources (DD)

This variable is intended to measure the relative distribution of mainly non-agricultural economic power resources among individuals and various sections of the population as in the 1997 study, but the operationalization of the variable has been changed. As explained above, the values of this variable were mostly based on subjective judgments in the 1990 and 1997

studies, although I had established systematic criteria to guide interpretations. Consequently, compared to other explanatory variables, DD was a relatively 'soft' variable. Now I have attempted to correct this weakness of DD by seeking objective indicators and statistical data to guide and constrain the estimations of DD.

As the starting point is the assumption that extreme poverty as well as the concentration of economic resources in the hands of a small minority constrain the decentralization of economic power resources in a society and thus provide objective grounds to limit the scope of estimations. It is plausible to argue that people below the poverty line are without any effective economic resources to participate in national politics, or even in local politics. They have to focus on the day-to-day struggle for survival. The chances of people to participate in politics are certainly much better in countries where most people are above the poverty line and have some economic resources that are needed in political activities. Therefore, it was decided to use statistical data on the percentage of people below the poverty line to constrain the value of DD in such a way that the value of DD should not be higher than 100 minus the percentage of people below the poverty line.

Data on the highest 10 percent's share of income or consumption are used to indicate the relative differences in the concentration of economic power resources. Economic power resources are much more concentrated in a country in which the richest 10 percent's share of income or consumption is very high than in a country in which it is low. Therefore it is reasonable to use the highest 10 percent variable to constrain the value of DD in such a way that it should not be higher than 100 minus the percentage of the highest 10 percent minus 10. These two constraining variables (Below Poverty Line% and Highest 10%) are combined by adding the percentages. The value of DD should not be higher than 100 minus the combined percentage.

Statistical data on the population below the poverty line (Below Poverty Line%) are available from the World Bank's *World Development Reports* and from UNDP's *Human Development Reports*. *World Development Report 2002* gives data on this variable according to national poverty lines and international poverty lines. The criteria of national poverty lines vary from country to country, whereas the criteria of international poverty lines are the same for all countries. There are data on population below \$1 a day and \$2 a day. *Human Development Report 2001* provides data on population below income poverty line \$1 a day (1993 PPP US\$ 1983–99) and on population below national poverty line 1984–99 for developing countries and separately data on population below income poverty line \$4 a day (1990 PPP US\$ 1993–5) for Eastern Europe and the CIS and \$11 a day (1994 PPP US\$ 1994–5) for OECD countries. Principally, data given in *World Development Report 2002* and *Human Development Report 2001* were used, but sometimes data given in previous issues of these publications

were also used. If more than one figure is given for a country, the mean percentage was calculated. All three percentages (if available) were taken into account in the cases of sub-Saharan African and South Asian countries, whereas data on \$1 a day were not taken into account in the cases of other developing countries and Eastern Europe and the CIS. Data on OECD countries are based on population below income poverty line (%) \$11 a day given in *Human Development Report 2001* and/or \$14.40 a day given in *Human Development Report 2000*. Data have been complemented from other sources, and for countries from which no data are available, the value of the Poverty Line variable was estimated on the basis of data concerning neighboring countries or other countries in similar conditions. These sources give data on poverty for more than 100 countries. Data on the Below Poverty Line% variable are given and documented in Appendix 4.

Statistical data on Highest 10% are taken from the World Bank's *World Development Report 2002* and from UNDP's *Human Development Report 2001*. If there is more than one figure for a country, the mean percentage was calculated. For countries without data on Highest 10%, the value of this variable was estimated on the basis of neighboring countries or other comparable countries. It should be noted that data are not from the same year for all countries. Data on this variable are given and documented in Appendix 4. The two constraining variables are combined by subtracting their sum from 100. The results are given in column 'Total' in Appendix 4.

In addition to Below Poverty Line% and Highest 10% variables, economic freedom ratings published in *Economic Freedom of the World: 2000 Annual Report* (Gwartney and Lawson 2000) were used to constrain the values of DD. The economic freedom ratings calculated in that book are intended to indicate the nature of economic systems from the perspective of economic freedom. The ratings vary from 0 to 10. The higher the rating, the higher the level of economic freedom. It is reasonable to assume that, to some extent, these ratings measure the distribution of economic power resources, too. For the purposes of this study, the ratings were multiplied by 10. The multiplied ratings are used to guide the estimations of DD values in such a way that a DD value should not be more than 20 scores lower or 20 scores higher than the multiplied economic freedom rating for the country. However, the criteria of economic freedom used by Gwartney and Lawson are not intended to measure the distribution of economic power resources. Therefore, it was necessary to deviate from the criterion defined above especially in the cases of oil producing countries and of former and present socialist countries in which crucial economic power resources are highly concentrated. The multiplied economic freedom ratings are given in Appendix 4.

Furthermore, scores of economic liberalization given in *Nations in Transit 2001* (Karatnycky *et al.* 2001) are used to constrain estimations of DD in the cases of former socialist countries. Economic liberalization scores represent average ratings for the areas of privatization, macroeconomic policy, and

microeconomic policy. The ratings are based on a 1 to 7 scale, with 1 representing the most favorable level and 7 the most repressive, or state-dominated, level of economic practice (2001: 14). For the purposes of this study, their data were first transformed into inverse figures and then percentage shares were calculated from 7. Economic liberalization scores given in Appendix 4 are these percentages.

In most cases, the sum of the percentages of Below Poverty Line% and Highest 10% variables (Total) were used to constrain the estimated value of DD. The value of DD should not be higher than the sum of the two percentages subtracted from 100. Usually the estimated value of DD is rounded downward from 'Total,' but not more than 15 scores. However, if 'Total' is zero or near zero, I deviated from this rule and estimated the DD to be slightly higher than what it should be on the basis of 'Total,' but not more than 15 scores higher. In some cases, the estimated value of DD is based on the score of Economic Freedom 1997 or on Economic Liberalization Score. To some extent, the nature of economic systems was taken into account in estimations. Various additional sources indicated in Appendix 4 were used in such estimations.

The constraining variables used in this study have restricted significantly the scope of subjective judgments based on other information about economic systems. In 148 cases the value of DD differs only moderately, not more than 15 scores, from the value determined by Below Poverty Line% and Highest 10% variables (Total), or by the multiplied economic freedom rating, or by Economic Liberalization Score. The estimated DD values which deviate more than 15 scores from these constraining variables are marked by asterisk (*) in Appendix 4. Justifications for these deviations are presented in notes. Thus the new DD variable is principally based on empirical data, and the scope of subjective judgements is in nearly all cases quite limited. In some cases, the margin of error may rise to 10–20 percent. It is assumed that *the higher the value of DD, the more widely the ownership and control of mainly non-agricultural economic power resources are decentralized in a society and the better social conditions are for democracy.*

Real GDP per capita (PPP\$)

Per capita national income in some form seems to be the most frequently used indicator of economic and socio-economic development which has been used to explain democracy and democratization (see, for example, Lipset 1959; Deutsch 1961; Russett *et al.* 1964; Needler 1968; Olsen 1968; May 1973; Powell 1982; Muller 1985, 1995, 1997; Lane and Ersson 1990, 1994; Diamond 1992; Hadenius 1992; Lipset *et al.* 1993; Pinkney 1993; Diamond *et al.* 1995; Moore 1996; Coppedge 1997; Berg-Schlosser and Mitchell 2000; Gill 2000; Przeworski and Limongi 1997; Przeworski *et al.* 2000). I did not use it as an explanatory variable in my previous studies, although I compared its explanatory power to that of IPR. In the 1990

study, the correlation between GNP per capita in 1983 and ID-1983 was 0.483, whereas the correlation between IPR and ID-1983 was 0.840 (Vanhanen 1990: 70, 105). In the 1997 study, the correlation between GNP per capita in 1991 and ID-1991 was 0.617, whereas the correlation between IPR and ID-1991 was 0.808. I came to the conclusion that GNP per capita explains much less of the variation in ID than IPR and that when it is used together with IPR, the explained part of variation in ID increases only insignificantly (less than one percentage point) (Vanhanen 1997: 72–7).

Per capita national income will be used as an explanatory variable in this study. It is the best and the most frequently used variable to indicate the level of economic development and the wealth of nations, but I use it to measure, indirectly, the distribution of economic power resources because it is plausible to assume that significant economic resources are usually, although not always, the more widely distributed among individuals and various social groups, the higher the level of economic development. The occupational structures tend to be more diversified in economically developed countries than in less developed countries, and economic enterprises are geographically more widely decentralized in developed than in less developed countries. This means that usually there are more interest groups in developed than in less developed countries, and the ownership and control of economic enterprises and other means of production tend to be more widely distributed in developed than in less developed countries. As a consequence, the level of economic development correlates positively with the distribution of economic resources. So my argument is that it is justified to regard per capita income not only as an indicator of the level of economic development but also as an indicator of resource distribution.

There are different indicators of per capita national income: (1) Gross National Product (GNP) per capita, (2) Gross Domestic Product (GDP) per capita, (3) GNP per capita measured at PPP (purchasing power parity) dollars, and (4) GDP per capita measured at PPP dollars. The basic difference between GNP and GDP is that GDP comprises the total output of goods and services for final use produced by an economy by both residents and non-residents within the geographical boundaries of a nation, whereas GNP comprises GDP plus income from abroad, which is the income residents receive from abroad, less similar payments made to non-residents who contribute to the domestic economy. It should be noted that GNP and GDP include only the value of goods and services that are produced legally and sold on open markets. One problem with these variables is that GNP and GDP per capita overstate real income differences between developed and developing countries for the reason that many economic activities in developing countries are not taken into account in GNP. Another problem is that the exchange rate used to convert GNP in local currency units into US dollars is usually based on the relative prices of internationally traded goods, not on purchasing power. Purchasing power parity (PPP) exchange rate tries to take into account the currency's real

domestic purchasing power. This method reduces the gap between rich and poor countries considerably (see Nafziger 1997: 21–6; Gardner 1998: 22–6; Ray 1998: 12–16; *Human Development Report 1999* 1999: 254; *World Development Report 1999/2000* 2000: 274).

Any of the above mentioned indicators of per capita income could be used in this study, but I selected Real GDP per capita (PPP\$) in 1998 for the purposes of this study. Data on real GDP per capita (PPP\$) may better indicate real differences in the level of economic development and especially, indirectly, differences in the distribution of economic resources, than data on GNP or GDP. Empirical data on this variable were taken from UNDP's *Human Development Report 2000* (Table 1), but in some cases it was necessary to complement data from other sources. Statistical data are available from all 170 countries, and they can be regarded as highly reliable. They can be compared to data on GNP per capita measured at PPP dollars given in the World Bank's *World Development Reports*.

In order to make data on Real GDP per capita (PPP\$) in 1998 directly comparable with data on other explanatory variables, they were transformed into percentages by using 25,000 dollars to represent 100 percent. This upper limit was selected to restrict the impact of the most extreme cases. The percentage is 100 for all countries whose Real GDP per capita (PPP\$) in 1998 was higher than 25,000 dollars (Iceland, Kuwait, Luxembourg, Norway, Switzerland, and the United States). Data on this variable and percentages are given in Appendix 5 as well as corresponding data on GNP per capita in 1998.

In this study, Real GDP per capita (PPP\$) 1998 (GDP%) is intended to measure indirectly the relative distribution of socio-economic power resources from the perspective of total economy. It is assumed that *the higher the level of Real GDP per capita (PPP\$), the more widely socio-economic power resources are distributed in the society and the better the chances of democratic politics*. Of course, it measures also the level of economic development and the wealth of nations.

Indices of power resources

The five basic explanatory variables can be used separately to explain democratization, but I think that a combination of them would be a theoretically more valid substitute for the hypothetical concept of 'resource distribution' than any of them separately. The five explanatory variables are intended to measure the degree of resource distribution from different perspectives. 'Resource distribution' is the theoretical explanatory factor, not any of the five basic variables. Therefore I wanted to aggregate the five variables and to use their combination as the principal explanatory variable. Students, Literates, Family Farms, DD, and GDP% explain democratization because they reflect some aspects of the distribution of power resources. As Pennings *et al.* (1999: 200) say: 'If the independent variables

are actually indicators of one latent dimension, then one should construct one scale and enter this scale as the independent variable instead of the separate indicators.'

The problem is how to combine the five explanatory variables. In order to facilitate the process of combination, all five variables were transformed into the scale from 0 to 100. Further, because Students and Literates are intended to measure the distribution of intellectual power resources from the perspective of education, it is reasonable to combine them into a sectional Index of Intellectual Power Resources (IR) by calculating the mean of the two percentages. Because these two variables and IR could also be used as indicators of economic development and modernization, my measures of resource distribution and measures of economic development are partly overlapping. Family Farms (FF) and DD can be combined into a sectional Index of Economic Power Resources (ER) by the same method as in the 1997 study. In other words, the values of FF and DD are weighted by percentages of agricultural (AP) and non-agricultural populations (NAP) respectively, and the weighted values of FF and DD are then simply added: $ER=(FF \times AP)+(DD \times NAP)$. After the calculation of these two sectional indices, we have three explanatory variables: IR, ER, and GDP% (Real GDP per capita).

There would be many ways to combine the explanatory variables. In the 1997 study, only two combinations were used: IPR and IPRI. This time I will experiment with three different combinations because it is difficult to know which would be the most justified method of aggregating explanatory variables.

The Index of Power Resources (IPR), which is calculated by multiplying the values of the two sectional indices IR and ER and by dividing the product by 100, will be used as the first combination of explanatory variables: $IPR=(IR \times ER)/100$. This index is based on only four basic explanatory variables (Students, Literates, FF, and DD), which are combined into two sectional indices (IR and ER). It produces high values if the values of both sectional indices are high. The value of IPR decreases drastically if the value of either sectional index is near zero.

The Extended Index of Power Resources (IPR-2), which is calculated by multiplying the standardized values of IR, ER, and GDP% and by dividing the product by 10,000, will be used as the second combination: $IPR-2=(IR \times ER \times GDP\%)/10,000$. Because of multiplication, it produces high values only if all components have high values. Any low value of a component will reduce the value of IPR-2. Because the extreme variation in the values of GDP% affects the values of IPR-2 crucially, it is interesting to see whether this extended index of power resources is able to explain as much or more of the variation in democratization than the original IPR, from which GDP% is excluded.

The mean of the five explanatory variables (Mean) will be used as the third combination. The Mean variable differs from the two other indices of

power resources in one important respect. A low value of any single variable will not reduce the value of this combination drastically. In other words, high values of some variables can compensate low values of some other basic variables.

Summary of explanatory variables

The following explanatory variables will be used in this study to measure the degree of resource distribution and to explain variation in the measures of democratization:

- 1 Students (students in universities per 100,000 inhabitants). It is transformed into percentages by using 4,000 students per 100,000 inhabitants to represent the level of 100 percent;
- 2 Literates (the percentage of literates from the adult population);
- 3 Family Farms (FF);
- 4 DD (the degree of decentralization of mainly non-agricultural economic power resources);
- 5 Real GDP per capita (PPP US\$). It is transformed into percentages by using 25,000 dollars per capita to represent the level of 100 percent (GDP%);
- 6 Index of Intellectual Power Resources (IR) (the mean of Students and Literates);
- 7 Index of Economic Power Resources (ER). FF and DD are combined by weighting the values of FF and DD by the percentage of agricultural population (AP) and by the percentage of non-agricultural population (NAP) respectively. $ER = (FF \times AP) + (DD \times NAP)$;
- 8 Index of Power Resources (IPR). $IPR = (IR \times ER) / 100$;
- 9 Extended Index of Power Resources (IPR-2). $IPR-2 = (IR \times ER \times GDP\%) / 10,000$;
- 10 Mean. The arithmetic mean of the five basic explanatory variables.

Empirical data on the five basic explanatory variables are from different periods before 1999. Most data on Students are from the years 1995–7 and on Literates from the year 1998. Empirical data on Family Farms are from the period since the 1960s. Data on DD concern the situation in the latter half of the 1990s. Nearly all data on Real GDP per capita concern the year 1998.

Research hypotheses and methods

The operational definitions of the measures of democracy (Chapter 3) and of resource distribution make it possible to transform the original hypothesis presented in Chapter 2 into two research hypotheses:

- 1 *The measures of democracy, the Index of Democratization in particular, are positively correlated with the measures of resource distribution, the combined indices of power resources in particular.*
- 2 *All countries tend to cross the threshold of democracy at about the same level of resource distribution as indicated by indices of power resources (IPR, IPR-2, and Mean).*

Mattei Dogan (1994: 35) says succinctly that the ‘chariot of science is trailed by three horses: theory, data and method’ and warns that if these three horses do not run at the same speed the chariot may lose its equilibrium. I have tried to keep the three horses in balance. This study is based on a deductive evolutionary resource distribution theory of democratization formulated and discussed in Chapter 2. A testable hypothesis of democratization was derived from the theory. Dependent and independent variables are defined in Chapters 3 and 4, and extensive empirical data on all variables have been collected. Data are presented and documented in the appendices of this book and in my previous studies and datasets.

Because all data on empirical variables are at the interval level, it is possible to test the hypotheses by correlation and regression analyses, but some other techniques of comparison will also be used. The first hypothesis can be tested by correlation analysis. Positive correlations should be relatively strong. Weak or negative correlations would falsify the hypothesis, which presupposes a strong positive correlation between the measures of democratization and of resource distribution. I want to emphasize that this hypothesis is really falsifiable. It is possible to falsify this hypothesis by empirical evidence given in appendices (for falsification, see Popper 1968; *A Pocket Popper* 1983: 143–70). The stronger the correlations are, the more confidently we can assume that the distribution of power resources is causally related to the variation of democratization. If the explained part of variation rises above 50 percent, it would support the theoretical assumption that the distribution of power resources constitutes the fundamental factor of democratization.

According to my theoretical argumentation, the hypothesized positive relationship between the level of democratization and the measures of resource distribution is causal, but because correlations merely measure covariation, correlation analysis cannot be directly used to establish causality (cf. Blalock 1960: 337; Wagschal 1999: 303–8; de Vaus 2002: 267–8). It is necessary to consider what causality presupposes. Manheim and Rich (1986: 21–2) say that it is justified to postulate causal relationships only when four conditions are simultaneously met. First, the postulated cause and effect must change together, or covary. Second, the cause must precede the effect. Third, we must be able to identify a causal linkage between the supposed cause and effect. Fourth, the covariance of the cause and effect phenomena must not be due to their simultaneous relationship to some other third factor. I think that the relationship between demo-

cratization and resource distribution meets these requirements quite well. First, correlations indicate that the postulated cause and effect change together. Second, data on explanatory variables precede data on political variables. Because differences in social structures and conditions measured by explanatory variables have nearly always preceded differences in political systems, it is reasonable to argue that cause has preceded the effect. Political decision makers can initiate social changes, but quite often they are unable to anticipate or control political consequences of social changes. Third, the Darwinian interpretation of politics discussed in Chapter 2 explains the causal linkage between the supposed cause and effect. Fourth, it would be difficult to find some third factor which could explain the covariation between the explanatory and dependent variables of this study. Consequently, I am quite confident that the relationship is causal. Blalock (1960: 337) notes that if 'our theory is able to show a logical connection between the two variables or to predict that *A* will be followed by *B*, we need not be too unhappy about making the intellectual leap to a causal interpretation' (see also Pennings *et al.* 1999: 168–72; Perry and Robertson 2002: 201–4).

The second hypothesis can be tested by regression analysis. The results of cross-sectional regression analysis should show that the values of explanatory variables are clearly higher for democracies than for non-democracies. If there is no systematic difference in the values of explanatory variables between the countries above and below the threshold of democracy, the second hypothesis should be regarded as falsified. For this purpose, it is necessary to define what is meant by 'about the same level of resource distribution.' If ID and explanatory indices were exactly in the same scale, it would be reasonable to hypothesize that countries tend to cross the threshold of democracy as soon as IPR (or some other explanatory index) rises to the level of around 10 index points because countries have usually crossed both threshold values of democracy when ID is around 10 index points. This means that the hypothetical regression equation would be $ID_{est.} = 0 + 1 \times IPR$ (or some other explanatory index) because the theory presupposes that the level of democracy depends directly on the level of resource distribution. In that case the transition level of explanatory variables should also be around 10 index points. In fact, explanatory indices are not in the same scale with ID. Therefore it is necessary to define the transition level of each explanatory index separately. It can be defined around the point at which the regression line of ID on IPR (or some other explanatory index) crosses the ID level of 10 index points. When the transition levels of explanatory indices are defined, we can hypothesize that countries above the upper limit of a transition level tend to be democracies and that countries below the lower limit of the same transition level tend to be non-democracies. Deviating cases weaken the hypothesis, but if the number of deviations remains relatively small, they are not enough to falsify the probabilistic hypothesis. It should be noted that because the operational indicators used in this study are not perfect substitutes for

hypothetical concepts, it would be unrealistic to expect complete correlation between ID and IPR. We have to accept some variation around the average transition level. Besides, accidental factors always have a role in politics.

This study is focused on the situation in 1999–2001, but a more limited statistical analysis will be made over the period 1850–1998 in order to see to what extent the relationship hypothesized between political and explanatory variables has remained the same over time. Further, my intention is to review predictions made in my previous studies and to see to what extent they have proved to be correct or wrong. Such a review of past predictions is appropriate because my intention in this study is to evaluate the prospects of democracy in single countries on the basis of the situation in 2001.

Regression analysis will be used to differentiate between countries in which the level of democratization is approximately in harmony with the degree of resource distribution (countries around the regression line) and countries which contradict the hypothesis (countries with large positive or negative residuals). It will be interesting to see in which countries the level of democratization is much higher (large positive residuals) or lower than expected on the basis of regression equations and to explore what factors might explain large deviations. In general, large positive residuals can be interpreted to predict that the level of democratization decreases and large negative residuals that there is potential for the rising of the level of democratization.

5 A review of democratization in 1850–1998

The central purpose of this study is to test the two research hypotheses formulated in Chapter 4 by empirical evidence and to see to what extent it is possible to explain the variation in the degree of democratization by the explanatory variables derived from the evolutionary resource distribution theory of democratization. The higher the explained part of variation, the more confidently it is possible to predict the prospects of democracy in single countries on the basis of explanatory variables. The study focuses on 170 contemporary countries (population 200,000 or higher) and on the situation in 1999–2001, but first I shall reanalyze the past relationship between the measures of democracy and explanatory variables over the period 1850–1998. Because the explanatory theory used in this study is assumed to be universal, it is plausible to expect that the relationship between the degree of democratization and the measures of resource distribution has remained more or less stable over time. The results of correlation analysis show how stable the relationship between variables has been. In the latter part of this chapter, some predictions made in previous studies will be reviewed in order to see to what extent they have been correct or wrong.

Cross-sectional correlations in 1850–1998

Let us start from a correlation analysis which covers the 170 countries of this study and their predecessors over the period 1850–1998. However, this analysis does not include all 170 countries because Bosnia & Herzegovina, Eritrea, and Slovakia were not included in my previous studies. Further, this reanalysis does not include the states which no longer exist (German Democratic Republic, South Vietnam, and South Yemen) nor the small states with a population between 100,000 and 200,000 inhabitants which were included in the 1997 study (St Lucia, St Vincent & Grenadines, Sao Tome & Principe, Vanuatu, and Western Samoa). The number of countries covered by this analysis was 37 in 1850, after which it gradually increased and rose to 167 in the 1990s.

Statistical data on political variables are principally from *The Polyarchy Dataset* (2001), but the data used in this analysis are not exactly the same as

those published in my previous books (Vanhanen 1979, 1984, 1990, 1997) and in *The Polyarchy Dataset* because some political data have been corrected and because referendums have been incorporated into the Participation variable and through it into the ID values. Data on explanatory variables are derived from my previous books (Vanhanen 1979, 1984, 1990, 1997). Data are combined into the *Democratization and Power Resources 1850–2000* dataset published by the Finnish Social Science Data Archive (2003). IPR over the period 1850–1970 is based on five explanatory variables and over the period 1980–90 on six variables. Data on the sixth explanatory variable (DD) are only from the 1980s and 1990s. Data on political variables are calculated separately for each year over the period 1850–1998, whereas data on explanatory variables are decennial.

It would be possible to correlate each political variable with each explanatory variable separately for each year over the period 1850–1998, but because the number of such correlations would rise to thousands, they are not calculated for this study, and it is not necessary in order to test the first hypothesis and the stability of the hypothesized relationship. It is enough to restrict correlation analysis to the relationship between IPR, which is the principal measure of resource distribution, and ID, which is the principal measure of democratization. Correlation analysis is limited to the first year of each decade in the period 1850–1930 and to the first and fifth years of each decade in the period 1940–98 (including also the last year 1998). The results of this correlation analysis are presented in Table 5.1.

Cross-sectional correlations are positive as hypothesized over the period 1850–1998 and they support the first hypothesis strongly. Correlations have remained relatively stable from decade to decade, although the correlations of the period 1850–80 are clearly weaker than later correlations. There is a technical explanation for this difference in the strength of correlations. Because most values of ID and IPR differ only slightly from zero in the period 1850–80, it would not be reasonable to expect strong correlations. According to my interpretation, the stability of correlations supports the theory which presupposes that the relationship between democratization and resource distribution remains approximately the same over time.

The explained part of variation in ID varies from 52 to 76 percent in the period 1890–1998. Most correlations are higher than 0.8. The strength of correlations declined temporarily in the 1960s when approximately 30 African countries became independent. Some of these countries had democratic institutions during the first years of independence, although their IPR values were extremely low. These discrepancies reduced the strength of correlations in the 1960s. Another (probably temporary) decline occurred in the 1990s as a consequence of democratization in several African countries and in the former socialist countries. The IPR values of the former socialist countries for 1990 were still low because of the concentration of economic power resources. Later on, most of these countries achieved a

Table 5.1 Cross-sectional correlations between IPR and ID over the period 1850–1998

<i>IPR year</i>	<i>ID year</i>	<i>N</i>	<i>Correlation</i>
1850	1850	37	0.543
1860	1860	37	0.544
1870	1870	41	0.621
1880	1880	42	0.666
1890	1890	42	0.762
1900	1900	42	0.721
1910	1910	50	0.870
1920	1920	57	0.803
1930	1930	61	0.869
1940	1940	55	0.828
1940	1945	62	0.832
1950	1950	75	0.833
1950	1955	78	0.805
1960	1960	100	0.762
1960	1965	112	0.771
1970	1970	116	0.825
1970	1975	116	0.830
1980	1980	143	0.864
1980	1985	144	0.858
1990	1990	149	0.848
1990	1995	167	0.745
1990	1998	167	0.758

much better balance between IPR and ID as a consequence of privatization programs and economic reforms which have decentralized the ownership and control of economic power resources.

The fact that cross-sectional correlations for the period 1980–98 are not higher than for the period 1910–70 indicates that the sixth explanatory variable DD, which was included in IPR through the sectional index DER in 1980–90, does not strengthen correlations significantly. The five original explanatory variables had been able to explain approximately as much of the variation in ID.

Correlations do not directly show that the relationship between variables is causal, but the fact that social structures – like the level of economic development and educational and land tenure systems – change usually slowly, supports the assumption that explanatory variables based on social structures are in this relationship more independent than political variables. However, to some extent their relationship is interactive.

Political power can be used to change social structures, and it has been used for this purpose. For example, after its victory in the Russian civil war, the ruling communist party concentrated economic power resources in the hands of the government by collectivizing agriculture and by socializing all private economic enterprises. Later on the same was made in other socialist countries. After the collapse of socialist systems, new governments started

to privatize economic enterprises and to decentralize economic power resources. Agrarian reforms in many countries provide examples of attempts to change economic structures by conscious political decisions. On the other hand, many transformations in economic and social structures caused by technological changes have been outside the control of political power holders. For example, technological changes in agriculture have increased the size of family farms in many countries and decreased the number of agricultural workers. Technological changes have also contributed to the rise of educational levels in most countries of the world and caused the governments to further education. Such changes are uncontrollable undercurrents which undermine existing power structures and create conditions for the emergence of new power groups. The significant rise of the level of education in Russia and Eastern Europe may have been the fundamental causal factor which contributed to the collapse of socialist systems. Therefore I am inclined to argue that the relationship between IPR and ID is causal. In principle, it is possible to change the nature of political systems quickly, but it is much more difficult to change social structures and conditions affecting resource distribution in a society, although it is not completely impossible. The calculation of lagged correlations would provide a method of exploring the causal priority between political and explanatory variables (cf. Vanhanen 1979: 143–52).

Correlations in the total world group

Another method of testing the first research hypothesis and the stability of the relationship between explanatory variables and the measures of democracy is to combine decennial data over the period 1850–1998 into the same group. This longitudinal group includes 1,133 decennial observation units (only 318 units in the case of DD). Data on IPR and its components are taken from the beginning of each decade from 1850 to 1990. Data on the three measures of democracy concern the eighth year of each decade from 1858 to 1998. Let us first examine the intercorrelations of explanatory variables presented in Table 5.2.

Table 5.2 shows that all explanatory variables are moderately or strongly intercorrelated, which means that they are overlapping to a significant extent. The weakest correlations are between FF and other explanatory variables. All basic explanatory variables and sectional indices are strongly correlated with IPR and even more strongly with Mean, which represents the arithmetic mean of the six (in 1850–1970 five) basic explanatory variables. Strong positive intercorrelations can be interpreted to support the assumption that they are indicators of the same theoretical explanatory factor, the degree of resource distribution.

The first research hypothesis presupposes clear positive correlations between the measures of resource distribution and the measures of democracy, not only cross-sectionally but also over time. The correlations between

Table 5.2 Intercorrelations of explanatory variables in the longitudinal group of 1,133 country-year observation units in 1850–1990 (in the case of DD, N=318)

<i>Variable</i>	<i>UP</i>	<i>NAP</i>	<i>IOD</i>	<i>Stud.</i>	<i>Liter.</i>	<i>IKD</i>	<i>FF</i>	<i>DD</i>	<i>DER</i>	<i>IPR</i>	<i>Mean</i>
UP		0.858	0.957	0.695	0.687	0.754	0.361	0.457	0.329	0.702	0.842
NAP			0.970	0.676	0.824	0.846	0.372	0.487	0.367	0.723	0.908
IOD				0.710	0.789	0.834	0.379	0.491	0.361	0.739	0.910
Students					0.631	0.826	0.341	0.543	0.361	0.746	0.778
Literates						0.958	0.460	0.481	0.483	0.656	0.906
IKD							0.459	0.553	0.483	0.751	0.943
Family Farms (FF)								0.529	0.949	0.654	0.633
DD									0.793	0.866	0.764
DER										0.699	0.639
IPR											0.851
Mean											

the three measures of democracy and various explanatory variables given in Table 5.3 test the longitudinal aspect of the first research hypothesis. Negative or weak positive correlations would falsify this aspect of the hypothesis.

The correlations given in Table 5.3 support the first hypothesis strongly. It is remarkable that the positive relationship hypothesized between explanatory and dependent variables seems to have remained stable over time. In other words, the same indicators of resource distribution have explained the variation in degree of democratization approximately as satisfactorily since the 1850s.

There is not much difference in the explanatory powers of the six basic variables and of the three sectional indices, although DD is most strongly correlated with Competition and ID. The six single variables measure resource distribution from different perspectives, but only from partly different perspectives because all explanatory variables are moderately or strongly intercorrelated. There is a clear difference between the two basic political variables and the Index of Democratization (ID). Nearly all correlations between ID and explanatory variables are stronger than correlations between the two basic political variables (Competition and Participation) and explanatory variables. It implies that ID may indicate the degree of democratization better than either of the two basic political variables.

The two alternative combinations of explanatory variables (IPR and Mean) are used as the principal measures of resource distribution. Table 5.3 shows that IPR and Mean are slightly more strongly correlated with Competition and Participation than most of the six single explanatory variables and the three sectional indices. Differences in the strength of correlations are relatively small. However, they are clearly more strongly correlated with ID than single explanatory variables and sectional indices. DD is an exception because its correlation with ID (0.786) is nearly as high

Table 5.3 Measures of resource distribution correlated with the measures of democracy in the total world group of 1,133 country-year observation units in 1850–1998 (in the case of DD, N=318)

<i>Explanatory variable</i>	<i>Competition</i>	<i>Participation</i>	<i>ID</i>
UP (Urban Population)	0.464	0.575	0.627
NAP (non-agricultural population)	0.576	0.587	0.668
IOD (Index of Occupational Diversification)	0.543	0.603	0.672
Students	0.400	0.555	0.571
Literates	0.610	0.649	0.639
IKD (Index of Knowledge Distribution)	0.589	0.676	0.673
FF (Family Farms)	0.423	0.423	0.543
DD (degree of decentralization of non-agricultural economic power resources)	0.704	0.474	0.786
DER (Index of the Distribution of Economic Power Resources)	0.476	0.451	0.591
IPR (Index of Power Resources)	0.589	0.621	0.809
Mean (arithmetic mean of the basic explanatory variables)	0.636	0.682	0.756

as the correlation between IPR and ID (0.809) and a little higher than the correlation between Mean and ID (0.756). The strongest correlation is between IPR and ID as expected. The explained part of variation rises to 65 percent, which represents an extremely high degree of explanation. In the case of Mean, the explained part of variation rises to 57 percent. According to my interpretation, this difference in the strength of correlations indicates that IPR is a better substitute for the hypothetical concept of ‘resource distribution’ than Mean. Both aggregate indices are based on the same basic explanatory variables, but, as explained in Chapter 4, IPR is calculated by multiplying the three sectional indices and by dividing the product by 10,000, whereas Mean is the mean of the five (six in 1980–90) basic explanatory variables.

The explained part of variation (65 percent) in the degree of democratization is so high that it is justified to evaluate and predict chances of democracy in single countries on the basis of their IPR values. The results of a regression analysis summarized in Figure 5.1 illustrate the accuracy of predictions based on the relationship between IPR and ID over the period 1850–2000. It should be noted that this analysis includes 1,303 observation units because data for 170 countries in 2000 are also included.

We can see from Figure 5.1 that most of the country-year units of observation differ only moderately from the regression line. It indicates that the value of IPR has ‘predicted’ the degree of democratization for most countries satisfactorily, but Figure 5.1 discloses also numerous clearly

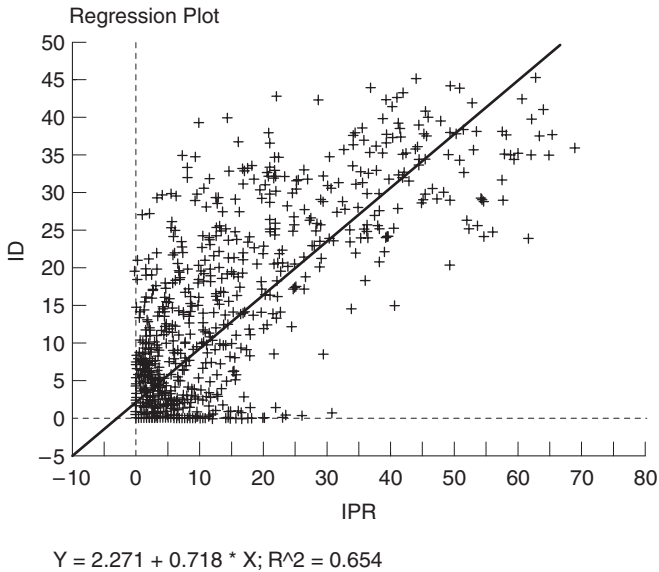


Figure 5.1 The results of regression analysis of ID on IPR for single countries in the group of 1,303 country-year observation units in 1850–2000.

deviating cases with large negative or positive residuals. Their existence implies that, in addition to the explanatory variables of this study, there are other factors affecting the degree of democratization. Some deviations may be due to the fact that the operational indicators of democracy and resource distribution are imperfect substitutes for the hypothetical concepts of ‘democratization’ and ‘resource distribution.’

Review of previous predictions

According to Karl Popper, the aim of science is to find satisfactory explanations of whatever strikes us as being in need of explanation. Scientific explanation will be the explanation of the known by the unknown (Popper 1983: 191). In the studies of democratization, the great variation of political systems from the perspective of democracy constitutes the *explicandum*, the known state of affairs in need of explanation. In my studies, the variation in the distribution of power resources has been assumed to form the explanation for the variation in the degree of democratization. The results of the correlation analysis described above explain a significant part of the *explicandum*. Popper notes that, generally speaking, ‘a theoretical problem consists in the task of providing an intelligible explanation of an unexplained natural event and the testing of the explanatory theory by way of its predictions’ (Popper 1992: 4).

Predictions for single countries were derived from the results of regression analyses by evaluating the chances of democracy or democratization at the level of single countries on the basis of residuals. Large positive residuals are assumed to predict a decline in the level of democratization (if the degree of resource distribution does not rise) and large negative residuals are interpreted to predict that the level of democratization will rise (if the degree of resource distribution does not decrease).

On the basis of the results of regression analyses, I made general predictions about the prospects of more extensive power distribution, of the prospects of pluralistic political systems, or of the prospects of multiparty democracy already in my studies in the 1970s (see Vanhanen 1971, 1975, 1977a, 1977b, 1979), although they include relatively few specific predictions for single countries. My general argument was that the distribution of power seeks out an equilibrium with the distribution of power resources and that, therefore, imbalance between them predicts changes in political or explanatory variables towards a better balance (see, for example, Vanhanen 1977b: 172–9).

The Emergence of Democracy (1984)

The concluding chapter of *The Emergence of Democracy* (Vanhanen 1984), which explores democratization over the period 1850–1979, focuses on the prospects for the growth of democracy in the major regions of the world and also in single countries. It is noted that in the past democracy emerged only in societies where power resources were widely distributed among the population. This relationship is assumed to be invariant ‘because it is produced by natural selection in politics, which works tirelessly and is powered by the endless struggle for scarce resources’ (1984: 131). Further, it is noted that because the number of countries at the transition level of IPR has sharply increased since the 1950s, ‘we can expect a considerable increase in the number of Democracies within the next two decades.’ More specifically, it was predicted that the number of democracies in this comparison group (119 countries) ‘will be more than 50 by the end of this century’ (ibid.: 131). This general prediction was correct.

Most predictions were correct also at the level of single countries, but not all of them. The greatest failure concerned the group of socialist countries. The IPR values for socialist countries were low in the 1970s because of the concentration of economic power resources in the hands of the state and the ruling party. Therefore I could not predict democratization, although I paid attention to the discrepancy of explanatory variables. I noted that the ‘social basis of hegemonic governmental structures is rather narrow in socialist countries because they are upheld only by the concentration of the means of coercion and of economic power resources,’ whereas other social conditions, especially a high level of education, are conducive to democracy. I said that it is ‘difficult to estimate the relative importance

of the different power resources' and predicted that 'the pressure for democratization will probably be enhanced, and the consequences of this pressure are incalculable' (*ibid.*: 132).

In the case of Latin America, my predictions were more accurate. In 1970–9, only six of the 20 Latin American countries were democracies, but because 11 other countries were at or above the transition level of IPR, I predicted that 'nearly all of these countries will have crossed the threshold of democracy by the end of this century' (*ibid.*: 132). In fact, only Cuba and Haiti of the 20 Latin American countries were clearly below the minimum threshold of democracy in 2001.

Because the IPR values of most African countries were (and still are) extremely low, I had to predict that nearly all of them 'will remain below the threshold of democracy during the next two decades' (*ibid.*: 133). In fact, most African countries were below the threshold of democracy in 2001, although not 'nearly all.' According to my measures of democracy, 15 sub-Saharan countries (Benin, Botswana, Cape Verde, Central African Republic, Chad, Gambia, Ghana, Madagascar, Malawi, Mauritius, Mozambique, Nigeria, Senegal, South Africa, and Uganda) were above the minimum threshold of democracy in 2001. Cape Verde, Gambia, Mauritius, and Mozambique were not included in the 1984 study. This failure to predict democratization in so many countries implies that two decades may be too long a time period for predictions. In fact, the 1990–1 IPR values for Botswana, Cape Verde, Central African Republic, Ghana, Madagascar, and Nigeria had already risen to the transition level and for Mauritius and South Africa above the transition level (see Vanhanen 1997: 87–8). It means that, on the basis of their IPR values in 1990–1, democracy in 2001 was unexpected only in seven of these countries (Benin, Chad, Gambia, Malawi, Mozambique, Senegal, and Uganda).

The Process of Democratization (1990)

In the 1990 book, the results of empirical analysis were used as a starting point to examine the prospects of democracy by regional groups. It was assumed 'that the process of democratization is powered by the same causal factors in all parts of the world and that the relative distribution of important power resources is the most important factor affecting the chances to establish and uphold democracy' (Vanhanen 1990: 121). The 147 countries of this study were divided into seven regional groups.

All the countries of Western Europe and North America were democracies in 1988, and I predicted that they would remain as democracies. All 23 countries were above the transition level of IPR. I noted that it 'is difficult to imagine any domestic forces that could destroy democratic institutions in these countries and establish any kind of autocratic rule' (*ibid.*: 126). All these countries have remained democracies as predicted.

The Soviet Union and eight countries of Eastern Europe were non-democracies in 1988. They had contradicted the socio-economic and modernization theories of democratization since the 1950s. According to my explanation, they were non-democracies because 'the level of resource distribution, not the level of socio-economic development and modernization, is the causal factor of democratization' (ibid.: 133). The problem with them was the discrepancy between the first two and the third dimension of resource distribution. The high values of IOD (the Index of Occupational Diversification) and IKD (the Index of Knowledge Distribution) predicted democratization, whereas the concentration of economic power resources measured by DER was in harmony with the concentration of political power. IPR values were above 10.0 only for Poland and Yugoslavia (because of Family Farms) and near zero for the other seven countries. I asked: 'How long can the concentration of power resources in one dimension check the growth and distribution of power resources in other dimensions?' (ibid.: 135). I argued that the destiny of other East European countries depended on the Soviet Union, which had been, at least until 1988, the ultimate guarantor of their non-democratic political systems. In the case of the Soviet Union, I argued that as 'a consequence of technological changes, intellectual and economic power resources tend to become more and more widely distributed, and the process of natural selection in economy seems to favor the dispersion of economic control and to undermine the direction of economy through central authority.' Therefore, I assumed that 'together these factors have predisposed the Soviet Union toward democratization' (ibid.: 138). I added that the basic pattern is the same in the other East European countries.

Democratization in Eastern Europe was unexpected from the perspective of their low IPR values in 1980. The weight of the other dimensions of resource distribution broke the constraints based on the concentration of economic power resources. This example showed that the structure of IPR is not fully satisfactory. One dimension of resource concentration cannot unendingly prevent the effects of other dimensions of resource distribution.

In the group of Latin American and the Caribbean countries (26 countries), a decisive turn toward democratization had occurred in the 1980s. The number of democracies was 19 in 1988, and only six countries (Chile, Cuba, Guyana, Haiti, Panama, Paraguay, and Suriname) were below the threshold of democracy. According to my predictions, prospects of democracy were best for the 16 countries which were above the transition level of IPR (6.5). Two of these countries, Chile and Panama, were not democracies in 1988. I predicted that 'both countries will cross the threshold of democracy within the next few years' (ibid.: 144). Both are now democracies, and the other 14 countries have remained as democracies. Seven countries were at the transition level of IPR (3.5–6.5). Five of them were democracies in 1988 (Bolivia, El Salvador, Guatemala, Honduras, and

Nicaragua). I noted that on ‘the basis of their social conditions I cannot predict that democracy will survive in all of them without breakdowns’ (ibid.: 144). Four of them have remained above the threshold of democracy. Guatemala was slightly below the Participation threshold in 2001. In 1988, Guyana was slightly and Paraguay more clearly below the threshold of democracy. I was not sure about the chances of democracy in these two countries. In fact, both of them were above the threshold of democracy in 2001. Three countries were below the transition level of IPR (Cuba, Haiti, and Suriname), and all of them were non-democracies. I did not expect them to cross the threshold of democracy in the near future, although I noted that the 1987 parliamentary election won by the opposition Front for Democracy and Development had started the process of democratization in Suriname. Cuba and Haiti have remained below the threshold of democracy, whereas Suriname had already crossed the threshold in 1991. My conclusion was that democratization in many Latin American countries has become irreversible because ‘IPR has risen above 6.5 in 16 countries and is below 3.5 index points in only three countries’ (ibid.: 147).

North Africa and the Middle East (22 countries) was not yet a problematic region in 1980–8. Only three countries were above the transition level of IPR (6.5), and two of them (Israel and Lebanon) were democracies as expected. Jordan was below the threshold of democracy. I had to predict democratization in Jordan because of its high IPR value, but it has not yet taken place. Of the other 19 countries, ten (Algeria, Bahrain, Egypt, Iran, Iraq, Kuwait, Libya, Qatar, Syria, and Tunisia) were at the transition level of IPR and nine below the transition level of IPR. Because countries at the transition level of IPR can be democracies or non-democracies, I did not need to predict immediate democratization in any of them, but I argued that the chances of democratization are the slightest in Bahrain, Kuwait, and Qatar where the most important economic power resources (oil) are concentrated in the hands of the ruler families. Chances of democratization were expected to be better in the seven other countries. Iran was expected to have the best chances of democratization. In fact, Algeria had risen above the minimum threshold of democracy in 2001, whereas Iran was still below the Competition threshold of democracy. I did not predict democratization in any of the nine countries below the transition level of IPR (3.5). All of them have remained as non-democracies.

Sub-Saharan Africa constituted a more problematic regional group in 1980–8. Four (Botswana, Gambia, Liberia, and Mauritius) of the 42 countries were democracies in 1988, but three of them were deviant cases. Mauritius was the only country above the transition level of IPR and it was a democracy as expected. Five other countries (Congo (Brazzaville), Gabon, Ghana, Zaire, and Zambia) had reached the transition level of IPR. I assumed that these five countries had the best chances of democratization, although all of them were non-democracies in 1988. In 2001, Ghana had crossed the threshold of democracy, and Congo (Brazzaville) had been

above the threshold in 1992–6. Of the 36 countries below the transition level of IPR, Botswana, Gambia, and Liberia were, contradicting my hypothesis, democracies in 1988. Botswana and Gambia were democracies still in 2001, whereas democratic institutions had failed in Liberia. I could not predict democratization in any of the countries below the transition level of IPR, although I admitted that democratization may take place in some of them despite their low IPR values. Nigeria, Sierra Leone, and Uganda had experienced periods of democratic rule in the past. South Africa had remained in the category of non-democracies because the black majority was excluded from political rights and democratic politics. In fact, in addition to Botswana, Gambia, and Mauritius, Benin, Cape Verde, Central African Republic, Chad, Ghana, Madagascar, Malawi, Mozambique, Nigeria, Senegal, South Africa, and Uganda were democracies in 2001, although I had not been able to predict their democratization on the basis of their IPR values in 1980. These examples show that my measures of resource distribution do not provide a perfect explanation for democratization. I noted that it is much more difficult to change social conditions favorable for democracy in sub-Saharan Africa than in some other regions where only one or two explanatory variables are unfavorable for democracy. In sub-Saharan Africa the values of all explanatory variables, except Family Farms, are low.

In Asia (20 countries) all the five countries above the 6.5 IPR index points (Japan, South Korea, the Philippines, Singapore, and Sri Lanka) were democracies as expected in 1988, and I assumed that democracy will survive in all these countries, although the quality of democracy in Singapore is questionable. Four of them were above the threshold of democracy in 2001. Singapore had dropped below the threshold of democracy. Five other countries (Burma, India, Indonesia, Malaysia, and Thailand) were at the transition level of IPR. I predicted that India and Malaysia will remain above the threshold of democracy. I did not make clear predictions for the three other countries. In 2001, India, Indonesia, Malaysia, and Thailand were democracies, and Burma was still ruled by a military government. I could not predict democratization in the ten countries below the transition level of IPR, but Bangladesh, Mongolia, and Nepal have crossed the threshold of democracy, and Cambodia is only slightly below the Competition threshold of democracy. However, democratic institutions are still fragile in all these countries.

Of the five Pacific countries, Australia and New Zealand are stable democracies. Fiji was also above the transition level of IPR, but it had dropped below the threshold of democracy in 1988. I predicted that democratic institutions will be reestablished in Fiji because of its relatively high IPR value. This happened in 1992. Papua New Guinea and the Solomon Islands were deviant democracies. Despite their low IPR values, I did not predict the failure of democratic institutions in these two countries. I assumed that significant external economic and administrative aid and

ethnic heterogeneity supported the survival of democracy in Papua New Guinea and the Solomon Islands. They have remained above the threshold of democracy.

This review shows that it was possible to make relatively accurate predictions on the chances of democracy in single countries on the basis of their IPR values in 1980, although there are also cases in which predictions failed. It would be unrealistic to expect perfectly correct predictions because the explanatory variables do not take into account various locally important factors or external factors and because there is always accidental variation in politics. According to my theoretical interpretation, the strong and consistent relationship between the measures of democracy and explanatory variables is due to the fact that the strive for power is constant in human societies and that everywhere the sharing of power depends on the way in which crucial power resources are distributed among competing individuals and groups.

Prospects of Democracy (1997)

My latest predictions on the prospects of democracy in single countries were presented by regions in the 1997 book (Vanhanen 1997), which covers 172 contemporary countries. The region of Europe and North America includes 40 countries, of which 38 were democracies in 1993 (the latest year of analysis). All 34 countries above the transition level of IPR (6.3) were democracies as expected, and my general prediction for these countries was that they have a good chance of maintaining democratic structures. This category includes 13 former socialist countries and successor states of the former Soviet Union. Six countries (Albania, Belarus, Bulgaria, Moldova, Russia, and Ukraine) were at the transition level of IPR (3.3–6.3). Four of them were democracies, whereas Belarus and Moldova were below the Competition threshold of democracy. My general prediction for these countries was that ‘democratic systems have good chances to become stabilized because economic and social reforms are diversifying the control of economic and intellectual power resources and the Index of Power Resources will probably cross the upper limit of transition level of IPR very soon’ (ibid.: 106). Moldova crossed the threshold of democracy, but dropped again below the Competition threshold in 2001. Belarus has not yet crossed the threshold of democracy, although I predicted that democratic institutions will become stabilized in Belarus, too.

In the region of Latin America and the Caribbean, 24 countries were above the transition level of IPR and all of them were democracies as expected. Democratic institutions were predicted to survive in all these countries because their IPR values are sufficiently high. Until now this prediction has been correct. Five other countries (Cuba, Guatemala, Haiti, Honduras, and Paraguay) were at the transition level of IPR. Honduras and Paraguay were above the threshold of democracy. I expected democratic

institutions to survive in Honduras, whereas in Paraguay ‘breakdowns of democratic institutions are still possible although not inevitable’ (ibid.: 115). Paraguay was temporarily below the threshold of democracy in 1999 but in 2000 again above the threshold. In the case of Cuba, I said that we ‘can expect democratization in Cuba, although it is not possible to predict when and in what way it is going to happen’ (ibid.: 115). For Guatemala my prediction was that the struggle for democracy will continue, but the stabilization of democratic institutions is not yet sure. Guatemala has not been able to cross the new Participation threshold (20 percent). I did not predict democratization in Haiti. According to my interpretation, many attempts to establish democratic institutions had failed in Haiti because the level of resource distribution was too low.

The region of North Africa, the Middle East and Central Asia had become problematic in 1993. Of the region’s 29 countries, 17 were above the transition level of IPR, three at the transition level and nine below the transition level of IPR. All 17 countries above the transition level of IPR should have been democracies, but only five of them (Cyprus, Iran, Israel, Lebanon, and Turkey) were in 1993. The situation has not improved since then. Algeria has risen above the threshold of democracy, but Iran dropped below the Competition threshold. My predictions based on IPR values have failed to become true in 12 cases (Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Libya, Morocco, Qatar, Saudi Arabia, Syria, and Tunisia). I discussed the question whether some characteristics of Muslim culture make democratization more difficult in Islamic countries than in the countries of other cultural areas and continued: ‘Polygyny, religious extremism, or some other features of Muslim culture may delay democratization because of their tendency to concentrate power resources, but I am not willing to argue that Muslim culture makes the emergence of democracy impossible’ (ibid.: 119). It may be that some features of Muslim culture, in Arab countries in particular, hamper democratization even more strongly than I assumed. I did not predict democratization in the three countries (Mauritania, the United Arab Emirates, and Yemen) at the transition level of IPR. They have not yet crossed the threshold of democracy. My general prediction for the nine countries below the transition level of IPR was that democratization is not yet probable. All of them were non-democracies in 2001.

Some predictions made for the 44 sub-Saharan countries have failed. Three countries (Ghana, Mauritius, and South Africa) were above the transition level of IPR in 1990–1, but only Mauritius was a democracy as hypothesized. However, South Africa crossed the threshold of democracy in 1994 and Ghana in 1996. IPR values predicted democratization correctly in these cases. Clear predictions were not made for the 16 countries at the transition level of IPR. Political systems are assumed to be most unstable at the transition level of resource distribution. Eight of these countries were above the threshold of democracy and the other eight countries were

approaching the threshold. Twenty-five sub-Saharan African countries were below the transition level of IPR. I did not expect any of them to be a democracy or to cross the threshold of democracy in the near future. Contrary to my expectations, five of these countries (Benin, Comoros, Gambia, Niger, and Senegal) were in the category of democracies in 1993. However, Comoros dropped below the threshold in 1995 and again in 1999; Gambia dropped temporarily below the threshold in 1994–5; and Niger was below the new Participation threshold (20 percent) in 2001, whereas Benin and Senegal have remained above the threshold of democracy. Besides, Malawi and Mozambique are new deviant democracies. Predictions were more or less correct in 20 cases but failed in five cases.

The small group of South Asian countries included some deviating countries. According to my measures, Maldives and Sri Lanka were above the transition level of IPR in 1990–1, but Maldives was not a democracy. It is possible that the real resource distribution in Maldives is not so high as my variables indicated. India and Pakistan were at the transition level of IPR. India was a democracy and Pakistan slightly below the threshold of democracy. I expected India to remain as a democracy, whereas I did not predict democratization in Pakistan. The three countries below the transition level of IPR (Bangladesh, Bhutan, and Nepal) should have been non-democracies in 1993, but Bangladesh and Nepal had crossed the threshold of democracy in 1991 and have remained above the threshold since then. I did not make any clear predictions for these two countries because the value of IPRI had risen to the transition level in Bangladesh and because I assumed that a high degree of ethnic pluralism may be a factor supporting competitive politics in Nepal.

In East Asia and Southeast Asia, ten countries were above the transition level of IPR in 1990–1. Seven of them (Japan, South Korea, Malaysia, Mongolia, the Philippines, Singapore, and Thailand) were democracies as expected, whereas Indonesia, Myanmar (Burma), and Taiwan were non-democracies. I predicted democratization in these three countries. Indonesia and Taiwan have democratized, but Burma is still under a military government. Singapore dropped below the Competition threshold in 2001. Brunei and China were at the transition level of IPR in 1990–1, and both were non-democracies. I did not predict democratization in these countries in the near future. The four countries below the transition level of IPR (Cambodia, North Korea, Laos, and Vietnam) were not expected to be democracies and they were not. My prediction for Cambodia was that it is not yet able to maintain a democratic system. It is slightly below the Competition threshold of democracy.

Four (Australia, Fiji, New Zealand, and Western Samoa) of the seven Oceanian countries were above the transition level of IPR in 1990–1 and all of them were democracies as expected. I predicted the survival of democracy in all these countries. In the case of Fiji my prediction was that democracy will survive, although ethnic interest conflicts will continue.

Papua New Guinea and Vanuatu were at the transition level of IPR and both were democracies in 1993. I noted in the case of Papua New Guinea that extremely 'large positive residuals predict a dramatic decrease in the level of democratization, but because some local factors (affecting resource distribution) unknown to me may support competitive politics, I hesitate to make any definitive prediction' (Vanhanen 1997: 153). Democracy has survived in Papua New Guinea. The Solomon Islands with its IPR value below 3.3 was a clearly deviating democracy in 1993. I noted that its low IPR value predicts the breakdown of democratic institutions, but some local factors may be more favorable for democracy. Among such local factors are the facts that the country is without its own army and that it is under the protection of the UK military guarantees.

Summary of previous predictions

The review of previous predictions shows that the consistent and relatively strong positive correlation between the measures of democracy and the explanatory variables makes it possible to present rough predictions on the chances of democracy in single countries. Most predictions have been relatively accurate. However, several failures to anticipate democratization or breakdowns of democracy indicate that there is a significant margin of error in predictions based on the variables used in my studies. Such a margin of error is an inevitable consequence of the fact that nearly 40 percent of the variation in the degree of democratization remained unexplained.

The relationship between the degree of democratization and the degree of resource distribution may be stronger than empirical variables indicate. It should be noted that the operational variables used in my studies are only approximate and imperfect substitutes for hypothetical concepts. Competition and Participation do not take into account all aspects of democracy, and many local and institutional factors affecting the nature of political systems are excluded. Furthermore, external and accidental factors may affect democratization, or the failures of democratization. The explanatory variables and their combination IPR are intended to measure, directly or indirectly, the most important and universally used types of power resources, but they do it only approximately. They do not take into account many types of locally or temporarily important power resources nor the effects of external power resources. Considering the imperfect nature of operational variables, it is remarkable that the relationship between the measures of democracy and the measures of resource distribution rises so high and that it has remained consistent since the 1850s.

My conclusion is that it is plausible to make rough predictions on the prospects of democracy in various countries on the basis of the values of explanatory variables as well as to present recommendations about social reforms that might help to create better environmental conditions for

democratization and to strengthen the social basis of democracy. Because democracy is a consequence of the distribution of important power resources among various sections of the population, social reforms furthering the distribution of intellectual and economic power resources would further democratization and strengthen the social basis of democracy. The evolutionary resource distribution theory of democratization explains why it must be so.

6 Correlation analysis

The research hypotheses formulated in Chapter 4 are testable, which means that they can be falsified by empirical evidence on dependent and independent variables introduced in Chapters 3 and 4. In Chapter 5, the first research hypothesis was already tested by historical data covering the period 1850–1998. The evidence did not falsify the hypothesis. In this and the next chapters, we shall focus on the state of democratization in 1999–2001. The first research hypothesis will be tested by correlation analysis (Pearson's r) in this chapter. The results of correlation analysis show to what extent empirical evidence supports the evolutionary resource distribution theory of democratization. Positive correlations should be relatively strong. Negative or weak positive correlations would falsify the hypothesis. The results based on simple correlations will be complemented by multiple correlation and multiple regression analyses.

Empirical data on the measures of democracy are available from each year over the period 1810–2001, but this analysis is focused on the most recent data covering the years 1999–2001. Nearly all empirical data on the five explanatory variables of this study concern the situation in the 1990s. The Family Farms variable is a partial exception. In the lack of more recent data, it was necessary also to resort to data from the 1960s, 1970s, and 1980s. However, because changes in land tenure systems are usually slow, it is reasonable to assume that the lack of recent data does not seriously distort the reliability of data on Family Farms.

Simple correlations

Let us first explore the intercorrelations of the five explanatory variables and their combinations. Because all explanatory variables are intended to measure the relative distribution of important power resources, which is the fundamental explanatory factor, it is plausible to expect that explanatory variables are positively correlated with each other, although correlations do not need to be high. The use of five explanatory variables is based on the assumption that several indicators, which differ from each other in some respects, could together provide a better and more valid measurement of

Table 6.3 Correlations between the ten explanatory variables and the three measures of democracy in 1999–2001 in the group of 170 countries

<i>Explanatory variable</i>	<i>Com. 1999</i>	<i>Par. 1999</i>	<i>ID 1999</i>	<i>Com. 2000</i>	<i>Par. 2000</i>	<i>ID 2000</i>	<i>Com. 2001</i>	<i>Par. 2001</i>	<i>ID 2001</i>
Students	0.591	0.630	0.742	0.577	0.622	0.738	0.570	0.619	0.734
Literates	0.459	0.553	0.571	0.458	0.554	0.582	0.467	0.555	0.585
IR	0.569	0.641	0.712	0.562	0.637	0.717	0.562	0.636	0.715
FF	0.407	0.298	0.472	0.397	0.322	0.482	0.385	0.311	0.481
DD	0.732	0.654	0.851	0.704	0.654	0.842	0.699	0.652	0.839
ER	0.654	0.546	0.748	0.626	0.554	0.742	0.615	0.545	0.734
Real GDP%	0.460	0.467	0.641	0.443	0.470	0.636	0.425	0.453	0.620
IPR	0.705	0.683	0.861	0.684	0.688	0.858	0.675	0.677	0.848
IPR-2	0.551	0.582	0.749	0.536	0.588	0.746	0.522	0.570	0.729
Mean	0.652	0.645	0.814	0.635	0.649	0.815	0.625	0.640	0.808

strongly, although there are significant differences in the strength of correlations. Correlations for 1999, 2000, and 2001 are nearly the same, which is a natural consequence of the fact that data on the three political variables for 1999–2001 are very strongly intercorrelated as Table 6.2 indicates. It is remarkable that Competition and Participation are approximately as strongly correlated with explanatory variables. It supports the assumption about their equal importance as measures of democracy. The mean of 30 correlations between Competition and the ten explanatory variables is 0.565, and the mean of 30 correlations between Participation and the explanatory variables is 0.570. All correlations between ID and explanatory variables are higher than corresponding correlations between the two basic political variables and explanatory variables. The mean of 30 correlations between ID and the ten explanatory variables is 0.714. The average difference in the explained part of variation rises to 19 percentage points. This clear difference implies that the Index of Democratization is a better measure of democracy than either of the two basic variables separately.

The five single explanatory variables are assumed to measure the relative degree of resource distribution from partly different perspectives. Correlations indicate their separate explanatory power, but because explanatory variables are moderately or strongly intercorrelated, the explanations provided by them are overlapping to a significant extent. I do not focus on their separate explanatory powers because all of them are assumed to measure the same fundamental explanatory factor, the distribution of power resources. However, the strengths of correlations tell us about the relative significance of different explanatory variables. If a correlation is weak, the variable would be more or less irrelevant as an explanatory variable. In this case, all correlations between the three measures of democracy and the five explanatory variables are so high that all explanatory variables can be regarded to be relevant.

Students is moderately correlated with Competition and Participation and strongly with ID. The explained part of variation in ID-2001 rises to 54 percent. This strong correlation indicates that democracy is much more probable in countries where the relative number of university students is high than in countries where it is low. The correlations between Literates and political variables are clearly weaker than in the case of Students. The covariation between Literates and ID-2001 is not more than 34 percent. This is partly due to the fact that the rate of literacy is 90 percent or higher in 78 countries. As a consequence, the values of this variable vary less than the values of Students. The limited variation reduces correlations. In earlier periods correlations between Literacy and political variables were stronger (cf. Table 5.3). The relevance of this variable has to some extent decreased when the number of countries with nearly 100 percent literacy increased, but it has not yet lost its importance. Democracy presupposes people who are able to read and write and to get information about national politics. It is easier to maintain autocratic political systems in countries in which the number of literate and educated people is low than it is in countries in which it is high.

Students and Literates represent the two extreme ends of education; the basic level of literacy and the highest level of university education. Variables are strongly intercorrelated (0.708), but they measure to some extent different dimensions of intellectual power resources. Their average, the index of intellectual power resources (IR), is assumed to measure the relative distribution of intellectual power resources better than either of them separately. The correlations of political variables with IR are clearly higher than with Literates but slightly lower than with Students. The explained part of variation rises to 51 percent in the case of ID-2001. This finding supports the assumption about the significance of intellectual power resources in politics. The distribution of intellectual power resources among various sections of the population furthers democratization and helps to maintain democracy.

FF (Family Farms) is more weakly correlated with the measures of democracy than any other explanatory variable. It explains only 23 percent of the variation in ID-2001. The relatively low performance of Family Farms as an explanatory variable is partly due to the fact that the value of this variable differs significantly from the values of other explanatory variables in many countries. My argument is that one favorable social condition may not be enough to cause democratization if other circumstances are unfavorable for democracy and, vice versa, one unfavorable condition may not be enough to prevent democratization if other conditions are favorable for democracy. The discrepancies between Family Farms and other explanatory variables have reduced correlations between FF and the measures of democracy, but the nature of land tenure system has not lost its political significance. Especially in countries with large agricultural populations, the nature of land tenure system may affect crucially the

chances for democratization and democracy. When the ownership and control of economic resources based on agricultural land is distributed widely among family farmers, the chances of democracy are much better than in countries where the ownership and control of agricultural land is concentrated in the hands of the government or of big private landowners.

DD is more strongly correlated with political variables than any of the other explanatory variables. It explains statistically 70 percent of the variation in ID-2001. This is an extremely high rate of explanation. The reconstructed DD variable used in this study is much more based on operationally defined variables and empirical statistical data than the previous DD variables (see Chapter 4). It is no longer a 'soft' variable that could be disregarded as a dubious variable. As indicated in Appendix 4, the estimated values of DD are in most cases based on empirical data and estimates on the population below poverty line, on data and estimates on the percentage share of income or consumption of the highest 10 percent, and in some cases on Economic Freedom Ratings, or on transformed scores of Economic Liberalization. When estimations deviate from the constraints of these criterion variables, the nature of a country's economic system has been taken into account. Exceptional estimations are explained in Appendix 4. There is a certain margin of error in the estimated values of DD, but I think that DD is able to measure satisfactorily relative differences between countries in the distribution of economic power resources. The strong correlation between DD and political variables supports the hypothesis that the distribution of economic power resources furthers democratization.

FF and DD were combined into an index of economic power resources (ER) because it is reasonable to assume that their combination reflects better the overall degree of resource distribution than either of them alone. ER explains 54 percent of the variation in ID-2001. It is four percentage points more than in the case of IR but 16 percentage points less than in the case of DD.

Many researchers have argued and concluded that the level of economic development and wealth as measured by per capita income provides the best explanation for democracy and democratization (see Chapters 1 and 2). In this study per capita income (GDP%) is used as an indicator of resource distribution. The GDP% variable is moderately correlated with political variables. It explains 18 percent of the variation in Competition, 21 percent of the variation in Participation and 38 percent of the variation in ID-2001. It represents a significant degree of explanation, but I cannot regard per capita income as the dominant explanatory variable. Of the five single explanatory variables of this study, only FF explains less of the variation in ID than GDP%. This result can be checked by correlating political variables with absolute figures of per capita income. The correlations between Real GDP per capita (PPP\$) in 1998 (for data, see Appendix 5) and the three measures of democracy are in all cases slightly lower than in the case of the GDP% variable (0.425 with C-2001, 0.449 with P-2001,

and 0.616 with ID-2001). When GNP per capita 1998 (for data, see Appendix 5) is used as the measure of per capita income, correlations become even lower (0.385 with C-2001, 0.393 with P-2001, and 0.564 with ID-2001). My point is that the level of economic development as measured by per capita income furthers democratization to the extent that it indicates the distribution of socio-economic power resources. Usually the higher per capita income, the more widely economic power resources are distributed, but there are many exceptions to this relationship, and for that reason per capita income can explain only a relatively small part of the variation in the degree of democratization. There are rich countries in which economic power resources are highly concentrated and poor countries in which some important power resources are widely distributed.

More than half of the variation in the degree of democratization seems to be due to the distribution of economic power resources (ER) and also a half to the distribution of intellectual power resources (IR). However, it is not justified to explain the variation in political variables by any single explanatory variable because they are overlapping to a great extent. Therefore, the five explanatory variables and the two sectional indices were combined into alternative indices of resource distribution. IPR is calculated by multiplying IR and ER and by dividing the product by 100; IPR-2 is calculated by multiplying IR, ER, and GDP% and by dividing the product by 10,000; and Mean represents the mean of the five single explanatory variables. They are interpreted to measure the aggregate distribution of important power resources and to indicate relative differences between countries. It should be noted that IPR is based only on four of the five explanatory variables.

IPR explains 46 percent of the variation in Competition 2001, 46 percent of the variation in Participation 2001, and 72 percent of the variation in ID-2001. Only 28 percent of the variation in ID-2001 remains statistically unexplained. For the years 1999 and 2000 the explained part of variation in ID rises to 74 percent. The unexplained part of variation is due to all other explanatory factors, including measurement errors, institutional factors, historical legacies, external influences, various local factors and cultural variations, the influence of personalities, and various random factors.

IPR-2 is a clearly weaker explanatory variable. It explains 27 percent of the variation in Competition 2001, 32 percent of the variation in Participation 2001, and 53 percent of the variation in ID-2001. These are significant rates of explanation, but it is remarkable that IPR, without the contribution of GDP%, explains 19 percentage points more of the variation in the degree of democratization. Mean is a better explanatory variable than IPR-2 but a clearly weaker than IPR. It explains 39 percent of the variation in Competition 2001, 41 percent of the variation in Participation 2001, and 65 percent of the variation in ID-2001. The use of alternative aggregate indices shows that the method of combining basic variables matters. IPR seems to be the best combined index of power resources.

Multiple correlations

I have preferred to combine explanatory variables into single alternative indices, but it is also useful to measure the relationship between explanatory variables and the measures of democracy by calculating multiple correlations. In the multiple correlations given in Table 6.4 different combinations of explanatory variables have been used to explain variation in dependent variables. Multiple correlations can be used to check the results based on single correlations.

Table 6.4 shows that multiple correlations are somewhat stronger than corresponding single correlations based on combined indices. IR and ER taken together produce the multiple correlation of 0.862 in the case of ID-2001. The corresponding correlation between IPR and ID-2001 is 0.848, which means that the difference in the explained part of variation is not more than two percentage points. The multiple correlation based on GDP%, IR, and ER rises to 0.864 in the case of ID-2001 and the explained part of variation to 75 percent. The single correlation between ID-2001 and IPR-2, which is based on the same three variables, is 0.729 and the explained part of variation 53 percent. In this case the difference rises to 22 percentage points, which certainly matters. The aggregation of the three variables by multiplying them does not seem to have been an effective way to combine them. The extreme variation in GDP% exaggerates the variation in IPR-2 and reduces its correlation with ID. The five explanatory variables taken together (0.873) explain 76 percent of the variation in ID-2001, which is 11 percentage points more than what the mean of the five explanatory variables (Mean) explains. It is also a significant difference.

The multiple correlation based on four explanatory variables without FF is also 0.873 in the case of ID-2001, and the multiple correlation based on four explanatory variables without GDP% is 0.869. The explained part of variation rises to 76 percent in both cases. When DD is excluded from the group of explanatory variables, the multiple correlation decreases to 0.794. Thus the four variables without DD explain 63 percent of the variation in

Table 6.4 Some results of multiple correlation analysis in the group of 170 countries

<i>Explanatory variables</i>	<i>C-2001</i> <i>R</i>	<i>P-2001</i> <i>R</i>	<i>ID-2001</i> <i>R</i>
IR and ER	0.701	0.707	0.862
GDP%, IR, and ER	0.721	0.720	0.862
Students, Literates, GDP%, FF, and DD	0.739	0.723	0.873
Students, Literates, GDP%, and DD	0.739	0.723	0.873
Students, Literates, FF, and DD	0.712	0.708	0.869
Students, Literates, GDP% and FF	0.628	0.661	0.794
GDP% and FF	0.468	0.463	0.650
GDP% and IR	0.566	0.637	0.741
Students and DD	0.710	0.693	0.867

ID-2000, which is 13 percentage points less than in multiple correlations which include DD. This difference can be interpreted to indicate that DD increases the explained part of variation in ID-2001 by 13 percentage points independently from the other explanatory variables. It is a significant increase, but still 63 percent of the explained variation is overlapping with the other explanatory variables. Therefore, it would not be justified to claim that the explanation provided by this study is overwhelmingly dependent on the DD variable. Even the two weakest explanatory variables, FF and GDP%, taken together explain 42 percent of the variation in ID-2000. IR and GDP% taken together explain 55 percent of the variation in ID-2001. The two best single variables, Students and DD, taken together explain 75 percent of the variation in ID-2001.

Some researchers have argued that Human Development Index (HDI) reported in *Human Development Report* provides a more powerful explanation for democracy than per capita income. It seems to be a slightly better explanatory variable than measures of per capita income. The correlation between HDI-1998 and ID-2001 is 0.667. The explained part of variation (44 percent) is clearly higher than in the case of GNP per capita (32 percent), but it is only five percentage points more than in the case of GDP% (39 percent). However, the explanatory power of HDI is completely overlapping with the five explanatory variables of this study. When HDI-1998 is added to the five explanatory variables, the multiple correlation rises from 0.873 to 0.874. It is an insignificant increase.

Multiple regression analysis

The results of correlation and multiple correlation analyses can be checked by multivariate regression analysis. It helps to evaluate the relative importance of various independent variables. A regression coefficient in multivariate regression analysis reflects the influence of a variable X_k on Y when the other independent variables are held constant. In other words, in the computation of a single regression coefficient in multiple regression analysis only those variations in X_k and Y are considered that do not depend on variations in the remaining independent variables (see Blalock 1960: 337–46; Pennings *et al.* 1999: 189–90; Wagschal 1999: 330–6; de Vaus 2002: 353–7). Three multiple regression models are presented in the following tables.

Table 6.5 shows that DD and Students are the best explanatory variables, whereas FF, Literates, and GDP% do not seem to be important. The impact of GDP% on democratization is slightly negative when the other explanatory variables are held constant. I have wanted to measure the degree of resource distribution from different perspectives because several alternative variables may produce more reliable results than one or two single variables. Therefore I use five explanatory variables, although the explanation produced by the two best variables is practically as high. Besides, in some other periods the three other variables may have been more important explanatory variables

than what they are for 2001. It should also be noted that the best combination of explanatory variables (IPR) is not based directly on these single variables but on the two sectional indices (ER and IR).

Table 6.6 shows that the two sectional indices ER and IR are equally important explanatory variables, whereas the independent contribution of GDP% seems to be negligible and slightly negative. Partial correlation analysis produces similar results. The partial correlation between ER and ID-2001 is 0.661 when IR and GDP% are controlled, the partial correlation between IR and ID-2001 is 0.625 when ER and GDP% are controlled, and the partial correlation between GDP% and ID-2001 is -0.112 when ER and IR are controlled. Table 6.7 illustrates the relative explanatory powers of IPR and GDP%.

Table 6.5 The results of multiple regression analysis in which five single explanatory variables are used to explain variation in ID-2001 in the group of 170 countries

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>Std. Coeff.</i>	<i>t-Value</i>	<i>P-Value</i>
Intercept	-7.787	2.401	-7.787	-3.243	0.0014
DD	0.407	0.042	0.668	9.600	<0.0001
FF	0.029	0.030	0.049	0.941	0.3483
Literates	0.062	0.032	0.109	1.933	0.0549
Students	0.153	0.035	0.284	4.336	<0.0001
GDP %	-0.063	0.026	-0.150	-2.415	0.0168
R	0.873				
R Squared	0.763				

Table 6.6 The results of multiple regression analysis in which ER, IR, and GDP% are used to explain variation in ID-2001 in the group of 170 countries

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>Std. Coeff.</i>	<i>t-Value</i>	<i>P-Value</i>
Intercept	-16.533	1.744	-16.533	-9.479	<0.0001
ER	0.384	0.034	0.565	11.337	<0.0001
IR	0.324	0.031	0.540	10.316	<0.0001
GDP %	-0.037	0.025	-0.088	-1.458	0.1466
R	0.864				
R Squared	0.746				

Table 6.7 The results of multiple regression analysis in which IPR and GDP% are used to explain variation in ID-2001 in the group of 170 countries

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>Std. Coeff.</i>	<i>t-Value</i>	<i>P-Value</i>
Intercept	1.289	0.832	1.289	1.550	0.1231
IPR	0.672	0.047	0.958	14.435	<0.0001
GDP%	-0.058	0.028	-0.139	-2.099	0.0373
R	0.852				
R Squared	0.726				

Table 6.7 shows that the explanatory power of IPR is overwhelming compared to GDP%. Thus the results of multivariate regression analyses confirm the results of correlation and multiple correlation analyses. Per capita income does not help to explain the variation in ID independently from the other explanatory variables.

Summary

The results of correlation analysis support strongly the first research hypothesis about the positive relationship between the explanatory variables of this study and the measures of democracy. The statistically explained part of variation in the Index of Democratization rises over 70 percent, which can be regarded as an extremely high rate of explanation. It provides a solid empirical basis on which to evaluate chances and prospects of democracy in single countries.

It is remarkable that this rate of explanation is not crucially dependent on any single variable. Several variables measuring the degree of resource distribution from different perspectives have produced more or less similar results. The explanatory variables are strongly, but not completely, intercorrelated. Because of strong intercorrelations, it is not possible to determine the separate contributions of single explanatory variables exactly, and it is not necessary because they are indicators of the same theoretical explanatory factor. Various combinations of explanatory variables provide alternative aggregate measures of resource distribution, which is the fundamental explanatory factor derived from the evolutionary theory of democratization.

According to my interpretation, the observed strong relationship between explanatory variables and the measures of democracy is causal by nature. Explanatory variables are in this relationship more independent than political variables. Different changes in social conditions affecting resource distribution are undercurrents that are difficult to control by political decision makers. They may initiate structural changes in social and economic conditions, but they are often unable to anticipate or control the consequences of such changes.

I want to emphasize that the development or modernization theory of democratization and my resource distribution theory of democratization do not contradict each other. The explanations provided by measures of economic development and resource distribution are overlapping, although the combinations of my explanatory variables explain considerably more of the variation in democratization than measures of economic development or modernization. Per capita income and various measures of education have often been used to indicate the level of economic development or modernization, but I use these variables to measure resource distribution. Economic power resources are usually more widely distributed in rich countries than in poor countries, and Students and Literates measure the

relative distribution of intellectual power resources. According to my theoretical argumentation, economic development or modernization furthers democratization only to the extent that it causes various socio-economic power resources to become more widely distributed among different sections of the population. The same concerns capitalism. Usually this happens, and therefore measures of democratization are positively correlated with various indicators of socio-economic development or of capitalism, but there are exceptions to this rule. These exceptions reduce the correlation between economic development and democracy. I have not tried to explain democratization by economic development but by resource distribution, which is also the fundamental explanatory factor behind the relationship between economic development and democracy.

It has been difficult for many researchers to understand my theoretical argumentation. Zehra Arat (1999), for example, says about the results of my 1997 study that '[it,] being too little too late, does not add much to the research accumulated by different schools of thought during the last four decades.' I think that it is never too late to seek knowledge. I am not sure what is 'too little.' Arat seems to think that the causal problem of democratization had already been solved and that economic development provides a sufficient explanation for democratization, whereas I argue that economic development is only a special case of resource distribution and that it is possible to increase the explained part of variation considerably by inventing other measures of resource distribution. The results of this study show that my measures of resource distribution explain more than 30 percentage points more of the variation in ID for 1999–2001 than indicators of per capita income, which have traditionally been used to indicate the level of economic development and wealth.

7 Regression analysis

Empirical evidence supports strongly the first research hypothesis tested in Chapter 6, but correlations measure only the average relationship between variables, not its application to single countries. The second research hypothesis, according to which *all countries tend to cross the threshold of democracy at about the same level of resource distribution as indicated by the indices of power resources (IPR, IPR-2, and Mean)*, transfers analysis to the level of single countries. This hypothesis can be tested by regression analysis and by comparing the number of democracies and non-democracies at different levels of explanatory variables. Because correlations between the three alternative indices of resource distribution and ID are strong, the results of regression analysis provide a solid basis on which to evaluate the prospects of democracy at the level of single countries.

All explanatory variables and their combinations were taken into account in correlation analysis. Regression analysis will be limited to the three combinations of explanatory variables (IPR, IPR-2, and Mean) and to one dependent variable (ID-2001). Single explanatory variables and their two sectional indices are excluded from regression analysis because I am principally interested in the combined impact of explanatory variables on the Index of Democratization, not in the impact of single explanatory variables. The results of multiple regression analyses presented in Chapter 6 illustrate the relative significance of single explanatory variables. It should be noted that all single explanatory variables are overlapping to a significant extent and that it might be possible to replace them, or at least some of them, by some other indicators of resource distribution, whereas the theoretical explanatory factor – resource distribution – remains the same. Single explanatory variables are assumed to measure resource distribution from different perspectives. Therefore their combination measures the overall degree of resource distribution probably more validly than any of them alone. However, because it is not self-evident how single explanatory variables should be aggregated into an index of power resources, I experiment with three alternative combinations. They are extremely highly intercorrelated (see Table 6.1), but their structures are different.

ID-2001 is used as the dependent variable because I think that ID is a more valid measure of democratization than either of the two basic political variables (Competition and Participation) and because the measures of resource distribution are more strongly correlated with ID than with Competition or Participation. In the classification of countries into the categories of democracies and non-democracies it is necessary to take into account the values of Competition and Participation because the threshold values of Competition (30 percent) and Participation (20 percent) are used to separate democracies from non-democracies. The minimum ID value for democracies is not more than 6.0 index points, but usually the ID value has been around 10 index points when countries have crossed both threshold values of democracy. ID-1999 or ID-2000 could be used as an alternative dependent variable, but because they are extremely highly correlated with ID-2001, it is enough to limit regression analysis to ID-2001. The three regression equations are as follows:

$$\text{ID-2001 est.} = 1.441 + 0.595 \times \text{IPR}$$

$$\text{ID-2001 est.} = 9.668 + 0.516 \times \text{IPR-2}$$

$$\text{ID-2001 est.} = -7.875 + 0.539 \times \text{Mean}$$

Figures 7.1, 7.2, and 7.3 summarize the results of regression analyses for single countries. They show to what extent it is true that countries have tended to cross the threshold of democracy at about the same level of resource distribution. Some deviations can be accepted because the correlations between the three combinations of explanatory variables and ID-2001 are not complete and because there are measurement errors, but the number of deviant cases should not be large. Second, the results of regression analyses test the first research hypothesis from the perspective of single countries. They show for which countries the regression equations have ‘predicted’ the level of democratization (ID-2001) more or less accurately and which countries deviate from the regression line greatly. The size of residuals indicates the accuracy of predictions. These two types of analyses will be made separately.

Transition levels of resource distribution

The results of regression analyses test the second research hypothesis, but before we can count the countries which support or contradict this hypothesis it is necessary to define what is meant by ‘at about the same level of resource distribution.’ Because correlations between the three indices (IPR, IPR-2, and Mean) and ID-2001 are not complete, it is reasonable to accept some transition level of IPR, IPR-2, and Mean respectively at which political systems are expected to cross the threshold of democracy. Countries below the transition level of an explanatory variable should be non-democracies and countries above the transition level should be democracies. The limits of transition level can be determined for each index on the basis of the

level of respective index at which the regression line crosses the ID level of 10 index points.

The pattern of Figure 7.1, in which IPR is used as the independent variable, seems to be slightly curvilinear. Most countries do not deviate much from the regression line, which crosses the ID level of 10 index points approximately at the level of 15 IPR index points. Consequently, it is plausible to define the transition level of IPR to extend from 10 to 20 index points. Countries are expected to cross the threshold of democracy at this transition level of IPR. Figure 7.1 shows that there are some non-democracies above the transition level of IPR as well as some democracies below the transition level. These exceptions contradict the second research hypothesis, but because the number of deviant cases is relatively small, it is justified to conclude that the transition level of IPR separates democracies from non-democracies quite satisfactorily. The cross-sectional data used in this study do not show directly at what level of IPR contemporary democracies had crossed the threshold of democracy, but indirectly this cross-sectional evidence supports the second research hypothesis strongly.

The pattern of Figure 7.2, in which IPR-2 is as the independent variable, is lopsided and conspicuously curvilinear. The countries are heavily clustered to the lower left side. Because the regression line of ID-2001 on IPR-2 crosses the ID level of 10 index points approximately at the level of 1 IPR-2 index points, it is not possible to determine any lower limit of transition below which countries are expected to be non-democracies. The

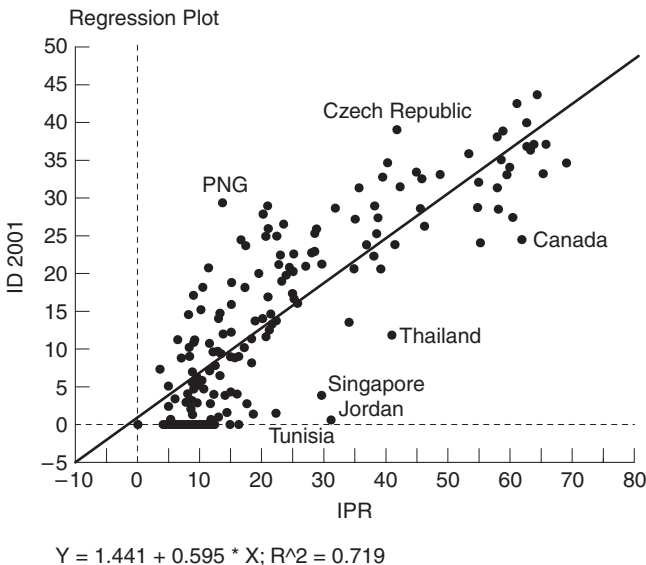


Figure 7.1 The results of regression analysis of ID-2001 on IPR for single countries in the group of 170 countries.

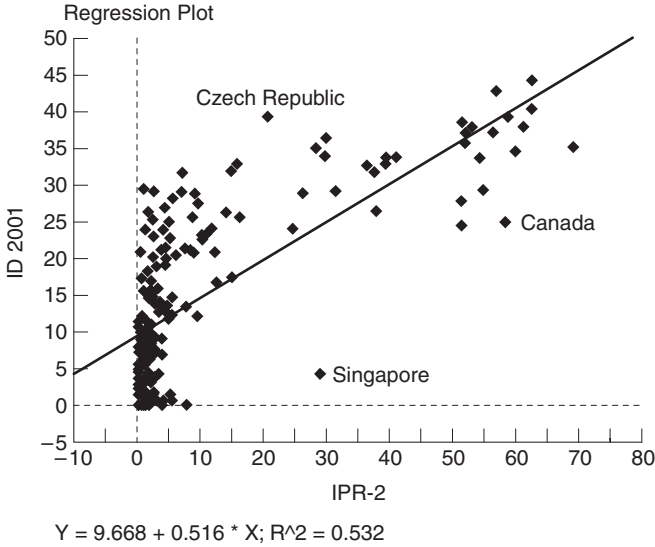


Figure 7.2 The results of regression analysis of ID-2001 on IPR-2 for single countries in the group of 170 countries.

transition level of IPR-2 would extend from -4 to 6 IPR-2 index points. Figure 7.2 shows that nearly all countries for which IPR-2 is higher than 6 are democracies as expected, whereas there cannot be any countries below the lower limit of transition (-4). So the transition level of IPR-2 indicates the sufficient level of IPR-2 for democratization quite satisfactorily, but it fails to show the lower limit below which countries are not expected to cross the threshold of democracy. In fact, many countries have been able to cross the threshold of democracy, although their IPR-2 value is near zero. In most of these cases, an extremely low value of GDP% has decreased the country's IPR-2 value near zero. Poverty as such does not seem to constitute an insurmountable obstacle for democratization. In this case, I have to conclude that empirical evidence falsifies the second research hypothesis because there is no lower limit of transition below which democratization is not expected to take place.

The pattern of relationship between ID-2001 and Mean in Figure 7.3 is approximately linear. The regression line crosses the ID level of 10 index points approximately at the level 33 Mean points. The transition level of Mean can be defined to extend from 28 to 38 Mean points. The second research hypothesis presupposes that countries tend to cross the threshold of democracy at this transition level of resource distribution. The basic pattern is the same as in Figure 7.1, but the number of deviating non-democracies and deviating democracies seems to be somewhat higher than in Figure 7.1. However, the transition level of Mean separates democracies

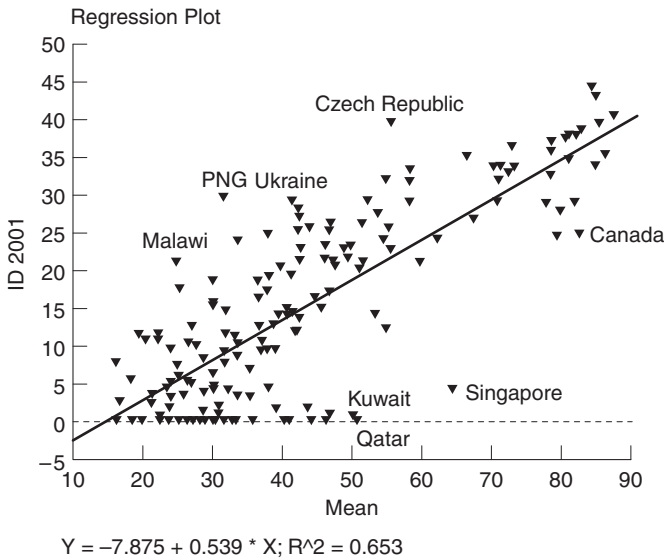


Figure 7.3 The results of regression analysis of ID-2001 on Mean for single countries in the group of 170 countries.

from non-democracies quite well. Thus the results support the second research hypothesis.

The definition of the transition levels of IPR, IPR-2, and Mean provides the basis to count the countries which confirm or contradict the second research hypothesis. We have to exclude IPR-2 from this analysis because it is not possible to establish any lower limit of transition for this variable. The hypothesis is tested by cross-tabulating democracies and non-democracies by the transition levels of IPR and Mean (Table 7.1).

Table 7.1 shows that countries have tended to cross the threshold of democracy at about the same level of resource distribution as indicated by IPR and Mean. Most countries below the two transition levels are non-democracies as expected, and most countries above the transition levels are democracies as expected. However, several countries contradict this rule and the second research hypothesis. Some countries were above the minimum threshold of democracy in 2001, although they were still below the lower limit of the transition level of IPR and/or Mean; and some other countries remained below the threshold of democracy, although they had crossed the upper limit of the transition level of IPR and/or Mean. The number of countries contradicting the second hypothesis is clearly higher in the case of Mean (25) than in the case of IPR (14).

The Phi coefficient can be used to measure the strength of the hypothesized association (Buchanan 1980: 83–6; Wagschal 1999: 159–64). The countries at the transition levels are excluded from this analysis because

Table 7.1 Democracies and non-democracies in 2001 cross-tabulated by the transition level of IPR and Mean respectively in the group of 170 countries

	<i>IPR below 10.0</i>		<i>IPR 10.0–20.0</i>		<i>IPR above 20.0</i>		<i>Total</i>
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>
Non-democracies	37	81.2	28	60.4	3	4.0	68
Democracies	11	18.8	20	39.6	71	96.0	102
Total	48	100.0	48	100.0	74	100.0	170

	<i>Mean below 28.0</i>		<i>Mean 28.0–38.0</i>		<i>Mean above 38.0</i>		<i>Total</i>
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>
Non-democracies	27	76.5	28	59.0	13	11.2	68
Democracies	12	23.5	16	41.0	74	88.8	102
Total	39	100.0	44	100.0	87	100.0	170

they can be democracies or non-democracies. The Phi coefficient reaches +1 or -1 only if both cells of the diagonal are empty. The Phi coefficients are 0.76 for IPR and 0.54 for Mean. These Phi coefficients indicate a relatively strong association between the variables. IPR is clearly the best explanatory variable. It is justified to conclude on the basis of this analysis that empirical evidence supports the second hypothesis, although there are several contradicting cases.

The deviating democracies and non-democracies are listed in Table 7.2. The category of deviating democracies includes the countries which are above the threshold of democracy but below the transition level of IPR and/or Mean. The category of deviating non-democracies includes the countries which are below the threshold of democracy but above the transition level of IPR and/or Mean.

Table 7.2 shows that there are 14 deviating democracies and 13 deviating non-democracies. Nearly all deviating democracies are the same according to both explanatory variables. Honduras and Nigaragua are slightly deviating democracies only on the basis of IPR, and Madagascar, Malawi, and Uganda only on the basis of Mean. Eleven of the deviating democracies are poor sub-Saharan African countries, Bangladesh is a poor South Asian country, and Honduras and Nicaragua are poor Latin American countries. It is evident that poverty does not prevent the emergence of democracy, although democratic institutions are often fragile and imperfect in poor countries. The two combinations of explanatory variables fail to explain the emergence of democracy at so low level of resource distribution. However, I want to pay attention to the fact that democratic institutions have emerged in these countries quite recently and that democracy is not yet secure or consolidated in any of them.

The number of deviating non-democracies is 13 on the basis of Mean but only three on the basis of IPR. This difference indicates that the values

Table 7.2 Deviating democracies and non-democracies according to the transition levels of IPR and Mean in 2001

Country	On the basis of IPR	On the basis of Mean
<i>Deviating democracies</i>		
Bangladesh	*	*
Benin	*	*
Central African Republic	*	*
Chad	*	*
Gambia	*	*
Guinea-Bissau	*	*
Honduras	*	—
Madagascar	—	*
Malawi	—	*
Mozambique	*	*
Nicaragua	*	—
Nigeria	*	*
Senegal	*	*
Uganda	—	*
<i>Deviating non-democracies</i>		
Azerbaijan	—	*
Bahrain	—	*
Belarus	—	*
Brunei	—	*
Jordan	*	*
Kazakhstan	—	*
Kuwait	—	*
Qatar	—	*
Saudi Arabia	—	*
Singapore	*	*
Syria	—	*
Tunisia	*	*
United Arab Emirates	—	*

of IPR have been able to predict democratization more effectively than the values of Mean. Contrary to the poor deviating democracies below the transition levels of IPR and Mean, six of the deviating non-democracies above the transition level of Mean are prosperous oil-producing countries. All of them are Muslim countries. Azerbaijan, Jordan, Kazakhstan, Syria, and Tunisia are other Muslim countries. Thus 11 of the 13 deviating non-democracies are Muslim countries. It implies that some aspects of Muslim culture may hamper democratization. Belarus and Singapore are different cases. Jordan, Singapore, and Tunisia, which are deviating non-democracies also on the basis of IPR, can be regarded as the most seriously contradicting cases. Because of the concentration of economic power resources, the degree of resource distribution remained at the transition level of IPR in the prosperous oil-producing countries, which are deviating non-democracies only on the basis of Mean.

The results of this analysis based on the IPR and Mean variables support the second research hypothesis, although not without exceptions. Predictions based on the transition level of IPR are more accurate than those based on the transition level of Mean. Consequently, IPR provides stronger support for the second research hypothesis than Mean.

Deviations from the regression lines

The second hypothesis was tested by exploring whether all countries above the transition level of an explanatory variable (IPR and Mean) tend to be democracies as expected and whether all countries below the transition level tend to be non-democracies as expected. The results of regression analyses can also be used to reveal how well the average relationship between an explanatory variable and ID-2001 applies to single countries and which countries deviate most from the regression line. Residuals show the size of deviations. Large positive residuals indicate that the level of democratization is much higher than expected on the basis of the regression equation, and large negative residuals indicate that the level of democratization is much lower than expected. It should be noted that residuals are not large for all deviating democracies and deviating non-democracies listed in Table 7.2.

The problem is how to define 'large residuals.' There is no natural borderline between 'large' and 'moderate' deviations. For the purposes of this analysis, it seems plausible to separate approximately 25 percent of the countries into the category of large deviations. On the basis of this criterion, residuals higher than ± 8.0 can be used to separate the most deviating countries in the regression of ID-2001 on IPR (one standard deviation of residual ID 2001 is 6.6); residuals higher than ± 10.0 in the regression of ID-2001 on IPR-2 (one standard deviation of residual ID 2001 is 8.5); and residuals higher than ± 9.0 in the regression of ID-2001 on Mean (one standard deviation of residual ID 2001 is 7.4). These differences in the criteria and standard deviations correspond to the differences in correlations. Because IPR has the highest correlation with ID-2001, the standard deviation of residual is smaller, and a smaller criterion can be used to separate the most extremely deviating countries from the less deviating countries than in the cases of IPR-2 and Mean. Using these criteria, the most deviating countries can be separated from the less deviating countries on the basis of the results of regression analyses. Figures 7.1, 7.2, and 7.3 summarize the results of regression analyses of ID-2001 on IPR, IPR-2, and Mean respectively. The results based on IPR-2 are excluded from this exploration in order to simplify the analysis and because the correlation between ID-2001 and IPR-2 is much weaker than correlations with IPR and Mean. The detailed results of regression analyses based on IPR and Mean are given for single countries in Table 7.3.

Table 7.3 reports the values of the three measures of democracy for 2001, the values of IPR and Mean variables, and the results of the two

Table 7.3 The results of regression analysis of ID-2001 on IPR and Mean in turn for single countries in the group of 170 countries

Country	Com. 2001	Par. 2001	ID 2001	IPR	Res. 2001	Fitted 2001	Mean	Res. 2001	Fitted 2001
1 Afghanistan	0	0	0	5.9	-5.0	5.0	19.8	-2.8	2.8
2 Albania	58.5	42.7	25.0	20.1	11.6	13.4	41.6	10.5	14.5
3 Algeria	46.2	34.4	15.9	14.6	5.8	10.1	35.8	4.5	11.4
4 Angola	0	0	0	7.6	-6.0	6.0	22.2	-4.1	4.1
5 Argentina	51.5	50.7	26.1	28.3	7.8	18.3	50.8	6.6	19.5
6 Armenia	46.9	34.5	16.2	25.2	-0.2	16.4	44.0	0.4	15.8
7 Australia	62.8	59.1	37.1	62.2	-1.3	38.4	79.8	2.0	35.1
8 Austria	66.8	56.5	37.7	65.3	-2.6	40.3	80.2	2.3	35.4
9 Azerbaijan	29.7	38.8	11.5	17.8	-0.5	12.0	41.2	-2.8	14.3
10 Bahamas	42.3	41.2	17.4	24.6	1.3	16.1	48.4	-0.8	18.2
11 Bahrain	0	0	0	6.3	-5.2	5.2	45.6	-16.7	16.7
12 Bangladesh	40.0	43.3	17.3	8.4	10.9	6.4	24.8	11.8	5.5
13 Barbados	35.0	47.9	16.8	24.8	0.6	16.2	46.0	-0.1	16.9
14 Belarus	24.4	60.7	14.8	7.7	8.8	6.0	40.0	1.1	13.7
15 Belgium	70.0	61.2	42.8	60.6	5.3	37.5	84.2	5.3	37.5
16 Belize	40.7	34.0	13.8	18.5	1.4	12.4	39.0	0.7	13.1
17 Benin	32.9	21.9	7.2	8.4	0.8	6.4	24.4	1.9	5.3
18 Bhutan	0	0	0	9.5	-7.1	7.1	24.8	-5.5	5.5
19 Bolivia	70.0	28.8	20.2	19.0	7.5	12.7	39.0	7.1	13.1
20 Bosnia & Her.	70.0	37.3	26.1	20.8	12.3	13.8	46.2	9.1	17.0
21 Botswana	43.0	20.9	9.0	15.0	-1.4	10.4	36.4	-2.7	11.7
22 Brazil	58.4	41.9	24.5	16.2	13.4	11.1	37.2	12.3	12.2
23 Brunei	0	0	0	5.4	-4.7	4.7	43.8	-15.7	15.7
24 Bulgaria	57.3	55.2	31.6	35.2	9.2	22.4	57.6	8.4	23.2
25 Burkina Faso	12.5	21.2	2.6	4.6	-1.6	4.2	16.4	1.6	1.0
26 Burma	0	0	0	15.8	-10.8	10.8	31.2	-8.9	8.9
27 Burundi	0	0	0	10.4	-7.6	7.6	25.0	-5.6	5.6
28 Cambodia	23.7	21.4	5.1	10.0	-2.3	7.4	25.8	-0.9	6.0
29 Cameroon	7.4	23.9	1.8	13.8	-7.9	9.7	30.4	-6.7	8.5
30 Canada	59.2	42.0	24.9	61.6	-13.2	38.1	81.8	-11.3	36.2
31 Cape Verde	44.4	32.4	14.4	12.5	5.5	8.9	31.2	5.5	8.9
32 Central Af. R.	45.5	24.5	11.1	8.6	4.5	6.6	22.0	7.1	4.0
33 Chad	36.8	31.1	11.4	8.7	4.8	6.6	21.8	7.5	3.9
34 Chile	48.7	47.2	23.0	27.6	5.1	17.9	49.2	4.4	18.6
35 China	0	0	0	11.9	-8.5	8.5	30.2	-8.4	8.4
36 Colombia	49.7	29.7	14.8	20.9	0.9	13.9	44.8	-1.5	16.3
37 Comoros	0	0	0	8.9	-6.7	6.7	25.0	-5.6	5.6
38 Congo (Br.)	0	0	0	14.2	-9.9	9.9	32.4	-9.6	9.6
39 Congo (Zaire)	0	0	0	11.0	-8.0	8.0	25.8	-6.0	6.0
40 Costa Rica	53.1	39.3	20.9	34.6	-1.1	22.0	51.0	1.3	19.6
41 Côte d'Ivoire	49.0	11.7	5.7	8.6	-0.9	6.6	24.8	0.2	5.5
42 Croatia	48.5	59.2	28.7	31.5	8.5	20.2	57.6	5.5	23.2
43 Cuba	0	67.5	0	4.4	-4.1	4.1	32.4	-9.6	9.6
44 Cyprus	65.3	53.3	34.8	39.8	9.7	25.1	65.8	7.2	27.6
45 Czech Rep.	67.7	58.0	39.3	41.3	13.3	26.0	54.8	17.6	21.7
46 Denmark	68.8	64.3	44.2	64.0	4.7	39.5	83.4	7.1	37.1
47 Djibouti	21.4	14.7	3.1	7.5	-2.8	5.9	25.4	-2.7	5.8
48 Dom. Republic	50.1	38.2	19.1	22.6	4.2	14.9	40.6	5.1	14.0
49 Ecuador	48.8	29.0	14.2	19.7	1.0	13.2	40.6	0.2	14.0

Table 7.3 (Continued)

<i>Country</i>	<i>Com.</i> <i>2001</i>	<i>Par.</i> <i>2001</i>	<i>ID</i> <i>2001</i>	<i>IPR</i>	<i>Res.</i> <i>2001</i>	<i>Fitted</i> <i>2001</i>	<i>Mean</i>	<i>Res.</i> <i>2001</i>	<i>Fitted</i> <i>2001</i>
50 Egypt	13.1	23.0	3.0	17.0	-8.6	11.6	35.0	-8.0	11.0
51 El Salvador	48.0	19.2	9.2	14.3	-0.7	9.9	37.2	-3.0	12.2
52 Eq. Guinea	2.2	44.8	1.0	12.4	-7.8	8.8	28.4	-6.4	7.4
53 Eritrea	0	0	0	10.4	-7.6	7.6	23.4	-4.7	4.7
54 Estonia	70.0	34.3	24.0	36.5	0.8	23.2	54.0	2.8	21.2
55 Ethiopia	12.1	29.2	3.5	8.2	-2.8	6.3	20.8	0.2	3.3
56 Fiji	56.3	47.4	26.7	23.1	11.5	15.2	41.8	12.0	14.7
57 Finland	59.2	56.7	33.6	64.9	-6.4	40.0	84.2	-3.9	37.5
58 France	58.7	47.2	27.7	60.0	-9.4	37.1	79.2	-7.1	34.8
59 Gabon	30.9	22.1	6.8	12.8	-2.3	9.1	34.6	-4.0	10.8
60 Gambia	34.8	30.1	10.5	7.8	4.4	6.1	22.0	6.5	4.0
61 Georgia	34.8	39.5	13.7	33.7	-7.8	21.5	52.6	-6.8	20.5
62 Germany	59.1	60.1	35.5	58.0	-0.4	35.9	77.8	1.4	34.1
63 Ghana	46.5	32.2	15.0	12.7	6.0	9.0	29.6	6.9	8.1
64 Greece	56.2	64.2	36.1	53.0	3.1	33.0	72.2	5.1	31.0
65 Guatemala	32.0	19.1	6.1	9.8	-1.2	7.3	29.8	-2.1	8.2
66 Guinea	21.9	22.6	4.9	8.7	-1.7	6.6	23.8	-0.1	5.0
67 Guinea-Bissau	45.3	23.2	10.5	7.8	4.4	6.1	20.2	7.5	3.0
68 Guyana	46.2	45.7	21.1	23.9	5.4	15.7	41.8	6.4	14.7
69 Haiti	8.0	35.9	2.9	9.1	-4.0	6.9	23.6	-1.9	4.8
70 Honduras	47.0	32.5	15.3	9.7	8.1	7.2	29.4	7.3	8.0
71 Hungary	57.0	44.6	25.4	38.1	1.3	24.1	54.6	3.8	21.6
72 Iceland	59.3	59.1	35.0	68.8	-7.4	42.4	85.4	-3.2	38.2
73 India	45.5	37.6	17.1	20.5	3.5	13.6	37.2	4.9	12.2
74 Indonesia	54.0	25.7	13.9	21.9	-0.6	14.5	40.2	0.1	13.8
75 Iran	15.0	28.0	4.2	15.6	-6.5	10.7	37.4	-8.1	12.3
76 Iraq	0	41.6	0	3.8	-3.7	3.7	23.6	-4.8	4.8
77 Ireland	60.7	53.8	32.7	45.4	4.3	28.4	71.6	2.0	30.7
78 Israel	53.8	49.1	26.4	46.0	-2.4	28.8	66.8	-1.7	28.1
79 Italy	57.5	64.0	36.8	62.8	2.0	38.8	77.8	2.7	34.1
80 Jamaica	45.0	28.3	12.7	20.6	-1.0	13.7	38.4	-0.1	12.8
81 Japan	51.6	47.3	24.4	54.9	-9.7	34.1	78.6	-10.1	34.5
82 Jordan	12.5	5.7	0.7	30.9	-19.1	19.8	46.2	-16.3	17.0
83 Kazakhstan	19.0	48.3	9.2	15.5	-1.5	10.7	38.4	-3.6	12.8
84 Kenya	47.8	17.5	8.4	17.9	-3.5	12.1	33.0	-1.5	9.9
85 Korea, North	0	0	0	0.0	-1.4	1.4	26.0	-6.1	6.1
86 Korea, South	60.3	47.9	28.9	57.7	-6.9	35.8	77.0	-4.7	33.6
87 Kuwait	30.0	2.1	0.6	5.2	-3.9	4.5	49.6	-18.3	18.9
88 Kyrgyzstan	25.5	39.6	10.1	11.6	1.8	8.3	33.0	0.2	9.9
89 Laos	1.0	45.4	0.5	9.1	-6.4	6.9	22.4	-3.7	4.2
90 Latvia	70.0	39.5	27.6	38.3	3.4	24.2	52.8	7.0	20.6
91 Lebanon	70.0	41.5	29.0	37.9	5.0	24.0	51.6	9.1	19.9
92 Lesotho	2.5	28.8	0.7	11.4	-7.5	8.2	30.4	-7.8	8.5
93 Liberia	24.0	21.6	5.2	4.7	1.0	4.2	18.0	3.4	1.8
94 Libya	0	0	0	6.4	-5.2	5.2	35.4	-11.2	11.2
95 Lithuania	68.9	39.8	27.4	34.7	5.3	22.1	53.0	6.7	20.7
96 Luxembourg	69.8	41.7	29.1	54.5	-4.8	33.9	81.2	-6.8	35.9
97 Macedonia	52.9	37.9	20.0	23.6	4.5	15.5	50.4	0.7	19.3
98 Madagascar	48.5	25.3	12.3	13.3	2.9	9.4	26.6	5.8	6.5

Table 7.3 (Continued)

Country		<i>Com.</i> 2001	<i>Par.</i> 2001	<i>ID</i> 2001	<i>IPR</i>	<i>Res.</i> 2001	<i>Fitted</i> 2001	<i>Mean</i>	<i>Res.</i> 2001	<i>Fitted</i> 2001
99	Malawi	47.6	43.8	20.8	10.8	12.9	7.9	24.2	15.6	5.2
100	Malaysia	43.5	30.7	13.4	21.5	-0.8	14.2	41.8	-1.3	14.7
101	Maldives	9.1	33.2	3.0	11.2	-5.1	8.1	33.2	-7.0	10.0
102	Mali	15.6	14.4	2.2	8.1	-4.1	6.3	20.8	-1.1	3.3
103	Malta	48.2	70.0	33.7	44.4	5.8	27.9	70.6	3.5	30.2
104	Mauritania	15.0	28.2	4.2	7.7	-1.8	6.0	23.2	-0.4	4.6
105	Mauritius	48.3	52.8	25.5	28.0	7.4	18.1	43.2	10.1	15.4
106	Mexico	56.6	37.4	21.2	22.1	6.6	14.6	45.4	4.6	16.6
107	Moldova	29.7	34.8	10.3	16.7	-1.1	11.4	36.4	-1.4	11.7
108	Mongolia	49.8	36.7	18.3	16.7	6.9	11.4	35.8	6.9	11.4
109	Morocco	34.3	11.6	4.0	13.5	-5.5	9.5	31.8	-5.3	9.3
110	Mozambique	47.2	24.0	11.3	6.0	6.3	5.0	19.2	8.8	2.5
111	Namibia	23.5	31.6	7.4	11.0	-0.6	8.0	31.2	-1.5	8.9
112	Nepal	39.0	29.0	11.3	17.5	-0.6	11.9	31.4	2.2	9.1
113	Netherlands	70.0	54.8	38.4	57.6	2.7	35.7	82.0	2.1	36.3
114	New Zealand	61.3	54.7	33.5	59.1	-3.1	36.3	72.6	2.2	31.3
115	Nicaragua	43.7	41.7	18.2	9.9	10.9	7.3	29.6	10.1	8.1
116	Niger	41.1	18.4	7.6	3.3	4.2	3.4	15.8	7.0	0.6
117	Nigeria	37.2	27.4	10.2	7.9	4.1	6.1	26.0	4.1	6.1
118	Norway	70.0	56.0	39.2	58.2	3.1	36.1	84.6	1.5	37.7
119	Oman	0	0	0	7.9	-6.1	6.1	33.0	-9.9	9.9
120	Pakistan	0	0	0	9.6	-7.2	7.2	27.0	-6.7	6.7
121	Panama	55.2	45.3	25.0	21.9	10.5	14.5	46.0	8.1	16.9
122	Papua New G.	70.0	42.0	29.4	13.0	20.2	9.2	30.8	20.7	8.7
123	Paraguay	50.4	21.9	11.0	11.0	3.0	8.0	32.4	1.4	9.6
124	Peru	46.9	40.2	18.9	14.6	8.8	10.1	37.4	6.6	12.3
125	Philippines	60.1	35.8	21.5	29.0	2.8	18.7	48.8	3.1	18.4
126	Poland	52.5	39.6	20.8	39.0	-3.8	24.6	59.2	-3.2	24.0
127	Portugal	50.1	47.8	23.9	41.1	-2.0	25.9	61.6	-1.4	25.3
128	Qatar	0	0	0	8.7	-6.6	6.6	50.4	-19.3	19.3
129	Romania	44.1	46.5	20.5	24.5	4.5	16.0	47.0	3.0	17.5
130	Russia	58.3	48.1	28.0	19.7	14.8	13.2	41.4	13.6	14.4
131	Rwanda	0	0	0	14.5	-10.1	10.1	28.0	-7.2	7.2
132	Saudi Arabia	0	0	0	7.2	-5.7	5.7	40.0	-13.7	13.7
133	Senegal	41.5	22.4	9.3	8.0	3.1	6.2	23.6	4.5	4.8
134	Sierra Leone	0	0	0	5.6	-4.8	4.8	18.4	-2.0	2.0
135	Singapore	26.3	15.6	4.1	29.5	-14.9	19.0	64.0	-22.5	26.6
136	Slovakia	56.4	58.4	32.9	39.2	8.1	24.8	57.6	9.7	23.2
137	Slovenia	54.1	53.2	28.8	45.2	0.5	28.3	70.0	-1.1	29.9
138	Solomon Isl.	60.0	39.6	23.8	16.9	12.3	11.5	33.0	13.9	9.9
139	Somalia	0	1.0	0	4.0	-3.8	3.8	16.2	-0.9	0.9
140	South Africa	33.7	37.1	12.5	14.6	2.4	10.1	36.0	1.0	11.5
141	Spain	54.8	57.8	31.7	57.5	-3.9	35.6	70.2	1.7	30.0
142	Sri Lanka	51.6	45.0	23.2	28.1	5.0	18.2	45.4	6.6	16.6
143	Sudan	7.7	20.0	1.5	8.5	-5.0	6.5	23.4	-3.2	4.7
144	Suriname	52.7	43.0	22.7	22.5	7.9	14.8	42.0	7.9	14.8
145	Swaziland	0	0	0	8.0	-6.2	6.2	29.8	-8.2	8.2
146	Sweden	63.4	59.4	37.7	63.4	-1.5	39.2	81.4	1.7	36.0
147	Switzerland	70.0	57.6	40.3	62.2	1.9	38.4	86.6	1.5	38.8

Table 7.3 (Continued)

Country	<i>Com.</i> 2001	<i>Par.</i> 2001	<i>ID</i> 2001	<i>IPR</i>	<i>Res.</i> 2001	<i>Fitted</i> 2001	<i>Mean</i>	<i>Res.</i> 2001	<i>Fitted</i> 2001
148 Syria	2.7	54.1	1.5	18.0	-10.5	12.1	38.6	-11.4	12.9
149 Taiwan	62.0	52.3	32.4	54.4	-1.4	33.8	77.6	-1.6	34.0
150 Tajikistan	21.8	41.1	9.0	6.6	3.6	5.4	31.0	0.2	8.8
151 Tanzania	19.8	22.7	4.4	14.3	-5.5	9.9	29.4	-3.6	8.0
152 Thailand	37.8	32.0	12.1	40.7	-13.6	25.7	54.4	-9.3	21.4
153 Togo	25.2	31.7	8.0	12.1	-0.6	8.6	28.4	0.6	7.4
154 Trinidad & T.	50.0	42.0	21.0	26.5	3.8	17.2	46.6	3.8	17.2
155 Tunisia	4.5	33.7	1.6	21.9	-12.8	14.5	43.2	-13.8	15.4
156 Turkey	62.0	36.1	22.4	37.7	-1.5	23.9	54.8	0.7	21.7
157 Turkmenistan	0	0	0	6.7	-5.4	5.4	32.8	-9.8	9.8
158 Uganda	30.7	32.7	10.0	12.5	1.1	8.9	27.2	3.2	6.8
159 Ukraine	56.1	51.7	29.0	20.1	15.6	13.4	40.6	15.0	14.0
160 United Arab E.	0	0	0	5.1	-4.5	4.5	40.6	-14.0	14.0
161 United Kingdom	56.8	59.0	33.5	48.3	3.3	30.2	69.6	3.9	29.6
162 United States	51.3	67.0	34.4	59.5	-2.4	36.8	80.2	-1.0	35.4
163 Uruguay	48.5	65.6	31.8	41.8	5.5	26.3	54.2	10.5	21.3
164 Uzbekistan	8.1	46.0	3.7	5.7	-1.1	4.8	28.4	-3.7	7.4
165 Venezuela	43.1	27.4	11.8	20.2	-1.7	13.5	41.6	-2.7	14.5
166 Vietnam	0	56.5	0	9.2	-6.9	6.9	28.4	-7.4	7.4
167 Yemen	20.6	23.6	4.9	10.3	-2.7	7.6	26.6	-1.6	6.5
168 Yugoslavia	52.0	43.9	22.8	24.8	6.6	16.2	48.0	4.8	18.0
169 Zambia	62.0	15.6	9.7	12.7	0.7	9.0	27.2	2.9	6.8
170 Zimbabwe	27.8	15.5	4.3	11.7	-4.1	8.4	30.0	-4.0	8.3

regression analyses. 'Residual 2001' shows by how many ID index points a country's actual ID value differs from the regression line, and 'Fitted 2001' indicates the predicted value of ID, which is the value of ID at the regression line. The most deviating countries with residuals larger than ± 8.0 on the basis of IPR and larger than ± 9.0 on the basis of Mean are listed in Table 7.4. It is interesting to see to what extent these most deviating countries are the same as the deviating democracies and non-democracies presented in Table 7.2

Table 7.4 shows that according to both regressions, positive residuals are large for Albania, Bangladesh, Bosnia & Herzegovina, Brazil, the Czech Republic, Fiji, Malawi, Nicaragua, Papua New Guinea, Russia, Slovakia, Solomon Islands, and Ukraine, and negative residuals are large for Canada, Congo (Brazzaville), Japan, Jordan, Singapore, Syria, Thailand, and Tunisia. These 21 countries contradict the first research hypothesis most clearly. The other 25 countries are not as seriously deviating cases because they have large residuals only on the basis of IPR or Mean.

The group of 23 countries with large positive residuals is quite heterogeneous, although most of them are former socialist (9) and Latin American countries (6). Economic power resources are still relatively highly concentrated in most of the former socialist countries, and it has been difficult to

Table 7.4 The most extremely deviating countries according to regressions of ID-2001 on IPR and Mean respectively in the group of 170 countries

Country	IPR residuals higher than ± 8.0	Mean residuals higher than ± 9.0
<i>Large positive residuals</i>		
Albania	*	*
Bangladesh	*	*
Belarus	*	—
Bosnia & Herzegovina	*	*
Brazil	*	*
Bulgaria	*	—
Croatia	*	—
Cyprus	*	—
Czech Republic	*	*
Fiji	*	*
Honduras	*	—
Lebanon	—	*
Malawi	*	*
Mauritius	—	*
Nicaragua	*	*
Panama	*	—
Papua New Guinea	*	*
Peru	*	—
Russia	*	*
Slovakia	*	*
Solomon Islands	*	*
Ukraine	*	*
Uruguay	—	*
<i>Large negative residuals</i>		
Bahrain	—	*
Brunei	—	*
Burma	*	—
Canada	*	*
China	*	—
Congo (Brazzaville)	*	*
Cuba	—	*
Egypt	*	—
France	*	—
Japan	*	*
Jordan	*	*
Kuwait	—	*
Libya	—	*
Oman	—	*
Qatar	—	*
Rwanda	*	—
Saudi Arabia	—	*
Singapore	*	*
Syria	*	*
Thailand	*	*
Tunisia	*	*
Turkmenistan	—	*
United Arab Emirates	-	*

decentralize the control of agricultural and non-agricultural economic power resources in ethnically heterogeneous Latin American countries. Belarus, Bulgaria, Croatia, Cyprus, Honduras, Panama, and Peru have large residuals only on the basis of IPR, and Lebanon, Mauritius, and Uruguay only on the basis of Mean. Therefore these ten countries do not contradict the first research hypothesis as seriously as the 13 other countries which have large residuals on the basis of both IPR and Mean.

The group of 23 countries with large negative residuals is dominated by oil-producing and other Muslim countries (13), but the group includes also two socialist countries (China and Cuba), four economically highly developed countries (Canada, France, Japan, and Singapore), three extremely poor countries (Burma, Congo, and Rwanda), and Thailand in which the strong position of the king and the military reduces the degree of democratization. It is interesting to note that eight oil-producing Muslim countries have large negative residuals on the basis of Mean but not on the basis of IPR. Because crucial economic power resources are highly concentrated in these countries, their IPR values are low, whereas a relatively high level of per capita income has increased their Mean values. It is remarkable that both negative residuals are large only for seven of these 23 countries.

Table 7.2 lists 14 deviating democracies and 13 deviating non-democracies, which contradict the second research hypothesis on the basis of IPR and/or Mean. It is interesting to note that positive residuals are large only for four deviating democracies (Bangladesh, Honduras, Malawi, and Nicaragua). The other ten deviating democracies do not deviate from the regression line drastically. Positive residuals based on IPR vary from 0.8 (Benin) to 6.3 (Mozambique) and positive residuals based on Mean from 1.9 (Benin) to 8.8 (Mozambique) in this group of ten deviating democracies. In other words, although they contradict the second research hypothesis, they do not contradict seriously the first hypothesis about the relationship between the degree of resource distribution and the level of democratization.

Negative residuals are large for Jordan, Singapore, and Tunisia, which are deviating non-democracies on the basis of both IPR and Mean. They are the most seriously deviating countries with large negative residuals. The other ten deviating democracies contradict the second hypothesis only on the basis of Mean. Negative residuals are large for eight of these ten countries (Bahrain, Brunei, Kuwait, Qatar, Saudi Arabia, Syria, Tunisia, and the United Arab Emirates). Nearly all of them are oil-producing Muslim countries in which crucial economic power resources are highly concentrated but GDP% is relatively high.

The examination of deviating democracies and non-democracies and countries with large residuals discloses that poverty has not always constituted an insurmountable obstacle for democratization and that a relatively high level of per capita income has not always helped countries to cross the threshold of democracy. All deviating cases and countries with large residuals will be discussed separately in Chapter 8.

8 Analysis of single countries

The results of the regression analyses presented in Chapter 7 show that, in most cases, explanatory variables have 'predicted' the actual ID values more or less satisfactorily. However, there are also numerous deviating cases. The regression analyses disclosed the countries which contradict the first and the second research hypotheses most clearly. In this chapter, the results of statistical analyses and especially deviating cases will be examined at the level of single countries and regional groups. This analysis is based on the results of the regressions of ID-2001 on IPR and Mean respectively (Tables 7.1, 7.2, 7.3, and 7.4).

For the purposes of this analysis, the 170 countries are first classified into four categories from the perspective of the second research hypothesis: (1) democracies and non-democracies as expected, (2) countries at the transition levels of explanatory variables, (3) deviating democracies, and (4) deviating non-democracies. Attention will be focused on the two last categories because the countries of these categories contradict the second hypothesis most clearly. Second, from the perspective of the first research hypothesis, the 170 countries are classified into three categories on the basis of their residuals: (1) countries with large positive residuals, (2) countries with large negative residuals, and (3) countries with small or moderate residuals. The purpose is to separate the most deviating countries from the countries for which residuals are small or moderate.

The distribution of countries into the categories defined above will also be explored by regional groups. For this purpose, the 170 countries are divided into five major regional groups: (1) Europe and European offshoot countries, (2) Latin America and the Caribbean, (3) the Middle East, North Africa, and Central Asia, (4) other parts of Asia and Oceania, and (5) sub-Saharan Africa. The results of these analyses are summarized in Tables 8.1 (on page 162) and 8.2 (on page 181) separately by IPR and Mean.

The second research hypothesis applied to single countries

The purpose of this analysis is to explore which single countries support and which ones contradict the second research hypothesis. For this purpose, the

170 countries are classified into the four categories introduced above. The countries contradicting the second research hypothesis will be analysed separately. Finally, the results are summarized by regional groups. The regression of ID-2001 on IPR-2 is excluded from this analysis for the reason that it was not possible to establish any lower limit of the transition level of IPR-2 below which countries are not expected to cross the threshold of democracy.

Democracies and non-democracies as expected

The countries of this category support the second research hypothesis. They are democracies above the transition levels of IPR and Mean or non-democracies below the transition levels of IPR and Mean. The transition levels of IPR and Mean are intended to indicate the average level of resource distribution at which countries have crossed the threshold of democracy (see Chapter 7). Because the theory of democratization is assumed to apply to all populations and countries of the world, all countries above the transition levels of IPR and Mean are expected to be democracies and all countries below the transition levels are expected to be non-democracies.

We can see from Tables 7.1 and 7.3 that 71 countries above the transition level of IPR are democracies as expected and that 74 countries above the transition level of Mean are democracies as expected. Further, 37 countries below the transition level of IPR are non-democracies as expected and 27 countries below the transition level of Mean are non-democracies as expected. These 108 countries in the case of IPR and 101 countries in the case of Mean support the second research hypothesis most clearly.

My general prediction for the democracies above the transition levels of IPR and Mean is that they will remain as democracies, although some of them are quite recent and still fragile democracies. Most of them are economically developed and relatively rich countries, but the group includes also numerous developing and poor countries in which the degree of resource distribution has been high enough to support the emergence and survival of democracy. Correspondently, most of the non-democracies below the transition levels of IPR and Mean can be expected to remain below the threshold of democracy in the near future. Nearly all of them are poor countries in which the level of education is low and/or economic power resources are highly concentrated. The process of economic development is slow, and it is difficult to improve educational structures and to carry out economic reforms which would further the diffusion of economic power resources. The group includes also (on the basis of IPR) some relatively rich countries in which economic power resources are highly concentrated. Because several of these non-democracies are only slightly below the transition levels of IPR and/or Mean, it is possible that some of them will cross the minimum threshold of democracy in the near future.

Countries at the transition levels of IPR and Mean

We can see from Tables 7.1 and 7.3 that the number of countries at the transition level of IPR is 48 and at the transition level of Mean 44. According to my theoretical arguments, democracies and non-democracies are equally possible at the transition level of resource distribution. In fact, on the basis of IPR, 20 of these countries were democracies and 28 non-democracies in 2001. On the basis of Mean, 16 were democracies and 28 non-democracies in 2001. Nearly all of these countries are developing countries. The struggle for democracy or for the survival of democracy is intensive in most of these countries. Some of them may cross the threshold of democracy in the near future, but failures of democracy are also possible.

Most of these countries (32) are at the transition level of resource distribution on the basis of both IPR and Mean. This category of countries includes Algeria, Botswana, Brazil, Burma, Cameroon, Cape Verde, China, Congo (Brazzaville), Egypt, El Salvador, Equatorial Guinea, Gabon, Ghana, Iran, Kenya, Kyrgyzstan, Lesotho, Maldives, Moldova, Mongolia, Morocco, Namibia, Nepal, Papua New Guinea, Paraguay, Peru, Rwanda, Solomon Islands, South Africa, Tanzania, Togo, and Zimbabwe.

In addition to these 32 countries, 16 other countries are at the transition level on the basis of IPR but not of Mean: Azerbaijan, Belize, Bolivia, Burundi, Cambodia, Congo (Zaire), Ecuador, Eritrea, Kazakhstan, Madagascar, Malawi, Russia, Syria, Uganda, Yemen, Zambia. It is interesting to note that nine of these countries (Burundi, Cambodia, Congo (Z), Eritrea, Madagascar, Malawi, Uganda, Yemen, and Zambia) are below the transition level of Mean and seven above the transition level of Mean (Azerbaijan, Belize, Bolivia, Ecuador, Kazakhstan, Russia, Syria). There is a clear difference between these two subgroups of countries. The countries of the first subgroup are extremely poor (mainly sub-Saharan African) countries in which some resources (mostly agricultural land) are relatively widely distributed, whereas the countries of the second subgroup are more developed and prosperous, but some economic power resources are still highly concentrated. On the other hand, 12 countries are at the transition level of Mean but not of IPR: Cuba, Guatemala, Honduras, India, Libya, Nicaragua, Oman, Swaziland, Tajikistan, Turkmenistan, Uzbekistan, and Vietnam. Of these countries, India is slightly above the transition level of IPR, but the other 11 countries are below the transition level of IPR. They are Latin American, Arab, and socialist or former socialist countries in which economic power resources are highly concentrated.

Deviating democracies

The 14 deviating democracies contradicting the second research hypothesis most clearly are listed in Table 7.2. In the following, each of these 14 countries is introduced and discussed in order to find out what circum-

stances might explain their democratization earlier than expected on the basis of explanatory variables.

Bangladesh

Bangladesh is an extremely poor country which has been able to establish and maintain democratic institutions, although not without serious difficulties. Since its independence in 1971, Bangladesh has been above the threshold of democracy for 12 years and below the threshold for 19 years. The present period of democratic regime has continued since the 1991 parliamentary election. The two parties, the Bangladesh Nationalist Party and the Awami League, have alternated in power. Extreme poverty and a low level of education are unfavorable social conditions for democracy, whereas the moderately high share of family farms is favorable for democracy. Bangladesh may be able to maintain its competitive political system, although large positive residuals predict a decrease in the degree of democratization. The role of political leaders constitutes an unpredictable factor, which may support or damage the chances of democracy.

Competition for power has been bitter and sometimes violent in Bangladesh (cf. Schaffer 2002). One constitutional invention may facilitate the regular arrangement of elections. Since 1996, a constitutional provision has determined that general elections are to be run by a neutral caretaker administration led by the country's most recently retired chief justice. The caretaker administration replaces a political government three months before the election (see Wagner 2002). I would like to argue that some important intellectual and economic power resources are so widely distributed among competing groups that the government party does not dare to deviate from this practice. Opposition groups would be powerful enough to resort to violent demonstrations and to paralyze the society. Besides, the country's proximity to democratic India may constitute a local factor which supports the strive to maintain democratic political system in Bangladesh.

Benin

Benin is also an extremely poor country that has succeeded in establishing and maintaining a democratic system. Since its independence in 1960, Benin has been above the threshold of democracy 15 years and below the threshold 27 years. The present democratic period has continued since 1991, but, after the 2001 presidential election, Benin is only slightly above the threshold of democracy (see Appendix 1). The values of all explanatory variables, except Family Farms, are unfavorable for democracy. Because the structural basis of democracy is fragile, it is reasonable to expect difficulties for democratic politics. A breakdown of democratic rule, at least temporarily, is possible. However, it should be noted that the present level of democ-

ratization is in balance with the degree of resource distribution. Residuals are near zero, 0.8 (IPR) and 1.9 (Mean). Therefore, from the perspective of the resource distribution theory of democratization, Benin is not a deviating country.

Central African Republic

The emergence of democracy in the Central African Republic contradicts the second research hypothesis. The country has been a democracy since 1993. Before that it was a non-democracy 33 years (1960–92). Because the values of all explanatory variables are low, I cannot predict the survival of democracy in the Central African Republic. Some type of semi-autocratic system would be in better balance with its low degree of resource distribution. In fact, the present system with limited democratic rights and liberties could be regarded as semi-autocratic (cf. *Freedom in the World 2000–2001* 2001: 129–30). However, the country does not contradict the first research hypothesis seriously. Positive residuals are relatively small, 4.5 (IPR) and 7.1 (Mean). The pressure of donor countries for ‘good governance’ probably contributed to the democratization in the Central African Republic in 1993. Democracy has not yet become consolidated. The military is deeply divided by tribal lines, and there was a failed military coup in 2001. President Patasse had to invite Libyan troops to protect him against rebels (see *Keesing’s* 2001: 44142, 44439; *The Economist*, 8 December 2001: 42).

Chad

Chad has had competitive elections since 1996, but it crossed the Competition threshold of democracy only in the 2001 presidential election. Thus it is a quite recent and to some extent questionable democracy. The six opposition candidates claimed that the poll had been marred by massive fraud (*Keesing’s* 2001: 44141). In the legislative elections on 21 April 2002, President Déby’s ruling party won 72 percent of the seats (*Keesing’s* 2002: 44715). Explanatory variables do not presuppose a democratic system in Chad, and the country may drop below the threshold of democracy. The ethnic heterogeneity of the population provides a natural basis for competing political parties as in many other sub-Saharan African countries. The present level of democratization (ID) is much higher than expected on the basis of explanatory variables, but positive residuals are only moderate, 4.5 (IPR) and 7.5 (Mean). Resource distribution would make an autocratic system insecure, too.

Gambia

Gambia is below the transition levels of both combinations of explanatory variables, but it has been, contrary to the second hypothesis, nearly contin-

uously above the threshold of democracy since its independence in 1965. As a consequence of a military coup, it dropped below the threshold of democracy for two years in 1994–5. Gambia returned to democracy through a competitive presidential election in 1996 and a parliamentary election in 1997. This transfer to democracy is, however, to some extent questionable because the former military ruler (Lt. Yahya Jammeh) was elected president in 1996 and again in 2001. This type of democracy modified by the military may be suited to Gambia's social circumstances. Gambia was only slightly above the Competition threshold of democracy in 2001, and its positive residuals are relatively small, 4.4 (IPR) and 6.5 (Mean). Gambia does not contradict the first research hypothesis.

In the legislative elections held on 17 January 2002, President Jammeh's ruling Alliance for Patriotic Reorientation and Construction won 45 of the 48 elected seats (*Keesing's* 2002: 44545). It means that Gambia dropped below the Competition threshold of democracy and ceased to be a deviating democracy (cf. Saine 2002).

Guinea-Bissau

Since its independence in 1974, Guinea-Bissau has been a non-democracy 21 years and a democracy 7 years. The present period of democratic rule has lasted since the 1999 competitive presidential and parliamentary elections. Because the values of both combinations of explanatory variables are below the transition level of resource distribution, we have to expect a downfall of democratic rule in Guinea-Bissau. The level of education, in particular, is extremely low. The value of ID is approximately two times higher than expected on the basis of explanatory variables, although positive residuals are only moderate, 4.4 (IPR) and 7.5 (Mean). In fact, there have been several coup attempts (*Keesing's* 2001: 44495). In May 2000, there was fighting between the supporters of President Yala and those allied with General Mané, who was killed (*Freedom in the World 2000–2001* 2001: 237–9).

Honduras

The present period of democratic rule has lasted in Honduras since the competitive presidential election of 1981. A democratic system seems to have become stabilized in Honduras despite the fact that the country is slightly below the transition level of IPR. The concentration of economic power resources has decreased the IPR value, whereas Honduras is already at the transition level of Mean. On the basis of its large positive residual based on IPR (8.1), I have to predict a considerable decrease in the level of democratization. It may be, however, that the political system of Honduras has become adapted to its social conditions in such a way that, despite democratic elections, political power remains in the hands of the tradition-

ally dominating ethnic and social groups and the military. In other words, Honduras may be a less democratic country than my measures of democracy indicate.

Madagascar

Madagascar has a long tradition of partly competitive elections. It crossed the threshold of democracy first time in 1990 and has remained above the threshold since then. It is a deviating democracy only on the basis of Mean. Its IPR value has already entered into the transition level of resource distribution. Because positive residuals are small, 2.9 (IPR) and 5.8 (Mean), the present level of democratization is not much higher than the expected one. Consequently, it is not reasonable to expect a downfall of democracy in Madagascar. Democratic institutions broke down temporarily after the December 2001 inconclusive presidential election. The incumbent President Ratsiraka and his challenger Marc Ravalomanana, who claimed that he had won a majority of the votes in the first round, were not able to agree on the second round of voting, and the governmental system collapsed in practice (see *Keesing's* 2002: 44543). The recounting of votes in April 2002 showed that Ravalomanana had won the election with 51.5 per cent of the vote (*Keesing's* 2002: 44712). Ratsiraka fled from his last stronghold to the Seychelles and then to France on 5 July 2002 (*Keesing's* 2002: 44885).

Malawi

Malawi was a non-democracy 30 years after its independence and has been above the threshold of democracy since 1994. The values of explanatory variables are low for Malawi, and it is below the transition level of Mean but not of IPR. The extremely large positive residuals, 12.9 (IPR) and 15.6 (Mean), are principally due to Malawi's exceptionally high values of political variables (ID 20.8 in 2001). Consequently, Malawi is one of the most deviating countries, although it contradicts the second hypothesis only on the basis of Mean, and I have to predict a considerable decrease in its level of democratization. IPR provides an explanation for a minimum level of democracy in Malawi but not for the fact that the ID value is more than two times higher than expected on the basis of IPR and four times higher than expected on the basis of Mean. Its present highly pluralistic party system seems to have become adapted to the country's ethnic cleavages. This provides a local explanation for an exceptionally high level of electoral competition, but ethnic heterogeneity alone may not be enough to maintain a competitive political system (cf. *Freedom in the World* 2001: 344–5).

Mozambique

Mozambique is a poor country devastated by a long civil war. It was a non-democracy from 1975 to 1993 as expected on the basis of its very low

degree of resource distribution. It became a highly deviating democracy in 1994 when it crossed the threshold of democracy through competitive presidential and parliamentary elections. Because it is clearly below the transition levels of IPR and Mean, the level of democratization can be expected to decrease considerably. Mozambique's high degree of Competition, which is based on the confrontation between the parties of the civil war, probably exaggerates the degree of democratization. It is a democracy emerged from the stalemate of a civil war (cf. Weinstein 2002; *Freedom in the World* 2001: 381–3). The effective distribution of the means of violence between competing parties seems to provide a local explanation for the unexpected high level of electoral competition in Mozambique.

Nicaragua

Nicaragua's present period of democracy has lasted since 1984 when the Sandinista National Front's provisional government legalized the victory it had achieved in the civil war by organizing a competitive presidential election. In the next presidential election in 1990, the opposition's candidate won, and the democratic system became stabilized. Nicaragua is still below the transition level of IPR and, consequently, it contradicts the second research hypothesis. Because both positive residuals are large, 10.9 (IPR) and 10.1 (Mean), it also contradicts the first research hypothesis. Large positive residuals predict a significant decline in the level of democratization. The extreme concentration of both agricultural and non-agricultural economic power resources is unfavorable for democracy. An agrarian reform intended to increase the share of family farms would help Nicaragua to strengthen the social basis of democracy. In the presidential election on 4 November 2001, the Constitutional-Liberal Party candidate E. Bolaños Geyer won by 56 percent of the vote (*Keesing's* 2001: 44444–5). Nicaragua remains as a deviating democracy, although the level of democratization decreased slightly compared to the results of the 1996 presidential election. As in the case of Mozambique, the major parties emerged from the confrontation of the civil war and strife. Their struggle for power maintains the unexpected high level of electoral competition in Nicaragua.

Nigeria

In Nigeria, democratically elected presidents and military rulers have alternated. Since 1960, Nigeria has been a democracy 13 years and a non-democracy 30 years. The present period of democracy began in 1999 when the military government allowed the country's return to democratic rule through elections. General Olusegun Obasanjo was elected president in 1999. The ethnic heterogeneity of the population has hampered the

function of democratic institutions, although it, on the other hand, has provided a natural social basis for competing parties. Nigeria has made many attempts to adapt its political institutions to the requirements of geographical ethnic cleavages and, to some extent, it has succeeded in these constitutional experiments. The values of both IPR and Mean are still below the transition levels of resource distribution. Therefore democracy in Nigeria contradicts the second research hypothesis, and a new failure of democracy would not be unexpected. However, positive residuals are small, 4.1 (IPR) and 4.1 (Mean), which means that the present level of democratization is only a little higher than expected. Nigeria does not contradict the first research hypothesis. The country has chances to maintain its democratic institutions, although a breakdown of democracy is also possible. In such conditions, the future of democracy depends crucially on the capabilities of political leaders (cf. *Freedom in the World* 2001: 402–5).

Senegal

The gradual process of democratization started in Senegal already in 1978. It has been above the Competition threshold of democracy since 1993, but it has been difficult for Senegal to cross the new Participation threshold of democracy (20 percent) in presidential elections. It crossed that threshold temporarily in 2001 because of a national referendum (see Appendix 1). So Senegal was above my thresholds of democracy only temporarily in 2001 when it became a slightly deviating democracy for one year. Senegal does not contradict the first research hypothesis. Positive residuals were small, 3.1 (IPR) and 4.5 (Mean), for 2001. Without the 2001 referendum, the level of democratization is in balance with the degree of resource distribution. Consequently, I do not expect any drastic changes in Senegal's political system. The country may cross the threshold of democracy in next presidential elections.

Uganda

Uganda crossed the threshold of democracy in the 2001 presidential election in which outgoing President Museveni became re-elected by 69.3 percent of the votes. Uganda became a deviating democracy on the basis of Mean but not of IPR. Because Uganda's positive residuals are near zero, 1.1 (IPR) and 3.2 (Mean), I do not expect any significant changes in the country's political system. The level of democratization is in balance with the degree of resource distribution. However, we should note that political parties are not allowed to function and to take part in legislative elections. In the 2001 legislative elections, the president's no-party supporters secured nearly all of the 214 directly elected seats (see IPU 2001). Because political parties are still outlawed, it is questionable whether Uganda can be regarded as a democracy

(cf. *Freedom in the World* 2001: 554–6). If I had classified the country's governmental system into the category of 'concurrent powers,' Uganda would be below the threshold of democracy according to my variables.

All deviating democracies discussed above are poor countries of sub-Saharan Africa, Latin America, and South Asia. Deviating democracies are clustered to sub-Saharan Africa. External aid programs which have presupposed good governance and democratization may have furthered the process of democratization in Africa. Only few of these countries can be regarded as highly deviating cases. Gambia and Senegal ceased to be deviating democracies in 2002, and democracy in Uganda is questionable. Honduras and Nicaragua are deviating democracies only on the basis of IPR and Madagascar and Malawi only on the basis of Mean. Positive residuals are near zero for Benin and small or moderate for the Central African Republic, Chad, Guinea-Bissau, Madagascar, and Nigeria, which means that they are not seriously deviating cases on the basis of the first research hypothesis. On the basis of large positive residuals, Bangladesh, Malawi, Mozambique, and Nicaragua are the most clearly deviating countries, but, as noted above, Malawi does not contradict the second research hypothesis on the basis of IPR. My general prediction is that breakdowns of democracy are most likely in countries with the lowest degree of resource distribution and the largest positive residuals.

Deviating non-democracies

The 13 deviating non-democracies listed in Table 7.2 are deviating cases on the basis of Mean, but only three of them (Jordan, Singapore, and Tunisia) are also deviating cases on the basis of IPR. These three countries contradict the second research hypothesis most seriously. In the following, each of the deviating non-democracies will be discussed separately.

Azerbaijan

Azerbaijan, which became independent in 1991 together with the other former Soviet republics, has not yet been able to cross the Competition threshold of democracy, although its ID value was 11.5 in 2001. President Geidar Aliyev and his party, the New Azerbaijan Party, dominate in politics. The ruling party's share of the seats in parliament declined below 70 percent in the National Assembly election of 5 November 2000 (see IPU 2000). Azerbaijan is a slightly deviating non-democracy on the basis of Mean. Its present level of ID seems to be in balance with the degree of resource distribution. Both residuals are near zero, -0.5 (IPR) and -2.8 (Mean). Democratization is possible in Azerbaijan but not yet inevitable (cf. Cornell 2001; *Freedom in the World* 2001: 66–9). The concentration of economic power resources in the hands of the government supports the dominance of President Aliyev's party.

Bahrain

Autocracy in Bahrain contradicts the second research hypothesis, but only on the basis of Mean. According to its low IPR value (6.3), Bahrain is a non-democracy as expected. Economic power resources based on oil industries are extremely concentrated in the hands of the government and the ruling families. The concentration of crucial economic resources supports autocracy, but other social conditions, especially the distribution of intellectual power resources, are conducive to a more democratic system. Consequently, the social basis of an autocratic political system is fragile in Bahrain, just as in other oil-producing Arab countries. There is popular pressure for democratization, and the government has started some constitutional and democratic reforms (see *Keesing's* 2002: 44648). IPR does not yet predict democratization in Bahrain but Mean does. Negative residuals based on Mean are among the highest in the world (see also *The Middle East* 2000: 344–7; Herb 2002: 45–6).

Belarus

Belarus is a deviating non-democracy on the basis of Mean but a non-democracy as expected on the basis of IPR. IPR and Mean have produced widely differing measurements of resource distribution, just as in the case of Bahrain. The extreme concentration of economic power resources has decreased the value of IPR, although intellectual power resources are relatively widely distributed. The imbalance between IPR and Mean does not provide a solid basis on which to predict the chances of democratization in Belarus. The concentration of economic power resources supports the autocracy of President Lukashenka, just like the dominance of communist parties in the former socialist countries, but it is a fragile foundation for autocracy in a society in which intellectual power resources are widely distributed. Consequently, the dominance of President Lukashenka may collapse and a more democratic system emerge, although the low IPR value (7.7) does not yet presuppose democratization (cf. Potocki 2002).

Brunei

Brunei is an absolute autocracy, which contradicts the second research hypothesis on the basis of Mean but not on the basis of IPR. According to its low IPR value (5.4), Brunei is a non-democracy as expected. The high concentration of economic power resources (principally oil industries) has kept the value of IPR low. The negative residual based on Mean is extremely large (–15.7), whereas the negative residual based on IPR is not higher than –4.7. Intellectual power resources are widely distributed and GDP% is high in Brunei. These structural factors predict democratization, whereas the concentration of economic power resources is in harmony with autocracy. The situation in Brunei is the same as in Bahrain and in several

other oil-producing autocracies of the Middle East. The social basis of autocratic rule is fragile, and social pressure for democratization is growing (cf. *Freedom in the World* 2001: 105–8).

Jordan

Jordan is one of the most extremely deviating non-democracies both on the basis of IPR (–19.1) and Mean (–16.3). Because Jordan does not have oil resources, economic power resources are not as highly concentrated as in the oil-producing Middle East countries, and social conditions are more conducive to democracy. According to my measures of resource distribution, Jordan should be above the threshold of democracy but it is not, although the process of democratization has started. Jordan has a parliament, and there are political parties, but executive power is still in the hands of the king. The ethnic diversity of the population may hinder democratization. The king is supported especially by Bedouin tribes, which constitute a small minority of the population. Besides, the native Arabs would not like to share power with numerous Palestinian refugees. There is strong popular pressure for a more democratic system. Because the extremely large negative residuals predict democratization, I assume that Jordan will be one of the first Arab countries to cross the threshold of democracy (cf. Brynen 1998; *The Middle East* 2000: 285–98; *Freedom in the World* 2001: 288–91). Of course, it is also possible that I have overestimated the degree of resource distribution in Jordan.

Kazakhstan

Kazakhstan is a slightly deviating non-democracy on the basis of Mean but not on the basis of IPR. Both negative residuals are near zero, –1.5 (IPR) and –3.6 (Mean), which means that the present authoritarian political system with limited political rights is approximately in balance with the degree of resource distribution. Because the degree of resource distribution is high enough for democratization also on the basis of IPR, it is reasonable to expect that the level of democratization will rise rather than decline in the near future. The ethnic heterogeneity of the population constitutes an incalculable factor in Kazakhstan's political life.

Kuwait

Kuwait is a typical oil-producing Arab country in which the extreme concentration of crucial economic power resources supports the survival of an authoritarian political system. Because of the concentration of economic power resources, it is a non-democracy as expected on the basis of IPR, whereas it is a highly deviating non-democracy on the basis of Mean. There is popular pressure for democratization in Kuwait, and the significance of

parliamentary elections has increased, but executive power is in the hands of the emir and the ruling family. The IPR (5.2) and Mean (49.6) values differ so drastically from each other that it is not possible to make any clear prediction about democratization. The small negative residual based on IPR (-3.9) presupposes a little higher degree of democratization, whereas the extremely large negative residual based on Mean (-18.3) predicts a relatively high degree of democratization. The fact that native Kuwaiti Arabs constitute only a small minority of the population probably hampers democratization. The native Arabs do not want to grant citizenship to various immigrant groups and even less to share power with them. It is reasonable to assume that the struggle for democracy will continue and intensify in Kuwait (cf. Crystal and al-Shayehji 1998; *The Middle East* 2000: 299–308; Herb 2002).

Qatar

Qatar is a traditional Arabian sheikhdom without any democratic institutions. Political and economic power is in the hands of the ruling family. The concentration of economic power resources supports an autocratic political system and keeps the value of IPR below the transition level, but because the values of other explanatory variables are high, the value of Mean presupposes democracy and makes Qatar a highly deviating non-democracy (negative residual -19.3). The pattern is the same as in the other oil-producing autocracies: only the concentration of economic power resources is in harmony with the concentration of political power. There has not yet been any significant pressure for political reforms, but it is reasonable to expect that the pressure for democratization will increase in Qatar, too. The social basis of the traditional autocracy is fragile (cf. *The Middle East* 2000: 351–4; Herb 2002).

Saudi Arabia

The situation in Saudi Arabia is similar to that in Bahrain, Brunei, Kuwait, Qatar, and the United Arab Emirates. The value of Mean presupposes some kind of democratic system, whereas the value of IPR is still below the transition level of resource distribution and is conducive to autocracy. The present monarchical system has survived since 1932. The concentration of economic power resources supports Saudi Arabia's authoritarian system, but the spread of education has diffused intellectual power resources, which is conducive to democratization. The question is how long the government is able to control the consequences of the diffusion of intellectual power resources. It is reasonable to expect increasing demands for democratization in Saudi Arabia, too. Jean-François Seznec (2002) notes that one can detect protodemocratic stirrings and that the kingdom is under tremendous social pressure to change rapidly (cf. *The Middle East* 2000: 359–75).

Singapore

Singapore is a highly deviating non-democracy according to both combinations of explanatory variables. Both IPR and Mean values presuppose democracy, but Singapore dropped below the threshold of democracy in the 2001 parliamentary elections in which the People's Action Party won 73.7 percent of the valid votes. Singapore's negative residuals are among the highest in the world, -14.9 (IPR) and -22.5 (Mean), and it is one of the most extremely deviating countries. Because all explanatory variables presuppose democracy, I have to predict Singapore's return to democracy.

The ethnic heterogeneity of the population (Chinese 78, Malay 14, and Indian 7 percent) may be a local factor which has contributed to the establishment of a one-party dominated political system. The Chinese population has not dared to divide its support among two or more parties. Besides, Singapore's electoral system has been designed to support the hegemony of the ruling party. There are still constitutional rights for political opposition, which means that a stronger opposition may arise in the future. Singapore's hegemonic party system is anomalous in a country in which economic and intellectual power resources are widely distributed (cf. *Freedom in the World* 2001: 476–9).

Syria

Syria is also a highly deviating non-democracy, although its IPR value is still at the transition level. Both negative residuals are large, -10.6 (IPR) and -11.4 (Mean). According to explanatory variables, the level of democratization should be much higher than it actually is. The distribution of power resources makes democracy possible although not yet inevitable. I have to predict increasing popular pressure for democratization in Syria. The state control of crucial economic resources and the concentration of the means of violence in the hands of the ruling group are local factors that help to explain the lack of democracy and the survival of the country's autocratic system dominated by the president and his Ba'ath party. Raymond A. Hinnebusch (1998: 227) argues that the 'Alawi core of the regime is a major obstacle to liberalization and that the 'Alawi clans around Asad, which dominate the security forces and have been transformed into a privileged political elite, have a special stake in the survival of the regime.' The question is how long this ruling elite is able to resist the pressure for democratization caused by extensive resource distribution.

Tunisia

Tunisia is another authoritarian Arab country. Because it has only limited oil resources, economic power resources are not as highly concentrated as in oil-producing Arab countries, and social conditions are more favorable for democracy. It is a highly deviating non-democracy both on the basis of

IPR and Mean. Tunisia contradicts the second research hypothesis clearly. My explanatory variables predict democratization, but the country has not yet crossed the threshold of democracy, although the process of democratization has started. Opposition parties have some chances to function and take part in parliamentary elections. The ruling Democratic Constitutional Rally has until now been able to retain its dominant position. The opposition parties have only few seats in the House of Representatives, and the president has been elected without any serious competition. The examples of Algeria and Morocco indicate that the situation may change. On the basis of my explanatory variables, it is reasonable to expect that the level of democratization in Tunisia will rise significantly in the near future. Larbi Sadiki regards Tunisia as an 'electoral' democracy, but he emphasizes that the ruling party 'with 81 per cent of the total seats, still dominates parliament and political life in general' (Sadiki 2002: 126–9; see also *Freedom in the World* 2001: 541–4).

United Arab Emirates

The situation in the United Arab Emirates is similar to that in the other oil-producing autocracies. It is a deviating non-democracy only on the basis of Mean. Because of the concentration of economic power resources, the value of IPR is below the transition level. Negative residuals indicate that the zero level of ID and the degree of resource distribution are in imbalance, which is bound to cause pressure for democratization. As in some other Arab countries, the indigenous Arab population constitutes a minority of the total population, which makes it even more difficult to carry out any democratic reforms (cf. *The Middle East* 2000: 354–8).

It is remarkable that 11 of the 13 deviating non-democracies are Muslim countries and that eight of them are Arab countries. Democratization seems to be to some extent more difficult in Muslim and Arab countries than in other parts of the world. Of these 13 deviating non-democracies, democratization is most probable in Jordan, Singapore, and Tunisia, which are deviating cases on the basis of both explanatory indices. Large negative residuals based on Mean predict democratization in the other ten countries too, or at least some progress in democratization. It is not justified to make as sure predictions on the basis of IPR because these ten countries are still at the transition level of IPR or below it.

Summary by regional groups

It is interesting to compare the application of the second research hypothesis to single countries by regional groups. The 170 countries are divided into five large geographical and partly cultural regional groups. The group of Europe and European offshoot countries (45) includes, in addition to

European countries, Australia, Canada, New Zealand, and the United States. Armenia, Cyprus, and Georgia belong to this regional group. The group of Latin America and the Caribbean includes 27 countries. The group of the Middle East, North Africa, and Central Asia comprises 26 mainly Muslim countries, including Algeria, Egypt, Libya, Morocco, Sudan, and Tunisia from North Africa and Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan from Central Asia. The culturally heterogeneous group of the Asia-Pacific includes the rest of Asian countries (27 countries). The group of sub-Saharan Africa comprises 45 countries. The results are given in Table 8.1.

Table 8.1 shows that there are great differences between the five regional groups. Nearly all countries of the first regional group (Europe and its offshoot countries) and most countries of the second regional group (Latin America and the Caribbean) are 'democracies as expected,' whereas they are few in the third (the Middle East, North Africa, and Central Asia) and the fifth (sub-Saharan Africa) regional groups. 'Non-democracies as

Table 8.1 The application of the second research hypothesis to single countries by regional groups

<i>Category of countries</i>		<i>Europe</i>	<i>Latin America</i>	<i>Middle East</i>	<i>Asia-Pacific</i>	<i>Sub-Sahara</i>	<i>Total</i>
<i>According to IPR</i>							
Democracies as expected (IPR above 20.0)	N	42	15	3	10	1	71
	%	59.2	21.1	4.2	14.1	1.4	100.0
Non-democracies as expected (IPR below 10.0)	N	1	3	12	7	14	37
	%	2.7	8.1	32.4	18.9	37.8	100
At the transition level (IPR 10.0 to 20.0)	N	2	7	9	8	22	48
	%	4.2	14.6	18.7	16.7	45.8	100.0
Deviating democracies (IPR below 10.0)	N	0	2	0	1	8	11
	%	0	18.2	0	9.1	72.7	100.0
Deviating non-democracies (IPR above 20.0)	N	0	0	2	1	0	3
	%	0	0	66.7	33.3	0	100.0
Total	N	45	27	26	27	45	170
<i>According to Mean</i>							
Democracies as expected (Mean above 38.0)	N	43	18	3	9	1	74
	%	58.1	24.3	4.0	12.2	1.4	100.0
Non-democracies as expected (Mean below 28.0)	N	0	1	3	6	17	27
	%	0	3.7	11.1	22.2	63.0	100.0
At the transition level (Mean 28.0 to 38.0)	N	1	8	10	9	16	44
	%	2.3	18.2	22.7	20.4	36.4	100.0
Deviating democracies (Mean below 28.0)	N	0	0	0	1	11	12
	%	0	0	0	8.3	91.7	100.0
Deviating non-democracies (Mean above 38.0)	N	1	0	10	2	0	13
	%	7.7	0	76.9	15.4	0	100.0
Total	N	45	27	26	27	45	170

expected' are clustered to the third, fourth (the Asia-Pacific), and fifth regional groups, whereas they are few in the first and second groups. They are most frequent in the regional group of sub-Saharan Africa.

The countries at the transition levels of IPR and Mean are rare in the first regional group, whereas they are relatively evenly distributed across the four other regional groups. They are most frequent in the regional group of sub-Saharan Africa, especially at the transition level of IPR.

Most 'deviating democracies' are in the group of sub-Saharan African countries, whereas 'deviating non-democracies' are heavily clustered into the group of the Middle East, North Africa, and Central Asia. Why have so many 'too early' democracies emerged in sub-Saharan Africa? International pressure to conform to the requirements of democratic rule may have hastened the process of democratization in sub-Saharan Africa in the first years of the 1990s, but if the democratic institutions established in the 1990s survive and become stabilized, external pressure would not be enough to explain their deviant positions. As indicated above, positive residuals are small or moderate for most of them, which indicates that the actual level of ID does not differ much from the 'predicted' one.

The fact that nearly all of the 'deviating non-democracies' are Muslim countries implies that Islamic culture has something to do with the delay of democratization in the region of Muslim countries. However, given that some Muslim countries have already crossed the threshold of democracy, Islam does not seem to constitute an insurmountable obstacle for democratization. Let us explore the explanatory power of IPR and Mean in Muslim countries in greater detail by separating Muslim countries from the rest of the 170 countries.

Muslim countries

The group of 170 countries includes 42 countries in which Muslims (see, for example, *Philip's Encyclopedic World Atlas 2000*; *The World Factbook 2000*; Vanhanen 1999: Appendix B) constitute a clear majority of the population (Afghanistan, Albania, Algeria, Azerbaijan, Bahrain, Bangladesh, Brunei, Comoros, Djibouti, Egypt, Gambia, Guinea, Indonesia, Iran, Iraq, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Libya, Malaysia, Maldives, Mali, Mauritania, Morocco, Niger, Oman, Pakistan, Qatar, Saudi Arabia, Senegal, Somalia, Sudan, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, and Yemen). The mean of residuals based on IPR is -2.8 for this subgroup of 42 countries and the mean of residuals based on Mean -4.4 (Table 7.3). These clearly negative mean residuals indicate that the actual level of democratization (ID 2001) is, on average, significantly lower than expected on the basis of resource distribution in Muslim countries, but IPR has been able to predict the actual ID values for Muslim countries more accurately than Mean. This concerns oil-producing countries in particular. Negative residuals based on Mean are large for

Bahrain, Brunei, Kuwait, Libya, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, whereas negative residuals based on IPR are only moderate for these countries.

Negative residuals imply that some characteristics of Islamic culture may hamper democratization (cf. Huntington 1991: 307–9; Brynen *et al.* 1995; Ibrahim 1995; Hudson 1995; Ben-Dor 1995; Boroumand and Boroumand 2002; Fuller 2002; Goddard 2002), but I want to emphasize that such characteristics do not constitute an absolute obstacle for democratization. Richard Rose comes to the conclusion, on the basis of evidence from Central Asia, that ‘being a Muslim does not make a person more likely either to reject democracy or to endorse dictatorship’ (Rose 2002: 110). Lane and Ersson suspect, on the basis of their quantitative analysis, that ‘Islam and democracy are not compatible entities.’ They say that it is ‘obvious that Islam impacts negatively upon democracy even when controlling for affluence, history and geography’ (Lane and Ersson 2002: 178, 184).

On the average, the level of ID was not more than 2.8 index points lower than expected on the basis of IPR in this group of 42 Muslim countries. Some predominantly Muslim countries have already crossed the threshold of democracy (Albania, Algeria, Bangladesh, Gambia, Indonesia, Lebanon, Malaysia, Senegal, and Turkey) and some others were only slightly below the threshold of democracy in 2001 (Azerbaijan, Iran, Kyrgyzstan, Niger, and Tajikistan). The process of democratization has started also in countries like Djibouti, Egypt, Guinea, Jordan, Kazakhstan, Kuwait, Maldives, Mali, Mauritania, Morocco, Sudan, Tunisia, and Yemen. Therefore, I expect that the struggle for democracy and the process of democratization will continue in Muslim countries.

The difference in the explanatory powers of IPR and Mean appears also in an analysis limited to the group of 42 Muslim countries. The correlation between IPR and ID 2001 is 0.634, whereas the corresponding correlation with Mean is not higher than 0.277. IPR explains statistically a significant part of the variation in ID (40 percent) in this group of 42 countries. In other words, the same factors which further or hamper democratization in the total group of 170 countries are effective within the group of Muslim countries, too. The low correlation with Mean seems to be mainly due to the fact that per capita income is high in several non-democratic oil-producing Muslim countries. High values of GDP% have inflated the Mean values of these countries. Of the single explanatory variables, DD and FF have the highest correlations with ID-2001 (0.555 and 0.301). Literates and Students have weak positive correlations (0.166 and 0.293), but the correlation between GDP% and ID-2001 is slightly negative (–0.233).

Figure 8.1 illustrates the results of the regression analysis of ID-2001 on IPR in the group of 42 Muslim countries. It shows that the level of democratization tends to rise with the degree of resource distribution, but some extremely deviating cases weaken the relationship. Bangladesh and Jordan are the two most extremely deviating countries. When these two extreme

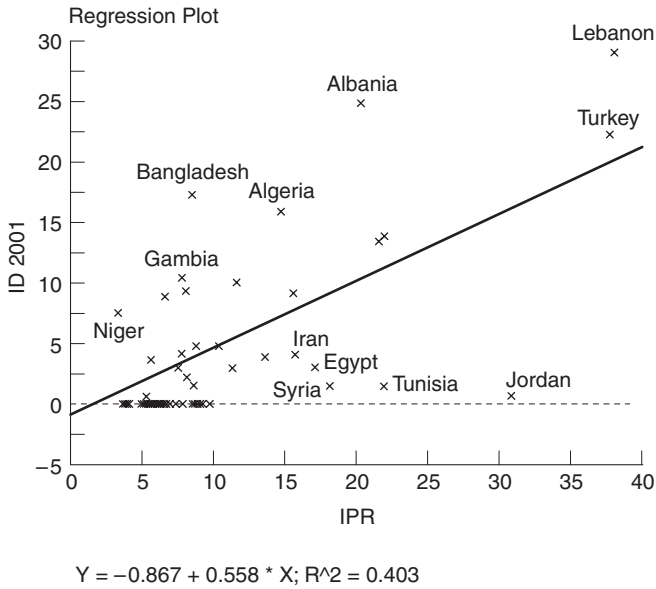


Figure 8.1 The results of regression analysis of ID-2001 on IPR for single countries in the group of 42 mainly Muslim countries.

cases are excluded from the group of Muslim countries, the correlation between IPR and ID-2001 rises to 0.765 and the explained part of variation to 58 percent.

The first research hypothesis applied to single countries

According to the first research hypothesis, the measures of democracy, and the Index of Democratization in particular, are expected to be positively correlated with the measures of resource distribution, the combined indices in particular. The results of correlation analysis show that the hypothesized relationship is strong and that the degree of resource distribution statistically explains most of the variation in ID. The regression analysis was used to disclose how well the average relationship between an explanatory index and ID-2001 applies to single countries. The results for single countries are given in Table 7.3.

The results of regression analyses will be examined at the level of single countries in order to see in which countries the level of democratization is approximately in balance with the degree of resource distribution and which countries differ clearly from the hypothesized relationship. Attention is focused on deviations from the regression line, whereas in the first section of this chapter attention was focused on the question to what extent

the transition levels of explanatory indices were able to separate democracies from non-democracies.

For the purposes of this analysis, the 170 countries are divided into three categories on the basis of their deviations (residuals) from the regression lines: (1) countries with large positive residuals, (2) countries with large negative residuals, and (3) countries with small or moderate residuals. The criteria of 'large residuals' are the same as in Chapter 7: higher than ± 8.0 for IPR and higher than ± 9.0 for Mean. The countries of the first two categories are listed in Table 7.4. The first category includes four 'deviating democracies' (Bangladesh, Honduras, Malawi, and Nicaragua) and one 'deviating non-democracy' (Belarus). The second category includes ten 'deviating non-democracies' (Bahrain, Brunei, Jordan, Kuwait, Qatar, Saudi Arabia, Singapore, Syria, Tunisia, and the United Arab Emirates). Because these 15 countries have already been introduced and discussed in the connection of deviating democracies and non-democracies, they will not be taken up again. The rest of the 46 countries with large residuals will be introduced and discussed in the following.

The 124 countries of the third category with small or moderate residuals will be listed and discussed only briefly because they do not contradict the first research hypothesis seriously. Finally, the results will be summarized by regional groups in order to see whether there are any significant regional differences in the accuracy of predictions derived from the first research hypothesis.

Countries with large positive residuals

Table 7.4 shows that positive residuals are large for 23 countries. Positive residuals based on IPR are higher than 8.0 for 20 countries and positive residuals based on Mean are higher than 9.0 for 16 countries. Nearly all of these countries are democracies, but because the level of democratization is much higher than expected on the basis of resource distribution, they contradict the first research hypothesis. Four of them (Bangladesh, Honduras, Malawi, and Nicaragua), which also contradict the second research hypothesis, were introduced in the first section of this chapter. The other 19 countries will be introduced and discussed in this connection. The purpose is to explore whether some local circumstances or other factors might explain their much higher than expected level of democratization.

Albania

Albania is one of the nine former socialist countries with large positive residuals. Its former negative residuals turned out highly positive in 1991 as a consequence of the country's change-over from socialist one-party autocracy to a multiparty democracy. An explanation for Albania's much higher than expected level of democratization is in the suddenness of its

political transformation. When the socialist system collapsed, Albania adopted democratic institutions abruptly without any gradual period of transition. Because economic structures affecting resource distribution did not change as quickly, positive residuals grew large. After 1991, land reforms and other economic reforms have furthered the distribution of economic power resources, and the imbalance between my measures of resource distribution and the level of democratization has diminished. This trend of change seems to continue. Consequently, the present large positive residuals will most probably decrease to moderate in the future. Albania has good chances of achieving a better balance between IPR and ID without any significant decline in its level of democratization.

Bosnia & Herzegovina

Bosnia & Herzegovina is above the transition levels of IPR and Mean. Positive residuals are large, but they are partly caused by the ethnically fragmented party system. The division of the population into three major ethnic groups has fragmented the party system. The constitutional system established in 1995 is intended to stabilize power-sharing between the three main ethnic groups. Therefore, the degree of democratization indicated by the measures of democracy is considerably higher than it should be on the basis of explanatory variables (cf. *Freedom in the World* 2001: 96–8). Ethnic interest conflicts continue in this ethnically highly heterogeneous country, but because they have become institutionalized, I can confidently predict the survival of democracy in Bosnia & Herzegovina despite its large positive residuals.

Brazil

For Brazil positive residuals are very large on the basis of both IPR and Mean. The value of ID is two times higher than expected on the basis of regression equations. The fragmentation of the party system has produced high ID values since 1990. The ethnic heterogeneity of the population and the size of the country are local factors which explain the fragmentation of the party system. Democratic politics in Brazil seems to have become adapted to the existence of a very pluralist party system. Therefore there are no special reasons to assume that the values of political variables would decrease significantly, although they are much higher than expected on the basis of explanatory variables. It should be noted that both parliamentary and presidential elections are taken into account in the case of Brazil. If my measures of democracy were based only on presidential elections, positive residuals would become much smaller.

Bulgaria

Bulgaria, just like Albania, has had large positive residuals since the collapse of communist party dominance in 1990. The multiparty system that emerged

in 1990 is still unstable. There have been drastic changes in the electoral support of competing parties and party combinations, and the value of ID has varied from 24 to 40. This variation has exaggerated real changes in the political system. Economic and other reforms carried out since the collapse of socialism have diffused economic and intellectual power resources and created a solid structural foundation for democratic politics (IPR 35.2). Therefore, democracy is secure in Bulgaria, although its level, according to the measures, is much higher than expected on the basis of regression equations.

Croatia

Croatia's situation is approximately the same as in Bulgaria, although its positive residuals are somewhat smaller, 8.5 (IPR) and 5.5 (Mean). Because the value of IPR is already high (31.5), the imbalance between the degree of resource distribution and the level of democratization is relatively small. It is justified to predict the survival of democracy in Croatia. In fact, the victory of former opposition parties in the 2000 parliamentary and presidential elections strengthened democratic institutions. It should be noted that there is certain variation in the measurements of democracy based on two electoral variables which does not necessarily reflect any significant changes in the nature of the country's political system.

Cyprus

In Cyprus, electoral competition has been highly intensive especially since the 1980s, but the level of democratization has been only moderately higher than expected on the basis of resource distribution. The very high values of IPR (39.8) and Mean (65.8) presuppose a high level of democratization. The positive residual based on Mean is only moderate (7.2), but the positive residual based on IPR became large (9.7) as a consequence of the 2001 parliamentary elections in which the degree of electoral participation increased by some percentage points. The imbalance is relatively small, and it may diminish in the next elections. The political system of the country is well adapted to its social structures and conditions which presuppose a highly democratic system.

Czech Republic

Both residuals are very large for the Czech Republic, and the country's political system seems to be too democratic compared to the degree of resource distribution. This clear imbalance is principally due to the country's fragmented party system and to its very high degree of electoral participation but also to the fact that, as a heritage from the socialist period, economic power resources are still less decentralized than in most market economy countries.

I want to emphasize that, especially at higher levels of democratization, differences in electoral and party systems cause significant variation in my political variables, which variation does not necessarily reflect differences in the degree of democratization. In the case of the Czech Republic, institutional characteristics of the political system have inflated the values of political variables, whereas, for example, in Canada they have decreased the values of political variables. ID-2001 is 39.3 for the Czech Republic and 24.2 for Canada, but I would not like to claim that the Czech Republic is nearly two times more democratic than Canada. My point is that the ability of these variables to measure variation in the degree of democratization decreases at higher levels of democratization. This is a disadvantage in my measures of democracy. Therefore, from the perspective of the survival of democracy, it is not necessary to be worried about the large positive residuals of the Czech Republic or about the large negative residuals of Canada. In both cases, the degree of resource distribution is high enough to support democracy. The same arguments apply to large positive and negative residuals in several other industrially highly developed democracies.

Fiji

Fiji's residuals turned into highly positive in 2001 when democratic institutions were re-established after the coup in 2000 and an interim government. In 2000, Fiji had extremely large negative residuals. The degree of resource distribution, as indicated by IPR and Mean, is high enough to support a democratic system. Therefore, the return to democracy through elections in 2001 was natural. The ethnic heterogeneity of the population contributes to the fragmentation of the party system and maintains an intensive ethnic and political conflict between the Fijian and Indian ethnic groups. This conflict caused the breakdowns of democratic institutions in 1987 and again in 2000. Because both positive residuals are large, 11.5 (IPR) and 12.0 (Mean), I have to predict some decrease in the value of ID, but I expect that Fiji is able to remain as a democracy.

Lebanon

Lebanon is a problematic democracy because of its unique constitutional system. The country has been some kind of democracy since its independence in 1946, although democratic institutions were paralyzed during the bitter civil war in 1975–91. According to the Taif accord made in 1989, the National Assembly will include equal numbers of Christian and Muslim members; the president is a Maronite Christian; the prime minister is a Sunni Muslim; and the speaker of the legislature is a Shi'ite Muslim. The Taif accord modified the original National Pact of 1943 by increasing the number of Muslims in the National Assembly and by reducing the powers of a Christian president (*The Middle East 2000*:

324–7). This compromise made it possible to end the civil war and organize new elections. The definition of ‘the largest party’ is highly problematic. In the case of the 2000 National Assembly elections, I regarded the ‘Resistance and Development List’ as the largest party. An alternative would be to regard the Christian and Muslim communities as the major ‘parties.’ The share of the largest party would vary considerably depending on the way how ‘the largest party’ is defined. If the latter alternative had been used, residuals would be near zero. Therefore, I am not sure whether the level of democratization in Lebanon is really higher than expected on the basis of resource distribution.

The presence of Syrian troops in Lebanon complicates the status of Lebanon as an independent state. *Freedom in the World* (2001: 320–3) claims that the Lebanese government is not sovereign in its own country and that Syria maintains *de facto* occupation of Lebanon. I think that it is reasonable to regard Lebanon as an independent country, although the presence of foreign troops limits its independence. Lebanon’s level of democratization may be somewhat lower than my measures indicate (cf. Palmer Harik 1998; *Freedom in the World* 2001: 320–4).

Mauritius

Mauritius has been a democracy since its independence in 1968. The present level of democratization is clearly higher than expected on the basis of explanatory variables. The ethnic heterogeneity of the population has provided a natural social basis for a multiparty system and produced a high level of competition. Because the values of all explanatory variables are sufficiently high for democracy, I predict the survival of democracy in Mauritius. Its ID value has fluctuated in the past from 15 to 27 index points and may fluctuate in the future depending on the changes in party alliances made for parliamentary elections.

Panama

The level of democratization is significantly higher than expected in Panama. This imbalance has continued since the 1994 highly competitive presidential election. In the case of Panama, political variables are based on the results of presidential elections. The winning candidate does not need to get a majority of the votes; a plurality of the votes is enough. As a consequence, the value of Competition may rise considerably higher in Panama than in countries where a majority of the votes is needed to win the presidency. Therefore, Panama’s much higher than expected ID value is partly a technical consequence of its electoral system. According to the explanatory variables, the degree of resource distribution is high enough to support democratic politics, but because positive residuals are large, some decrease in the level of democratization is probable.

Papua New Guinea

Papua New Guinea has been a democracy since its independence in 1975. Both residuals are extremely large, and it is one of the most highly deviating countries in the world. The actual level of democratization seems to be approximately three times higher than expected on the basis of regression equations. The country's large positive residuals are mainly due to the exceptionally high values of political variables (Competition 70.0). The party system is poorly developed in this ethnically extremely heterogeneous country. Most candidates take part in elections as independents. Each independent candidate represents a kind of 'party.' The values of all explanatory variables, except Literates (63 percent), are low. Thus the degree of resource distribution as measured by my variables does not presuppose a highly democratic system, although IPR and Mean have risen to the transition levels.

Ethnic heterogeneity seems to represent an important dimension of resource distribution in Papua New Guinea. Because all ethnic groups are small, it has been impossible to establish any large party and to concentrate political power in the hands of any single group. Benjamin Reilly (2001) emphasizes the significance of ethnic fragmentation for democracy in Papua New Guinea. My conclusion is that the survival of democracy in Papua New Guinea does not necessarily contradict the resource distribution theory of democratization because the degree of resource distribution is sufficiently high for democracy and because ethnic fragmentation represents a dimension of resource distribution which has not been taken into account in my explanatory variables. Consequently, the degree of resource distribution may be significantly higher than my variables indicate. In other words, Papua New Guinea would be a much less deviating case if it were possible to take into account some local factors affecting the distribution of politically relevant power resources. However, in this study my attention is focused on the ability of the five universal explanatory variables to explain the variation in the level of democratization.

Peru

Peru dropped temporarily below the threshold of democracy in the 2000 presidential election in which Fujimori became re-elected by 73 percent of the votes. Peru crossed the threshold of democracy again in the highly competitive presidential election in 2001, and its positive residual based on IPR became large (8.8), although the residual based on Mean remained moderate (6.6). So the present level of democratization in Peru seems to be somewhat higher than expected. The discrepancy is, however, relatively small. Because the degree of resource distribution is already high enough (IPR 14.6 and Mean 37.4) to support democratic politics, I expect Peru to remain as a democracy, although the level of democratization may decrease to some extent in next elections. The concentration of economic power

resources keeps the IPR value of Peru relatively low as in most other Latin American countries.

Russia

Since 1993, the level of democratization in Russia has been much higher than expected on the basis of my explanatory variables. For 2001, both positive residuals are large, 14.8 (IPR) and 13.6 (Mean). The main reason for this imbalance is in the relatively low values of IPR and Mean. Agricultural and non-agricultural economic power resources are still highly concentrated. Russia has not yet carried out any extensive privatization in agriculture. The share of family farms is small. Non-agricultural economic resources are highly concentrated in the hands of the government and private corporations. Economic reforms will gradually decrease this imbalance by raising the values of FF and DD. Intellectual power resources are already widely distributed. It is reasonable to expect that the imbalance will diminish in the future when various power resources become more widely distributed. After the collapse of the communist system, the struggle for power has been intensive and sometimes violent, but it is remarkable that the new democratic institutions of Russia have been able to survive. My explanation for the success of democratic institutions is that important power resources, especially intellectual ones, are so widely distributed in Russia that it is no longer possible for any single group to suppress political opponents and to establish an absolute hegemony. Democracy can emerge from the stalemate of competing groups.

Slovakia

Both positive residuals have been large for Slovakia since its independence in 1993, but it is not a deviating democracy because the degree of resource distribution is high enough (IPR 39.2 and Mean 57.6) to produce democratic politics. The existing imbalance is mainly due to the country's very high values of political variables. The party system is fragmented, and the degree of electoral participation is high. The situation is the same as in the Czech Republic. However, compared to the high values of explanatory variables, the imbalance is not serious. Democracy is secure in Slovakia.

Solomon Islands

As is the case for the two other Pacific island states, residuals are positive for the Solomon Islands, but they have been large only since the 2001 parliamentary elections in which the largest party's share of the seats declined and the degree of electoral participation increased. Political parties have a more prominent role in the Solomon Islands than in Papua New Guinea, but ethnic factors are important in the Solomon Islands, too.

The country has suffered seriously from an ethnic war between the people of the two major islands. The conflict seems to have increased people's interest in voting. The actual ID value is two times higher than predicted by the two regression equations. This indicates a significant imbalance, but because the values of IPR and Mean have reached their transition levels, any drastic decrease in the level of democratization is not necessary. Besides, because of local factors, especially of ethnic divisions, the real degree of resource distribution may be higher than my variables indicate. However, breakdowns of democratic systems are possible although not necessary at the transition levels of IPR and Mean. Therefore, the survival of democracy in the Solomon Islands is not secure (cf. *Freedom in the World* 2001: 485–7).

Ukraine

Ukraine is one of the most highly deviating countries with extremely large positive residuals and has been since its independence in 1991. The level of democratization is two times higher than expected on the basis of the two regression equations. The values of IPR and Mean have slightly crossed the upper limits of transition levels, which means that the country is a democracy as expected. The concentration of economic power resources has hampered the increase of IPR and Mean values. The situation is the same as in Russia. Economic reforms intended to further privatization in agriculture and in non-agricultural sectors of economy would raise the values of FF and DD and strengthen the social basis of democracy. Because of the great imbalance between resource distribution and the level of democratization as indicated by ID, it is reasonable to expect some decline in the level of democratization (cf. Diuk 2001; Diuk and Gongadze 2002).

Uruguay

On the basis of Mean, the level of democratization is considerably higher than expected in Uruguay, but because both explanatory indices presuppose democracy, I can confidently predict that democracy will survive. Uruguay first crossed the threshold of democracy in 1919, and has remained above the threshold nearly continuously. Since 1919 it has been under non-democratic governments only twice, in 1933–4 and 1973–83. The concentration of landownership is unfavorable for democracy in Uruguay as in many other Latin American countries.

The 23 countries with large positive residuals contradict the first research hypothesis, but not all of them deviate so seriously. Both residuals cross the criteria of 'large' residuals in 13 cases (Albania, Bangladesh, Bosnia & Herzegovina, Brazil, the Czech Republic, Fiji, Malawi, Nicaragua, Papua New Guinea, Russia, Slovakia, the Solomon Islands, and Ukraine) and they

become extremely large (15.0 or higher) in the cases of Papua New Guinea and Ukraine. Besides, residuals based on IPR are higher than 15.0 for the Czech Republic and Malawi. Positive residuals based on IPR are large for seven other countries (Belarus, Bulgaria, Croatia, Cyprus, Honduras, Panama, and Peru), and positive residuals based on Mean are large for three countries (Lebanon, Mauritius, and Uruguay). These ten countries do not contradict the first research hypothesis as clearly as the 13 countries of the first group.

Countries with large negative residuals

The category of countries with large negative residuals comprises 23 countries (see Table 7.4). Negative residuals based on IPR are large for 12 countries and negative residuals based on Mean for 18 countries. Four of them are democracies (Canada, France, Japan, and Thailand) and 19 others non-democracies. Because the level of democratization in all of them is much lower than expected on the basis of resource distribution, they contradict the first research hypothesis. Ten of them (Bahrain, Brunei, Jordan, Kuwait, Qatar, Saudi Arabia, Singapore, Syria, Tunisia, and the United Arab Republic), which contradict also the second research hypothesis, have already been introduced and discussed. The 13 other countries will be discussed in this section. The purpose is to explore why they deviate so much from the regression lines of IPR and Mean.

Burma (Myanmar)

Both residuals for Burma are highly negative, although only the residual based on IPR rises to the category of large negative residuals. They indicate that the military rule in Burma is not in harmony with the country's social conditions. Because Burma is still at the transition level of IPR and Mean, it is not a deviating non-democracy. In Burma, the degree of resource distribution is sufficiently high to support the struggle for democracy. In fact, the popular pressure for democratization is strong in Burma, and the country may cross the threshold of democracy in the near future.

The exceptionally strong position of the military is the most important local factor that has hampered democratization in Burma. Ethnic wars between the government troops and several separatist ethnic minorities inhabiting the border regions of Burma made it necessary to maintain a strong army. Gradually civilian governments lost control over the military. The civilian rule ended in a military coup in 1962. The concentration of the means of violence but also important economic resources in the hands of the military government has supported the survival of an autocratic military rule, but because some economic and especially intellectual power resources are widely distributed, social conditions are favorable for democratization (cf. *Freedom in the World* 2001: 113–16; Aung San Suu Kyi 1991).

Canada

Both negative residuals are large for Canada, but this does not need to mean that we should expect a rise in the values of political variables. As was emphasized in connection with the Czech Republic, differences in electoral systems and party systems may cause significant variation in political variables, which variation does not need to reflect differences in the degree of democracy. In the case of Canada, its relatively low degree of electoral participation has kept the value of ID considerably lower than in most other economically highly developed countries. On the other hand, its IPR and Mean values are among the highest in the world.

China

Both residuals for China are negative, although only the residual based on IPR is large. Negative residuals predict a more democratic system. China is at the transition levels of IPR and Mean, which means that non-democracy in China does not contradict the second research hypothesis. It is not reasonable to expect democratization in the near future, although economic reforms have undermined the social basis of autocracy and made socio-economic conditions more favorable for democracy than previously.

In fact, a process of democratization has started in rural China. Since 1987, when the National People's Congress promulgated the Organic Law of Villagers' Committees, village assemblies and village committees have been elected by competitive elections in part of China's nearly one million villages (see Thurston 1998; *The Economist*, 29 September 2001: 68). Anne F. Thurston's study of political reform in China's villages is theoretically interesting. She notes that there does not exist any relationship between economic development and democratization in rural China. According to her findings, 'genuinely competitive elections have a greater likelihood of success in more pluralistic villages, that is, villages where neither economic nor political power is very concentrated and where villagers are engaged in a multiplicity of associations – religious, political, economic, social, and familial' (Thurston 1998: 40–1). This is just what my resource distribution theory of democratization predicts.

Congo (Brazzaville)

Large negative residuals indicate that a more democratic system would be in a better balance with the degree of resource distribution than the military rule of former President Sassou-Nguesso established through a civil war in 1997. The country was above the threshold of democracy in the first year of independence in 1960 and later in 1992–6. Because Congo (Brazzaville) is at the transition levels of IPR and Mean, the degree of resource distribution makes democratization possible, although it is not yet inevitable.

Ethnic heterogeneity of the population complicates politics in Congo (Brazzaville) as in many other sub-Saharan African countries. Voting in the 1992 presidential election, in which Sassou-Nguesso lost power to a former President Pascal Lissouba, took place along ethnic lines. Before a new presidential election in 1997, Sassou-Nguesso resorted to the military troops of his minority ethnic group in the north, started a civil war and usurped power. Sassou-Nguesso tried to legalize his power by presidential and legislative elections in 2002. He won the presidential election held on 10 March 2002 by 89.4 percent of the vote, and his Congolese Labor Party won the legislative elections in May and June 2002 by a large margin (*Keesing's* 2002: 44658, 44770, 44827). Consequently, large negative residuals decreased.

Cuba

For Cuba, the negative residual based on Mean is large (−9.6), whereas the negative residual based on IPR is small (−4.1). This difference between the two combinations of explanatory variables is due to the fact that the concentration of economic power resources reduces the value of IPR much more drastically than the value of Mean. The autocratic system of Cuba is still in harmony with the concentration of economic power resources, but the Mean variable predicts democratization. The distribution of intellectual power resources in particular presupposes democratization. Consequently, Cuba's autocratic political system is not secure, and we can expect political troubles and ultimately democratization. The situation in Cuba is the same as it was in the Soviet Union and other European socialist countries before the collapse of socialist systems.

Egypt

Both residuals are negative for Egypt, although only the residual based on IPR rises to the category of large negative residuals. Social conditions seem to be conducive to a somewhat more democratic system. The values of IPR and Mean have entered into the transition level of resource distribution. A slow process of democratization has been going on in Egypt since the 1970s, but the level of Competition is still below the threshold of democracy. Egypt is one of the Arab countries in which democratization is possible although not yet inevitable according to my explanatory variables.

Bahgat Korany (1998: 40–1) argues that by general and not only Third World standards, Egypt seems at present to be a functioning democracy with two legislative bodies, 14 political parties, a regular transfer of power, five rounds of legislative elections since multipartism was first established in 1976, and three successful plebiscites choosing Mubarak as president. This is true, but the degree of competition does not yet satisfy my minimum requirement of democracy. Korany refers to several obstacles to democratization in Egypt and emphasizes that 'Egypt continues to be a

state-based system, controlled by the top executive, representative of hydraulic societies and centralized political authority.' Besides, political competition stops in Egypt before reaching the top executive post (Korany 1998: 62; see also Brownlee 2002). These and several other obstacles refer to the fact that important power resources are still heavily concentrated in the hands of the government. However, Egypt is transforming toward democracy.

France

France is a democracy as expected, but its residuals are negative, and the residual based on IPR rises to the category of large residuals. Although France's level of democratization is somewhat lower than expected, the imbalance is relatively small compared to France's extremely high degree of resource distribution. Just as in Canada, a low degree of electoral participation has reduced the value of ID.

Japan

Japan is another highly democratic country with large negative residuals. The comments presented in the cases of Canada and France apply to Japan, too. The imbalance is not serious considering the fact that the degree of resource distribution is high in Japan.

Libya

The residual based on Mean is highly negative for Libya (-11.2), whereas the residual based on IPR is only moderate (-5.2). Because of the concentration of economic power resources in the hands of the government, the value of IPR is still below the transition level. The situation is similar as in Cuba. I cannot predict democratization in Libya in the near future, although most explanatory variables presuppose a more democratic political system and although the value of Mean has already risen to the transition level. Because intellectual power resources are relatively widely distributed, we can expect that popular pressure for democratization increases in Libya (cf. *The Middle East* 2000: 335-6).

Oman

The large negative residual based on Mean reflects the impact of Oman's high level of per capita income. The situation is the same as in oil-producing Arab countries. The extreme concentration of economic power resources is in harmony with the country's autocratic political system, whereas a high level of per capita income and also a moderate level of literacy are conducive to democratization. I cannot predict democratization in the near

future because IPR is still below the transition level of resource distribution. According to IPR, Oman is a non-democracy as expected.

Rwanda

Rwanda has never been able to establish a democratic political system, but its large negative residual based on IPR implies that a somewhat more democratic system would be better adapted to its social conditions. Most explanatory variables do not yet predict democratization in Rwanda, and its relatively high IPR value is mainly due to the Family Farms variable. The value of IPR (14.5) has crossed the lower limit of the transition level, but Mean is still below the transition level of resource distribution. It is reasonable to expect that some kind of non-democratic system will continue in Rwanda. The deep ethnic conflict between Hutus (90 percent) and Tutsis (9 percent) has until now made it impossible to agree on the democratic sharing of power. The Tutsi minority has not wanted to submit to the rule of the Hutu majority. In the latest genocidal civil war which broke out in 1994 nearly one million people were killed. Since July 1994 Rwanda has been ruled by the Tutsi-dominated Rwandan Patriotic Front. This unsolved ethnic conflict hampers democratization in Rwanda.

Thailand

Thailand is a democracy as expected. The present period of democracy has lasted since 1992, but, because of the still strong position of the king (concurrent powers 75–25%), the level of democratization is significantly lower than expected on the basis of IPR. Because both negative residuals are large, -13.6 (IPR) and -9.3 (Mean), I have to predict that the level of democratization will rise in Thailand. The long tradition of military interventions has obstructed the consolidation of democratic institutions in Thailand. The prominent position of the king reflects partly the power of the military. The last military intervention took place in 1991. The new constitution of 1997 strengthened the position of the parliament and the dominance of civilian governments. Duncan McCargo (2002: 125) notes, however, that Thai politics has in many ways changed little and that power remains too highly concentrated.

Turkmenistan

Turkmenistan is a non-democracy as expected on the basis of IPR, but its negative residual based on Mean is large. The country is under the authoritarian rule of President Niyazov. Negative residuals predict a more democratic political system. However, the concentration of economic power resources in the hands of the government is in harmony with the concentration of political power. Other social conditions are more conducive to

democratization, but it is probably too early to expect democratization in Turkmenistan.

The countries with large negative residuals contradict the first research hypothesis, but all of them cannot be regarded as equally seriously deviating cases. Both negative residuals are large only for seven countries: Canada, Japan, Jordan, Singapore, Syria, Thailand, and Tunisia. On the basis of IPR but not of Mean negative residuals are large for five countries: Burma, China, Egypt, France, and Rwanda. On the basis of Mean but not of IPR negative residuals are large for 11 countries: Bahrain, Brunei, Congo (Brazzaville), Cuba, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Turkmenistan, and the United Arab Emirates. The seven countries of the first group can be regarded as contradicting the first research hypothesis more seriously than the countries of the two last groups. As noted above, four of these countries are democracies as expected despite their large negative residuals and 19 others are non-democracies. Of these non-democracies, Jordan, Singapore, Syria, and Tunisia, for which both negative residuals are large, are the countries most likely to cross the threshold of democracy. The level of democratization is expected also to rise in the other 15 countries, but most of them may still remain below the threshold of democracy.

Countries with small and moderate residuals

The 46 countries most clearly contradicting the first research hypothesis have been indicated and discussed in the previous sections. Residuals are small or moderate for the other 124 countries. It means that IPR is ± 8.0 or smaller and Mean ± 9.0 or smaller for all these countries. According to my interpretation, these 124 countries support the first research hypothesis, or contradict it only moderately, because the actual values of ID-2001 differ only slightly or moderately from the values predicted on the basis of regression equations. In the following, these 124 countries with small or moderate residuals are listed by regional groups:

- Europe and European offshoots (N=33). Armenia, Australia, Austria, Belgium, Denmark, Estonia, Finland, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Moldova, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, the United States, and Yugoslavia. Of these 33 countries, one or both positive residuals were moderate (IPR from 5.0 to 8.0 or Mean from 6.0 to 9.0) in 2001 for Belgium, Denmark, Greece, Latvia, Lithuania, Malta, and Yugoslavia. One or both negative residual were moderate (IPR from -5.0 to -8.0 or Mean from -6.0 to -9.0) for Finland, Georgia, Iceland, and Luxembourg. In the other 22 countries, the actual value of ID-2001 deviated only slightly from the predicted value.

- Latin America and the Caribbean (N=20). Argentina, Bahamas, Barbados, Belize, Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Jamaica, Mexico, Paraguay, Suriname, Trinidad & Tobago, and Venezuela. Of these 20 countries, one or both positive residuals were moderate for Argentina, Bolivia, Chile, Guyana, Mexico, and Suriname. In the other 14 countries, the actual level of ID did not deviate much from the regression lines in 2001.
- The Middle East, North Africa, and Central Asia (N=13). Algeria, Azerbaijan, Iran, Iraq, Israel, Kazakhstan, Kyrgyzstan, Morocco, Sudan, Tajikistan, Turkey, Uzbekistan, and Yemen. One positive residual was moderate for Algeria and one or both negative residuals for Iran, Morocco, and Sudan. In the other nine countries, the actual level of ID deviated only slightly from the regression lines in 2001.
- Other parts of Asia and Pacific (N=17). Afghanistan, Bhutan, Cambodia, India, Indonesia, North Korea, South Korea, Laos, Malaysia, Maldives, Mongolia, Nepal, Pakistan, Philippines, Sri Lanka, Taiwan, and Vietnam. Of these 17 countries, one or both positive residuals were moderate for Mongolia and Sri Lanka and negative residuals for Afghanistan, Bhutan, Laos, Maldives, Pakistan, Vietnam, and North Korea. In the other eight countries, the actual level of ID deviated only slightly from the regression lines in 2001.
- Sub-Saharan Africa (N=41). Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo (Zaire), Côte d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Senegal, Sierra Leone, Somalia, South Africa, Swaziland, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

Of these 41 countries, one or both positive residuals were moderate for Cape Verde, the Central African Republic, Chad, Gambia, Ghana, Guinea-Bissau, Madagascar, Mozambique, and Niger, and negative residuals for Angola, Burundi, Cameroon, Comoros, Congo (Zaire), Equatorial Guinea, Eritrea, Lesotho, Swaziland, and Tanzania. In the other 22 countries, the actual ID values did not differ much from the regression lines in 2001.

Summary by regional groups

Table 8.2 summarizes the results of this analysis by regional groups. The 170 countries are divided into three categories on the basis of residuals: (1) countries with large positive residuals, (2) countries with large negative residuals, and (3) countries with small and moderate residuals.

Table 8.2 shows that there are some clear regional differences in the frequency of large positive and negative residuals. Large positive residuals

Table 8.2 The application of the first research hypothesis to single countries by regional groups

Category of countries		Europe	Latin America	Middle East	Asia-Pacific	Sub-Sahara	Total
<i>According to IPR</i>							
Large positive residuals (higher than 8.0)	N	10	5	0	4	1	20
	%	50.0	25.0	0	20.0	5.0	100.0
Large negative residuals (higher than -8.0)	N	2	0	4	5	2	13
	%	15.4	0	30.8	38.4	15.4	100.0
Small and moderate residuals	N	33	22	22	18	42	137
	%	24.1	16.1	16.1	13.1	30.6	100.0
Total	N	45	27	26	27	45	170
<i>According to Mean</i>							
Large positive residuals (higher than 9.0)	N	6	3	1	4	2	16
	%	37.5	18.8	6.2	25.0	12.5	100.0
Large negative residuals (higher than -9.0)	N	1	1	11	4	1	18
	%	5.6	5.6	61.1	22.2	5.6	100
Small and moderate residuals	N	38	23	14	19	42	136
	%	27.9	16.9	10.3	14.0	30.9	100.0
Total	N	45	27	26	27	45	170

based on IPR are clustered to the first two regional groups, whereas large negative residuals are most frequent in the third and fourth regional groups. Small and moderate residuals are nearly equally distributed across the five regional groups. These regional differences imply that democratization has progressed more quickly in Europe and Latin America than in the three other regions. This difference is not surprising considering the fact that democratization started from Europe and North America. Large negative residuals predict democratization especially in the Middle East, North Africa and Central Asia and in the region of other Asian and Pacific countries.

The regional pattern of large positive and negative residuals based on Mean differs in some points. Large positive residuals are more equally distributed across the regions, although they are most frequent in the first regional group. Large negative residuals are clustered to the region of the Middle East, North Africa and Central Asia.

I am inclined to regard predictions based on IPR more trustworthy than predictions based on Mean for the reason that IPR takes into account the impact of economic power resources better than Mean. The small number of countries with large residuals in sub-Saharan Africa indicates that the level of democratization or the lack of democracy is relatively well adapted to the low degree of resource distribution in most African countries.

The number of countries with small and moderate residuals is relatively evenly distributed across the five regional groups. In the case of IPR, small

or moderate residuals comprise 73.3 percent of the European and European offshoot countries, and in the case of Mean 84.4 percent of the 45 countries. Corresponding percentages for the regional group of Latin America and the Caribbean are 81.5 and 85.2; for the Middle East, North Africa and Central Asia 84.6 and 53.8; for other Asian and Pacific countries 66.7 and 70.4; and for sub-Saharan African group 93.3 and 93.3. The relatively equal regional distribution of small and moderate residuals can be interpreted to imply that the measures of democracy and the measures of resource distribution are approximately as well adapted to measure democratization and the distribution of power resources in all regions of the world.

9 Conclusions

The results of this study support strongly the central hypothesis about the positive correlation between the degree of resource distribution and the level of democratization. The best combination of explanatory variables (IPR) explains 72 percent of the variation in ID-2001 and the two other combinations (IPR-2 and Mean) 53 and 65 percent respectively. The degree of explanation can be regarded as extremely high considering the fact that many other factors affect the variation in democratization, too. In the case of IPR, the impact of those other factors seems to be less than 30 percent. Those other factors include measurement errors, historical legacies, external influences, cultural differences, and various local and accidental factors (cf. Schmidt 2000: 446–60). It should be noted that the universal variables used in this study do not take into account all aspects of politically relevant resource distribution. There are certainly important local factors which affect the distribution of politically relevant power resources. Besides, some part of the variation in the measures of democracy is always due to measurement errors, institutional differences, and unpredictable random factors. Therefore, the real relationship between democracy and resource distribution may be even stronger than my variables indicate.

According to my theoretical interpretation, the level of democratization depends principally on the degree of resource distribution because political struggle for power constitutes a part of the universal struggle for existence in which participants are tended to resort to all available resources. This explains the tendency of political power to become divided among several competing groups as soon as important power resources are sufficiently distributed within a society. Thus it is possible to derive a theoretical explanation for the strong relationship between the measures of democracy and the measures of resource distribution from the principles of the evolutionary theory. The results of empirical analyses carried out in this study lead to the conclusion that the evolutionary resource distribution theory of democratization provides the most powerful theoretical explanation for democratization.

Comparison with other explanations

The evolutionary resource distribution theory of democratization used in this study and the results of empirical analyses may contradict some of the other theoretical explanations of democracy discussed in Chapter 1 but not all of them. Many researchers have argued that economic development and modernization provide the best explanation for democratization. The results of this study indicate also a strong positive relationship between democracy and economic development, but my theoretical explanation for this relationship is traced to the argument that economic and intellectual power resources are usually more widely distributed in economically highly developed countries than in less developed countries. Consequently, the level of economic development can be regarded as an indicator of resource distribution, or as a special case of resource distribution. Measures of per capita income (economic development) explain considerably less of the variation in democratization than do the combined indices of resource distribution (IPR, IPR-2, and Mean) used in this study, for the reason that important power resources may be widely distributed in some poor countries and highly concentrated in some rich and economically developed countries. Measures of per capita income do not take into account these important structural differences, whereas my other explanatory variables take them into account at least to some extent. The same interpretation applies to the argument that capitalist development explains democracy because it strengthens the working and middle classes and weakens the landed upper class (Rueschemeyer *et al.* 1992). Capitalist development is positively correlated with democracy for the reason that it usually, although not always, furthers the distribution of economic and intellectual power resources.

Coppedge (1997) complains that it has been maddeningly difficult to demonstrate which aspects of modernization are causes of democracy and which are effects. According to my interpretation, the tendency of modernization to further resource distribution can be regarded as a cause of democratization, although it may also be partly an effect of democratization. I agree with Przeworski *et al.* (2000) who noted that no level of per capita income (or modernization) can predict when democratization should occur because democracies have emerged at all levels of per capita income. The results of this study show that it is much easier to define the lower limit of resource distribution (IPR and Mean) below which democracies are rare.

I disagree with researchers who emphasize the equality of many different factors of democratization. My point is that the degree of resource distribution is the dominant explanatory factor, although many different and alternative empirical indicators can be used to measure the relative degree of resource distribution. The fact that the explained part of variation in ID-2001 rises above 70 percent in this study implies that there cannot be other equally important independent explanatory factors. I have to disagree even more with Huntington's (1991) argument that there cannot be any common and universally present independent variable that could

explain democratization and that the causes of democratization differ substantially from one place to another and from one time to another. The results of this study show that there is a common, universally present independent factor that explains a major part of the variation in democratization in all regions of the world and that it has explained democratization at least since the 1850s.

Political culture, of course, is an important factor; but it seems to me that what is called 'political culture' may reflect, at least partly, differences in resource distribution. It is difficult to compare the explanatory power of 'political culture' to my measures of resource distribution because it has been difficult to operationalize the concept of 'political culture' into measurable variables (however, see Lane and Ersson 2002, who have operationalized some aspects of political culture). Besides, because the degree of resource distribution explains more than 70 percent of the variation in democratization, the independent explanatory power of any possible variables of political culture could not be so important. Explanations would be overlapping for the most part.

Income inequality may have a negative impact on democratization as several researchers have argued (see, for example, Muller 1997), but this explanation does not contradict my theory. Income inequality can be regarded as an indicator of resource distribution, and, to some extent, it has been taken into account in my explanatory variables (DD). Arat (1991, 1994) stresses the importance of socio-economic rights, by which she refers to social, economic, and educational equality of people, as requisites of democracy. Certainly socio-economic conditions that increase equality are more favorable for democracy than social and economic inequalities, but this is just another way to emphasize the importance of resource distribution. I agree with Lane and Ersson (1994) who argue that the structure of the economic system matters and that a move towards democracy without the introduction of a market economy will most likely not be successful. This is so because a market economy tends to promote resource distribution.

I hope that this study provides some answers to the questions raised up in many comments on my previous studies, although it may not satisfy researchers who want to examine the problems of democratization from completely different perspectives. I have tried to clarify my theoretical arguments, to define empirical variables as clearly as possible, and to explain the methods by which hypotheses are tested. Especially I have attempted to explain how the central hypothesis was derived from the principles of the Darwinian theory of evolution by natural selection.

Theory and variables

In Chapter 2, I formulated and explained the principles of the evolutionary resource distribution theory of democratization. It is based on the idea that there must be strong regularities in the process of democratization because all human populations share common behavioral predispositions

or epigenetic rules and because the political struggle for power and for the fruits of power can be regarded as a forum of the general struggle for existence explained by the Darwinian theory of evolution by natural selection. The common causal factor of democratization is traced to the distribution of economic, intellectual, and other resources used as sources of power. The distribution of power resources constitutes the dominant causal factor of democratization. A sufficient distribution of important power resources is bound to lead to the distribution of political power, which is the most crucial characteristic of democracy. Consequently, it is logical to hypothesize that democratization takes place under conditions in which power resources are so widely distributed that no group is any longer able to suppress its competitors or to maintain its hegemony. My central argument is that there is a common causal factor of democratization and that this factor is in the distribution of relevant power resources.

Operationally defined measures of democracy were introduced and explained in Chapter 3. They are principally the same as in my previous studies, but I added referendums to the Participation variable because the significance of referendums is increasing in the world. They represent a dimension of direct democracy, which was not taken into account in my previous measures of democracy. My argument is that the inclusion of referendums in the measures of democracy improves the validity of these measures, especially in the cases of Switzerland and the United States.

Explanatory variables were defined and introduced in Chapter 4. They differ from previous explanatory variables in some important respects. Urban Population and Non-agricultural population variables were excluded. Real GDP per capita is a new explanatory variable, and the construction of the DD variable (the degree of decentralization of mainly non-agricultural economic power resources) was drastically changed. The five single explanatory variables (four in the case of IPR) are now combined into indices of power resources by three different ways. These three indices (IPR, IPR-2, and Mean) have been used as alternative combinations of explanatory variables and as the principal operational substitutes for the hypothetical concept of 'resource distribution.'

Longitudinal analysis

This study is focused on explaining contemporary differences in the state of democratization in the world, but Chapter 5 provides a brief historical analysis of democratization over the period 1850–1998. This was done in order to see whether the relationship hypothesized between the degree of resource distribution and the level of democratization had remained more or less the same since the 1850s. It was surprising to note that the strength of correlations between IPR (the index of power resources) and ID (the index of democratization) had remained nearly stable over this period (see Table 5.1). Cross-sectional correlations vary from 0.543 to 0.870. In the

total world group of 1,133 country-year observation units (one year from each decade) over the period 1850–1998, the correlation between ID and IPR is 0.809. Consequently, it is plausible to conclude that the same dominant factor has explained the variation in democratization quite satisfactorily at least since the 1850s.

Strong correlations between IPR and ID made it possible to present predictions on the chances of democracy in single countries. In Chapter 5, some of the predictions made in my previous studies are reviewed. Most predictions made on the basis of regression analyses have been approximately correct, although not in all cases. I was not able to predict the collapse of socialist systems on the basis of my explanatory variables because the concentration of economic power resources was in harmony with the concentration of political power in those countries and because IPR values were in zero or near zero for all socialist countries, except for Poland and Yugoslavia. In this study, the Mean variable as an alternative combination of explanatory variables is intended to avoid mistakes based on extremely low values of one explanatory variable.

The state of democracy in 1999–2001

The two research hypotheses are tested by empirical evidence in Chapters 6 and 7 and the results for single countries are analysed in Chapter 8. The first hypothesis was tested by correlation analysis. The results support the hypothesis strongly. All correlations between explanatory variables and the measures of democracy are positive as hypothesized, and most correlations are relatively strong. The three combinations of explanatory variables, which are used as principal substitutes for the hypothetical concept of ‘resource distribution,’ are strongly correlated with the Index of Democratization (ID), which is the principal operational substitute for the hypothetical concept of ‘democratization.’

It has been pointed out that correlation analysis does not establish causality, for the reason that correlations merely measure covariation. In Chapter 4, I discussed the requirements of causality and argued that the relationship between the degree of resource distribution and the level of democratization meets those requirements quite well, although the relationship is not completely one-way. The resource distribution theory of democratization explains why the distribution of political power is assumed to depend on the degree of resource distribution, and not vice versa. Besides, the stability of this relationship since the 1850s supports its causal interpretation.

Regression analysis was used to transfer the analysis to the level of single countries and to disclose how well the average relationship between an explanatory index (IPR, IPR-2, and Mean) and ID-2001 applies to single countries and which countries deviate most from the average relationship (regression line). The results show that in most cases the actual level of

democratization deviates from the predicted one only moderately, especially so in the case of IPR, which is most highly correlated with ID-2001. In other words, the degree of resource distribution predicts and explains the approximate level of democratization quite satisfactorily in most cases.

The most deviating countries were distinguished by two different ways. First, democracies and non-democracies in 2001 were cross-tabulated by the transition levels of IPR and Mean respectively. The results of cross-tabulations disclosed the countries contradicting the second research hypothesis: deviating democracies below one or two transition levels and deviating non-democracies above one or two transition levels. The number of deviating democracies and non-democracies is only 14 (8.2%) in the case of IPR and 25 (14.7%) in the case of Mean. The other countries were democracies or non-democracies as expected, or they were at the transition levels of the explanatory indices. The total number of democracies was 102 in 2001 and the number of countries below the threshold of democracy 68. Thus the number of democracies is already much higher than the number of non-democracies, but it should be noted that many of these democracies are only slightly above the threshold criteria.

Although the number of democracies is increasing, it would not be justified to conclude on the basis of this study that all countries are going to democratize. The number of non-democracies above the transition levels of the two explanatory indices is approximately the same as the number of deviating democracies below the transition levels. This observation leads to the conclusion that we cannot expect any significant increase in the number of democracies in the near future. The number of countries below the transition level of IPR is 48 and below the transition level of Mean 39. Besides, 48 countries are at the transition level of IPR and 44 countries at the transition level of Mean. In other words, social conditions are not yet ripe for democratization in all countries of the world.

Second, the countries contradicting most clearly the first research hypothesis were separated on the basis of residuals. The number of countries with large positive or negative residuals rises to 33 on the basis of IPR and to 34 on the basis of Mean, but only 14 of these countries (deviating democracies and deviating non-democracies) contradict also the second research hypothesis.

In Chapter 8, each of the countries contradicting the second research hypothesis as well as those countries with large positive or negative residuals were introduced and discussed separately in order to explore whether there might be any special circumstances or local factors which could explain their deviating position. It was not possible to find any common explanation for their deviations, whereas there seems to be several local and regional factors which provide partial explanations for large deviations. The countries which did not contradict the second research hypothesis or which deviated only moderately from the regression lines were mentioned only briefly. My general prediction for such countries is that it is not

justified to expect any drastic changes in their political systems in the near future, although some unexpected changes will always happen.

It was noted that nearly all deviating democracies, which contradict the second research hypothesis, are poor countries of sub-Saharan Africa, Latin America, South Asia, and the Pacific. It is reasonable to expect breakdowns of democracy in some of these countries, although it was also noted that several of them deviate only moderately from the regression line. It is remarkable that most of the deviating non-democracies are the Middle East and other Muslim countries, which implies that democratization has been more difficult in the Muslim regions of the world than in other regions.

Countries with large positive or negative residuals contradict the first research hypothesis, but it was pointed out that most of them do not contradict the second research hypothesis. In other words, in spite of their large residuals they are democracies or non-democracies as expected. Further, many of these countries have large residuals only on the basis of IPR or Mean but not on the basis of both of them. Therefore, the number of seriously deviating countries is relatively small.

Summary

The main purpose of this study has been to explore to what extent it is possible to explain the variation of democratization in the contemporary world by one theoretically grounded explanatory factor: the degree of resource distribution. The results show that this factor explains more than 70 percent of the variation in democratization. My conclusion is that there are strong regularities in the process of democratization and that these regularities are based on our common human nature. In the struggle for political power, as well as in the general struggle for existence, we have evolved to use all available resources and environmental opportunities. This means that in social environments in which important power resources are widely distributed among competing groups, political power also tends to become widely distributed (democracy), and in social environments in which important resources are highly concentrated, political power becomes concentrated in the hands of the few (autocracy). This strong regularity appears in all human societies across all racial, civilizational, cultural, developmental, and regional boundaries, although some variation seems to be due to historical and cultural differences, too.

The strong dependence of democracy on resource distribution leads to the conclusion that the best strategy to strengthen the social basis of democracy and to improve social prerequisites of democracy in non-democratic countries would be to carry out social reforms intended to further the distribution of power resources among various sections of the population. To this end, educational opportunities should be opened to all sections of the population, land reforms should further the establishment of family farm systems, and economic systems should be transformed into market economies.

Appendix 1 Data on the measures of democracy for 1999–2001 in 170 countries

1=Governmental system / year of election or other political change

2=Largest party / president or other chief executive

3=Votes for the largest party / presidential candidate or other chief executive as a percentage of the total votes

4=Total votes cast in a parliamentary or executive election

5=Total population* of the country in the year of election

6=Voters (usually valid votes) as a percentage of the total population

*Data on total populations for 1990–99 are from the United Nations' *1999 Demographic Yearbook* (2001). Data on populations for years 2000–1 are estimations based on data given for previous years in this source. In several cases, data given in *1999 Demographic Yearbook* differ to some extent from data given in previous *Demographic Yearbooks*. Consequently, the population data used in this study are not exactly the same as those used in *The Polyarchy dataset* for the years 1990–8.

Abbreviations:

Africa 1999=Nohlen *et al.*, *Elections in Africa. A Data Handbook*

Banks 1997=Banks *et al.*, *Political Handbook of the World 1997*

CNN.com=CNN.com, *World/Election Watch*

Europa=*The Europa World Yearbook*

IDEA 1997=International Institute for Democracy and Electoral Assistance

IFES=The International Foundation for Election Systems, *Elections Today*

IPU=Inter-Parliamentary Union, *Chronicle of Parliamentary Elections*

Keesing's=*Keesing's Record of World Events*

WFB 2000=CIA, *World Factbook 2000*

World Parliaments 1998=*World Encyclopedia of Parliaments and Legislatures*

1	2	3	4	5	6
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1 Afghanistan

Executive dominance

1992 ¹	Transitional governments	100.0	0	16,494,000	0
2001 ²	Interim government	100.0	0	23,000,000	0

1 See Banks 1997: 3–7; WFB 2000: 1–2; Keesing's 1999–2001. Taliban forces seized power in Kabul in September 1996. Continued fighting.

2 Keesing's 2001: 44503–5. After the defeat of Taliban forces, a new interim government led by Hamid Karzai was established in December 2001.

2 Albania

Parliamentary dominance

1997 ¹	Socialist Party of Albania	65.2	1,412,929	3,731,000	37.8
2001 ²	Socialist Party of Albania	41.5	1,323,900	3,100,000	42.7

1 IPU 1997; IDEA 1997: 54. People's Assembly election, 29 June and 6 July 1997.

2 IPU 2002; Keesing's 2001: 44307. People's Assembly election, 24 June and 8 July 2001.

3 Algeria

Concurrent powers (50–50%)

Parliamentary elections

1997 ¹	National Democratic Rally	33.7	10,496,352	29,050,000	36.1
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Presidential elections

1999 ²	Abdelaziz Bouteflika	73.8	10,093,611	30,774,000	32.8
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National referendums

1999 ³	1 referendum	–	–	–	5.0
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1 IFES 1998 Vol. 7(3): 58; IPU 1997. See also World Parliaments 1998: 9–12. National People's Assembly election, 5 June 1997.

2 IFES 1999 Vol. 8(2): 26; Keesing's 1999: 42915. Presidential election, 15 April 1999.

3 Keesing's 1999: 43125, 43177. Referendum, 16 September 1999.

4 Angola

Executive dominance

1992 ¹	Jose Eduardo Dos Santos	100.0	0	10,609,000	0
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1 IPU 1992–3; Keesing's 1992: 39082, 39128–9; Banks 1997: 22–8; World Parliaments 1998: 13–14; WFB 2000: 12. In the 1992 direct presidential election, Dos Santos received 49.6 percent of the votes, but because it was not possible to organize the second round of presidential election, he did not become legally elected. Civil war continued. The president's five-year term ended in 1997.

5 Argentina

Executive dominance

1999 ¹	Fernando de la Rúa	48.5	18,640,833	36,737,000	50.7
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1 IFES 1999 Vol. 8(4): 26; IPU 1999; Keesing's 1999: 43195. Presidential election, 24 October 1999.

1	2	3	4	5	6
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6 Armenia

Concurrent powers (50–50%)

*Parliamentary elections*1999¹ Unity Alliance 47.3 1,081,246 3,795,000 28.5*Presidential elections*1998² Robert Kocharian 58.9 1,542,267 3,795,000 40.6

1 IPU 1999; IFES 1999 Vol. 8(3): 26; Keesing's 1999, 43031. National Assembly election, 30 May 1999. Distribution of seats.

2 IFES 1998 Vol. 7(4): 26. Cf. Keesing's 1998: 42143–4; Europa 2000: 480. Presidential election, 16 March 1998. Second round.

7 Australia

Parliamentary dominance

1998¹ Labour Party 40.0 11,043,831 18,751,000 58.92001² Labour Party 37.8 11,474,093 19,400,000 59.1*National referendums*1999³ 1 referendum – – – 5.0

1 IPU 1998; Keesing's 1998: 42564. House of Representatives election, 3 October 1998.

2 IPU 2001; Keesing's 2001: 44460–1. House of Representatives election, 10 November 2001.

3 Keesing's 1999: 43109, 43212, 43267. Referendum, 6 November 1999.

8 Austria

Parliamentary dominance

1999¹ Social Democratic Party 33.2 4,622,351 8,177,000 56.5

1 IPU 1999; IFES 1999 Vol. 8(4): 26; Keesing's 1999: 43223. National Council election, 3 October 1999.

9 Azerbaijan

Concurrent powers (50–50%)

*Parliamentary elections*1995¹ Government coalition 92.0 3,556,277 7,685,000 46.32000² New Azerbaijan Party 62.9 2,883,819 8,000,000 36.0*Presidential elections*1998³ Geidar Aliyev 77.6 3,293,647 7,913,000 41.6

1 IPU 1995–6; Banks 1997: 58; Europa 1996: 477–8. National Assembly election, 12 and 26 November 1995. Distribution of seats.

2 IPU 2000; Keesing's 2000: 43880. National Assembly election, 5 November 2000. Distribution of seats. See also Cornell 2001.

3 IFES 1998 Vol. 8(1): 26. Cf. Keesing's 1998: 42574. Presidential election, 11 October 1998.

1	2	3	4	5	6
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10 Bahamas

Parliamentary dominance

1997 ¹	Free National Movement	57.7	119,173	289,000	41.2
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1 IPU 1997; IFES 1997 Vol. 7(1–2): 27. Cf. IDEA 1997: 56. House of Assembly election, 14 March 1997.

11 Bahrain

Executive dominance

1999 ¹	King Hamad bin Issa al-Khalifa	100.0	0	666,000	0
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National referendums

2001 ²	1 referendum	–	–	–	5.0
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1 Banks 1997: 60–2; World Parliaments 1998: 44; Keesing’s 1999: 42866; WFB 2000: 38; ‘Time travellers: A survey of the Gulf’ 2002: 15–19. Bahrain is a traditional monarchy. Emir Issa ibn Salman al-Khalifa died on 6 March 1999, and was succeeded by his eldest son Sheikh Hamad.

2 Keesing’s 2001: 44028; CNN.com 2001. A constitutional referendum on 14–15 February 2001.

12 Bangladesh

Parliamentary dominance

1996 ¹	Awami League	48.7	41,440,000	122,100,000	33.9
2001 ²	Bangladesh National Party	60.0	55,905,518	129,000,000	43.3

1 IPU 1995–6; Banks 1997: 65–8. Parliamentary elections, 12 June 1996. Distribution of seats.

2 IPU 2001; Keesing’s 2001: 44399–400. Parliamentary elections, 1 October 2001. Distribution of seats.

13 Barbados

Parliamentary dominance

1999 ¹	Barbados Labour Party	65.0	128,484	267,000	47.9
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1 IPU 1999. Cf. Keesing’s 1999: 42726. House of Assembly election, 20 January 1999.

14 Belarus

Executive dominance

1994 ¹	Aleksandr Lukashenka	85.0	4,967,748	10,308,000	48.2
2001 ²	Aleksandr Lukashenka	75.6	6,169,087	10,160,000	60.7

1 Europa 1996: 534; IFES 1994 Vol. 5(1): 24. Cf. Keesing’s 1994: 40109–10; IDEA 1997: 89; WFB 2000: 46. Presidential election, 10 July 1994. President Lukashenka’s term of office was extended from 1999 to 2001 by a referendum on 24 November 1996 (Keesing’s 1996: 41381).

2 Europa 2002: 680. Cf. Keesing’s 2001: 44355; CNN.com 2001. Presidential election, 9 September 2001.

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
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15 Belgium

Parliamentary dominance

1999¹ Socialist Party 19.7 6,214,074 10,152,000 61.2

1 IPU 1999; Keesing's 1999: 43025. House of Representatives election, 13 June 1999.

16 Belize

Parliamentary dominance

1998¹ People's United Party 59.3 81,000 238,000 34.0

1 IPU 1998; Keesing's 1998: 42439; Europa 2000: 653. House of Representatives election, 27 August 1998.

17 Benin

Concurrent powers (50–50%)

*Parliamentary elections*1999¹ Opposition parties 50.6 1,166,141 6,059,000 19.2*Presidential elections*1996² Mathieu Kérékou 52.5 1,904,079 5,594,000 34.02001³ Mathieu Kérékou 83.6 1,533,795 6,200,000 24.7

1 IPU 1999; IFES 1999 Vol. 8(2): 27; Keesing's 1999: 42876, 42924. National Assembly election, 30 March 1999. Distribution of seats.

2 Keesing's 1996: 40982; IFES 1996 Vol. 6(1): 30–1; Africa 1999: 95. Presidential election, 18 March 1996. Second round.

3 CNN.com 2001; Keesing's 2001: 44041. Presidential election, 22 March 2001. Second round.

18 Bhutan

Executive dominance

1972¹ King Jigme S. Wangchuk 100.0 0 1,090,000 0

1 Banks 1997: 86–8; World Parliaments 1998: 72; WFB 2000: 57. Bhutan is a traditional monarchy. Jigme Singye Wangchuk was proclaimed King on 24 July 1972 following the death of his father.

19 Bolivia

Executive dominance

1997¹ Hugo Pánzer Suárez 22.3 2,240,000 7,767,000 28.8

1 IPU 1997; Keesing's 1997: 41680, 41768. Presidential election, 5 June 1997. The Congress confirmed his presidency on 5 August by 118 votes of the 157 deputies. See also Whitehead 2001.

1	2	3	4	5	6
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20 Bosnia and Herzegovina

Parliamentary dominance

1998 ¹	Coalition for a Whole and Democratic Bosnia and Herzegovina	33.8	1,726,233	4,211,000	41.0
2000 ²	Social Democratic Party of Bosnia–Herzegovina	18.0	1,491,101	4,000,000	37.3

1 IFES 1999 Vol. 8(1): 26. Cf. IPU 1998; Keesing's 1998: 42521–2. All-Bosnia House of Representatives election, 12–13 September 1998.

2 IFES Election Guide.Org. 2000. Cf. IPU 2000; Keesing's 2000: 43875. All-Bosnia House of Representatives election, 11 November 2000.

21 Botswana

Parliamentary dominance

1999 ¹	Botswana Democratic Party	57.0	336,982	1,611,000	20.9
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1 IPU 1999; Keesing's 1999: 43186. National Assembly election, 16 October 1999.

22 Brazil

Concurrent powers (50–50%)

Parliamentary elections

1998 ¹	Liberal Party Front	16.0	67,723,027	161,790,000	41.9
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Presidential elections

1998 ²	Fernando H. Cardoso	53.1	67,723,027	161,790,000	41.9
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1 IFES 1999 Vol. 8(1): 28; IPU 1998; Keesing's 1998: 42549–50. Chamber of Deputies election, 4 October 1998.

2 IFES 1999 Vol. 8(1): 28. Presidential election, 4 October 1998.

23 Brunei

Executive dominance

1967 ¹	Sultan Hassanal Bolkiah	100.0	0	130,000	0
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1 Banks 1997: 109–111; World Parliaments 1998: 97; Europa 2000; WFB 2000: 72. Brunei is a constitutional sultanate. Haji Hassanal Bolkiah ascended the throne on 5 October 1967 upon the abdication of his father. Sovereign authority is vested in the Sultan.

24 Bulgaria

Parliamentary dominance

1997 ¹	Union of Democratic Forces	52.3	4,255,295	8,312,000	51.2
2001 ²	Simeon II National Movement	42.7	4,527,892	8,200,000	55.2

1 IPU 1997; IFES 1998 Vol. 7(1–2): 27. National Assembly election, 19 April 1997.

2 IPU 2001; Keesing's 2001: 44234. National Assembly election, 17 June 2001.

1	2	3	4	5	6
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25 Burkina Faso

Executive dominance

1998 ¹	Blaise Compaoré	87.5	2,264,293	10,683,000	21.2
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1 IFES 1999 Vol. 8(1): 29; Africa 1999: 146. Cf. Keesing's 1998: 42601. Presidential election, 15 November, 1998.

26 Burma (Myanmar)

Executive dominance

1988 ¹	Military governments	100.0	0	44,497,000	0
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1 *The Far East and Australasia* 1989; Aung San Suu Kyi 1991; Banks 1997: 577–81; WFB 2000: 79. A new military coup on 18 September 1988, and military governments since 1988.

27 Burundi

Executive dominance

1996 ¹	Maj. Pierre Buyoya	100.0	0	6,088,000	0
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1 Banks 1997: 123–7; Africa 1999: 164; WFB 2000: 81. After the coup on 25 July 1996, the constitution and the National Assembly were suspended. The military junta designated Buyoya as head of state.

28 Cambodia

Concurrent powers (50–50%)

Parliamentary elections

1998 ¹	Cambodian People's Party	52.5	4,902,488	11,426,000	42.9
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Executive elections

1993 ²	Prince Norodom Sihanouk	100.0	7	9,308,000	0
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1 IPU 1998; Keesing's 1998: 42400–401, 42448; Europa 2000: 838; WFB 2000: 83. National Assembly election, 26 July 1998. Distribution of seats.

2 IPU 1992–3; Keesing's 1993: 39513–15, 39642. Sihanouk was unanimously elected as monarch by a seven-member Throne Council on 24 September 1993 and crowned as King of Cambodia.

29 Cameroon

Executive dominance

1997 ¹	Paul Biya	92.6	3,422,055	14,298,000	23.9
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1 Europa 1998: 787; IFES 1998 Vol. 7(3): 61; Africa 1999: 184. See also Keesing's 1997: 41849. Presidential election, 12 October 1997.

1	2	3	4	5	6
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30 Canada

Parliamentary dominance

1997 ¹	Liberal Party	38.4	12,984,069	30,004,000	43.3
2000 ²	Liberal Party	40.8	12,857,962	30,650,000	42.0

1 IPU 1997. Cf. IFES 1998 Vol. 7(3): 58; IDEA 1997: 59. House of Commons election, 2 June 1997.

2 IFES Election Guide. Org. 2000; IPU 2000. Cf. Keesing's 2000: 43847. House of Commons election, 27 November 2000.

31 Cape Verde

Parliamentary dominance

1995 ¹	Movement for Democracy	69.4	152,122	386,000	39.4
2001 ²	African Party for the Independence of Cape Verde	55.6	136,091	420,000	32.4

1 IPU 1995–6; Africa 1999: 198–200. Cf. IFES 1996 Vol. 6(1): 31; IDEA 1997: 59; Banks 1997: 144–51; World Parliaments 1998: 128–9. National People's Assembly election, 17 December 1995. Distribution of seats.

2 IPU 2001; Keesing's 2001: 43934. National Assembly election, 14 January 2001. Distribution of seats.

32 Central African Republic

Concurrent powers (50–50%)

Parliamentary elections

1998 ¹	Union of Forces for Peace and Democratic Development	50.5	841,000	3,485,000	24.1
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Presidential elections

1999 ²	Ange-Felix Patasse	58.5	885,143	3,550,000	24.9
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1 IPU 1998; Keesing's 1988: 42658. National Assembly elections, 22 November and 13 December 1998. Distribution of seats.

2 Keesing's 1999: 43184. Presidential election, 2 October 1999.

33 Chad

Executive dominance

1996 ¹	Idriss Déby	71.6	2,102,907	6,899,000	30.5
2001 ²	Idriss Déby	63.2	2,427,558	7,800,000	31.1

1 Africa 1999: 238. Cf. Keesing's 1996: 41178; Banks 1997: 155–9; WFB 2000: 96. Presidential election, 3 July 1996. Second round.

2 Keesing's 2001: 44141, 44200. Presidential election, 20 May 2001. Cf. CNN.com 2001.

1	2	3	4	5	6
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34 Chile

Executive dominance

1993 ¹	Eduardo Frei	58.0	7,045,844	13,771,000	51.2
2000 ²	Ricardo E. Lagos	51.3	7,178,727	15,200,000	47.2

1 Keesing's 1993: 39773; IFES 1994 Vol. 4(2-3): 29. Presidential election, 11 December 1993.

2 IFES 2000 Vol. 8(4): 26. Cf. Keesing's 2000: 43353-4. Presidential election, 16 January 2000. Second round.

35 China

Parliamentary dominance

1998 ¹	Communist Party and allies	100.0	-	1,255,698,000	0
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1 IPU 1998; Keesing's 1998: 42124. National People's Congress elections from 1 October 1997 to 31 January 1998. Indirect elections.

36 Colombia

Executive dominance

1998 ¹	Andrés Pastrana Arango	50.3	12,146,929	40,827,000	29.7
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1 IFES 1998 Vol. 7(4): 27. Cf. Keesing's 1998: 42263, 42329. Presidential election, 21 June 1998. Second round. See also Hoskin and Murillo 2001.

37 Comoros

Executive dominance

1999 ¹	Military governments	100.0	0	676,000	0
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National referendums

2001 ²	1 referendum	-	-	-	5.0
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1 Keesing's 1999: 42713, 42770, 42879, 42927, 43447. Ben Said Massonde, who had been nominated as Interim President for a three-month period after President Abdulkarim's death on 6 November 1998, announced that he would continue in office after the expiry of his mandate on 5 February 1999, because it was 'impossible' to hold presidential elections. He was deposed on 6 April 1999 by a military coup by Col. Azali Assoumani, who assumed the powers of president on 6 May 1999.

2 Keesing's 2001: 44492. Constitutional referendum, 23 December 2001.

38 Congo, Republic of (Brazzaville)

Executive dominance

1997 ¹	Sassou-Nguesso	100.0	0	2,709,000	0
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1 Keesing's 1997: 41848, 41896; Africa 1999: 276; WFB 2000: 114. The former president Sassou-Nguesso seized military control after four months of civil war in October 1997 and declared himself President. See also Keesing's 1999: 42927. Continued fighting between the army and Ninja rebels.

1	2	3	4	5	6
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39 Congo, Democratic Republic of (Zaire)

Executive dominance

1997 ¹	Laurent Kabila	100.0	0	47,987,000	0
2001 ²	Joseph Kabila	100.0	0	52,000,000	0

1 Keesing's 1997: 41621–2; 2000: 43734, 43838; World Parliaments 1998: 176–8; Africa 1999: 295; WFB 2000: 111–12. Insurgents led by Laurent Kabila entered Kinshasa on 16 May 1997 and ousted Mobutu from power. Kabila declared himself as President. Civil war continued.

2 Keesing's 2001: 43932. Laurent Kabila was assassinated on 16 January 2001, after which his son Joseph Kabila assumed the presidency. The unelected 300-member legislature confirmed his appointment as president on 26 January 2001.

40 Costa Rica

Executive dominance

1998 ¹	M.A. Rodríguez Echeverría	46.9	1,386,000	3,526,000	39.3
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1 Keesing's 1998: 42058. Presidential election, 1 February 1998.

41 Côte d'Ivoire

Executive dominance

1999 ¹	Gen. Robert Guëi	100.0	0	14,526,000	0
2000 ²	Laurent Gbagbo	51.0	1,700,000	14,500,000	11.7

National referendums

2000 ³	1 referendum	–	–	–	5.0
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1 Keesing's 1999: 43301. A military coup led by Gen. Robert Guëi on 24–5 December 1999.

2 Keesing's 2000: 43780, 43840. See also IPU 2000; *Freedom in the World* 2001: 158–9. Presidential election, 22 October 2000. Turnout was only about 30 percent. The presidential election was followed by violent demonstrations and fighting, which helped the supporters of Laurent Gbagbo to usurp power from General Guëi.

3 IFES Election Guide.Org. 2000; Keesing's 2000: 43661. Referendum, 23 July 2000.

42 Croatia

Concurrent powers (50–50%)

Parliamentary elections

1995 ¹	Croatian Democratic Union	59.1	2,417,374	4,669,000	51.8
2000 ²	Coalition of Social Democratic Party and Croatian Social Liberal Party	47.0	2,890,966	4,600,000	62.8

Presidential elections

1997 ³	Franjo Tudjman	61.4	2,178,792	4,572,000	47.6
2000 ⁴	Stipe Mesic	56.0	2,559,341	4,600,000	55.6

1 IPU 1995–6. House of Representatives election, 29 October 1995.

2 IPU 2000; Keesing's 2000: 43382. House of Representatives election, 3 January 2000. Distribution of seats.

3 Keesing's 1997: 41705; IFES 1998 Vol. 7(3): 59. Presidential election, 15 June 1997.

4 IFES 2000 Vol. 8(4): 27; Keesing's 2000: 43382, 43432. Presidential election, 7 February 2000. Second round.

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
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43 Cuba

Parliamentary dominance

1998 ¹	Communist party	100.0	7,533,222	11,160,000	67.5
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1 IPU 1998; Keesing's 1998: 42006. National Assembly election, 24 February 1998. Distribution of seats.

44 Cyprus

Parliamentary dominance

1996 ¹	Democratic Rally	34.5	369,521	743,000	49.7
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2001 ²	Progressive Party of the Working People	34.7	405,224	760,000	53.3
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1 IPU 1995–6; IFES 1996 Vol. 6(2): 26. Cf. IDEA 1997: 60–1. House of Representatives election, 26 May 1996.

2 IPU 2001. House of Representatives election, 27 May 2001.

45 Czech Republic

Parliamentary dominance

1998 ¹	Czech Social Democratic Party	32.3	5,969,666	10,295,000	58.0
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1 IFES 1998 Vol. 7(4): 27. Cf. IPU 1998; Keesing's 1998: 42358. Chamber of Deputies election, 19–29 June 1998.

46 Denmark

Parliamentary dominance

1998 ¹	Social Democrats	35.9	3,405,997	5,301,000	64.3
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2001 ²	Liberal Party (Venstre)	31.2	3,449,668	5,360,000	64.3
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National referendums

2000 ³	1 referendum	–	–	–	5.0
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1 IPU 1998; Keesing's 1998: 42151. Legislative election, 11 March 1998.

2 IPU 2001; Keesing's 2001: 44470. The Danish Parliament election, 20 November 2001.

3 Keesing's 2000: 43757–8. Referendum, 28 September 2000.

47 Djibouti

Parliamentary dominance

1997 ¹	Popular Rally for Progress	78.6	91,747	617,000	14.7
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1 IPU 1997; IDEA 1997: 61; Africa 1999: 324. See also World Parliaments 1998: 211; WFB 2000: 136. Chamber of Deputies election, 19 December 1997.

1	2	3	4	5	6
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48 Dominican Republic

Executive dominance

1996 ¹	Leonel Fernandez Reyna	51.2	2,850,727	7,833,000	36.4
2000 ²	Hipolito Mejia	49.9	3,194,816	8,350,000	38.2

1 IFES 1996 Vol. 6(2): 27; IDEA 1997: 91. Presidential election, 30 June 1996. Second round.

2 IFES 2000 Vol. 9(1): 26; Keesing's 2000: 43566. Presidential election, 16 May 2000.

49 Ecuador

Executive dominance

1998 ¹	Jamil Mahuad Witt	51.2	3,536,000	12,175,000	29.0
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1 Keesing's 1998: 42264; *Journal of Democracy* 1998 Vol. 9(4): 177; WFB 2000: 142. See also IPU 1998. Presidential election, 12 June 1998. Turnout was approximately 50 percent. President Witt was ousted in a bloodless coup on 21 January 2000 and replaced by Vice President Noboa. Congress accepted the change of the president. See Keesing's 2000: 43355; Lucero 2001.

50 Egypt

Concurrent powers (50–50%)

Parliamentary elections

1995 ¹	National Democratic Party	71.6	9,812,942	57,510,000	17.1
2000 ²	National Democratic Party	79.9	–	69,000,000	(17.0)

Presidential elections

1999 ³	Mohammed H. Mubarak	93.8	19,480,000	67,226,000	29.0
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1 IPU 1995–6; IDEA 1997: 62; Africa 1999: 344; WFB 2000: 145. People's Assembly election, 29 November 1995. Distribution of seats.

2 IPU 2000; Keesing's 2000: 43881. People's Assembly election, 18 October – 8 November 2000. Distribution of seats. It is assumed that the degree of participation was approximately the same as in the 1995 parliamentary election.

3 Keesing's 1999: 43177. The re-election of Mubarak was approved by national referendum on 26 September 1999. Turnout was 79.2 percent of some 24.6 million eligible voters.

51 El Salvador

Executive dominance

1999 ¹	Franciso Flores	52.0	1,182,248	6,154,000	19.2
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1 IFES 1999 Vol. 8(2): 27; Keesing's 1999: 42829. Presidential election, 7 March 1999.

52 Equatorial Guinea

Executive dominance

1996 ¹	Theodoro Obiang Nguema	97.8	183,544	410,000	44.8
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1 Africa 1999: 363. Cf. Keesing's 1996: 40937; IDEA 1997: 92; WFB 2000: 150. Presidential election, 25 February 1996.

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
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53 Eritrea

Executive dominance

1993 ¹	Transitional government	100.0	0	3,028,000	0
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- 1 Banks 1997: 259–61; World Parliaments 1998: 228; Africa 1999: 367–71; WFB 2000: 152. The government of the Eritrean People's Liberation Front (EPLF) has ruled Eritrea since 1993.

54 Estonia

Parliamentary dominance

1999 ¹	Center Party	23.4	484,239	1,412,000	34.3
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- 1 IPU 1999; IFES 1999 Vol. 8(2): 28; Keesing's 1999: 42851–2. Legislative election (Riigikogu), 7 March 1999.

55 Ethiopia

Parliamentary dominance

1995 ¹	Ethiopian People's Revolutionary Democratic Front	86.1	19,826,290	54,649,000	36.3
2000 ²	Ethiopian People's Revolutionary Democratic Front	87.9	18,226,000	62,400,000	29.2

- 1 Africa 1999: 382–3. Cf. IPU 1994–5; Keesing's 1995: 40665; World Parliaments 1998: 234; WFB 2000: 156. Council of People's Representatives election in May 1995. Distribution of seats.

- 2 IPU 2000; Keesing's 2000: 43557, 43611; CNN.com 2000. Council of People's Representatives election, 14 May 2000. Distribution of seats.

56 Fiji

Parliamentary dominance

1999 ¹	Fijian Political Party	44.3	227,046	806,000	28.2
2000 ²	Interim government	100.0	0	810,000	0
2001 ³	Fijian United Party	43.7	389,000	820,000	47.4

- 1 IPU 1999; Keesing's 1999: 42948. The House of Representatives election, 8 and 15 May 1999.

- 2 Keesing's 2000: 43578–9, 43630, 43677. An armed coup on 19 May 2000. The 1997 constitution was abolished and an interim government was established in June 2000.

- 3 IPU 2001; Keesing's 2001: 44353; CNN.com 2001. House of Representatives elections, 25 August – 2 September 2001. Distribution of seats.

1	2	3	4	5	6
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57 Finland

Concurrent powers (50–50%)

Parliamentary elections

1999¹ Social Democrats 22.9 2,681,291 5,165,000 51.9

Presidential elections

1994² Martti Ahtisaari 53.9 3,197,132 5,088,000 62.8

2000³ Tarja Halonen 51.6 3,185,335 5,180,000 61.5

1 IPU 1999; IFES 1999 Vol. 8(2): 29. Parliamentary election, 21 March 1999.

2 IFES 1994 Vol. 4(2–3): 31; IDEA 1997: 92. Presidential election, 31 January 1994. Second round.

3 IFES 2000 Vol. 8(4): 27; Keesing's 2000: 43426. Presidential election, 6 February 2000. Second round.

58 France

Concurrent powers (50–50%)

Parliamentary elections

1997¹ Socialist Party 23.5 25,189,627 58,609,000 43.0

Presidential elections

1995² Jacques Chirac 52.6 29,943,671 58,139,000 51.5

National referendums

2000³ 2 referendums – – – 10.0

1 IPU 1997. National Assembly election, 25 May – 1 June 1997.

2 Keesing's 1995: 40520, 40557; IFES 1994 Vol. 5(2): 345. Presidential election, 23 April 1995. Second round.

3 IFES Election Guide.Org. 2000. Referendums, 24 September 2000.

59 Gabon

Concurrent powers (50–50%)

Parliamentary elections

1996¹ Gabonese Democratic Party 83.3 (230,000) 1,107,000 20.8

2001² Gabonese Democratic Party 71.4 262,000 1,500,000 17.5

Presidential elections

1998³ El Hadj Omar Bongo 66.9 316,900 1,188,000 26.7

1 IPU 1995–6; Banks 1997: 295–9; Africa 1999: 396, 401; WFB 2000: 175. National Assembly election in December 1996. Distribution of seats. It is assumed that the number of voters was approximately the same as in the 1995 referendum (228,169).

2 IPU 2001; Keesing's 2001: 44494. National Assembly election, 9 December 2001. Distribution of seats.

3 Africa 1999: 396, 404. Cf. Keesing's 1998: 42658; *Journal of Democracy* 1999 Vol. 10(1): 174. Presidential election, 6 December 1998.

1	2	3	4	5	6
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60 Gambia

Concurrent powers (50–50%)

Parliamentary elections

1997 ¹	Alliance for Patriotic Reorientation and Construction	77.3	307,303	1,189,000	25.8
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Presidential elections

1996 ²	Yahya Jammeh	55.8	394,494	1,150,000	34.3
2001 ³	Yahya Jammeh	53.0	458,533	1,330,000	34.4

1 Africa 1999: 419–20. Cf. IPU 1997; IDEA 1997: 64; IFES 1997 Vol. 6(1): 27; World Parliaments 1998: 263. National Assembly election, 2 January 1997. Distribution of seats.

2 Africa 1999: 421. Cf. Banks 1997: 299–300; IDEA 1997: 93; WFB 2000: 178. Presidential election, 26 September 1996.

3 CNN.com 2001; Keesing's 2001: 44382–3. Presidential election, 18 October 2001. Turnout was 89.9 percent.

61 Georgia

Concurrent powers (50–50%)

Parliamentary elections

1999 ¹	Citizens' Union	51.5	1,948,659	5,399,000	36.1
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Presidential elections

1995 ²	Eduard Shevardnadze	74.9	2,121,510	5,417,000	39.1
2000 ³	Eduard Shevardnadze	78.8	2,343,176	5,450,000	43.0

1 IPU 1999. Parliamentary election, 31 October and 14 November 1999. Distribution of seats.

2 Europa 1996: 1338; WFB 2000: 182. Presidential election, 5 November 1995.

3 IFES 2000 Vol. 9(1): 26; Keesing's 2000: 43541. Presidential election, 9 April 2000.

62 Germany

Parliamentary dominance

1998 ¹	Social Democratic Party	40.9	49,308,512	82,024,000	60.1
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1 IPU 1998; Keesing's 1998: 42509. Federal Assembly (Bundestag) election, 27 September 1998. Valid 'second votes.'

1	2	3	4	5	6
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63 Ghana

Concurrent powers (50–50%)

Parliamentary elections

1996 ¹	National Democratic Congress	67.0	5,980,000	18,154,000	32.9
2000 ²	New Patriotic Party	50.0	6,530,757	20,000,000	32.6

Presidential elections

1996 ³	Jerry Rawlings	57.4	7,145,772	18,154,000	39.4
2000 ⁴	John Kufour	56.9	6,381,387	20,000,000	31.9

1 IPU 1995–6; IDEA 1997: 64; WFB 2000: 187. Cf. Africa 1999: 434–5. Parliamentary election, 7 December 1996. Distribution of seats.

2 IPU 2000; IFES Election Guide. Org. 2000. Parliamentary election, 7 December 2000. Distribution of seats.

3 IFES 1997 Vol. 6(4): 27; Africa 1999: 438. Cf. Banks 1997: 1164; IDEA 1997: 93. Presidential election, 7 December 1996.

4 IFES Election Guide. Org. 2000; Keesing's 2000: 43892. Presidential election, 28 December 2000. See also Gyimah-Boadi 2001.

64 Greece

Parliamentary dominance

1996 ¹	Panhellenic Socialist Movement	41.5	6,783,445	10,476,000	64.7
2000 ²	Panhellenic Socialist Movement	43.8	6,868,133	10,700,000	64.2

1 IPU 1995–6; IFES 1996 Vol. 6(3): 28. Parliamentary election, 22 September 1996.

2 IPU 2000; IFES 2000 Vol. 9(1): 26. Parliamentary election, 9 April 2000.

65 Guatemala

Executive dominance

1999 ¹	Alfonso Portillo	68.0	2,117,872	11,088,000	19.1
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National referendums

1999 ²	1 referendum	–	–	–	5.0
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1 IPU 1999; Keesing's 1999: 43306–7. Presidential election, 26 December 1999. Second round.

2 Keesing's 1999: 42774, 42932. Referendum, 16 May 1999.

1	2	3	4	5	6
66 Guinea					
Concurrent powers (50–50%)					
<i>Parliamentary elections</i>					
1995 ¹	Party for Unity and Progress	62.2	1,849,983	7,153,000	25.8
2000 ²	Elections postponed	100.0	0	7,360,000	0
<i>Presidential elections</i>					
1998 ³	Lansana Conté	56.1	2,592,859	7,337,000	35.3
<i>National referendums</i>					
2001 ⁴	1 referendum	–	–	–	5.0
1 Africa 1999: 455. Cf. IFES 1995 Vol. 5(3): 32; IPU 1994–5; IDEA 1997: 66; WFB 2000: 205. People's National Assembly election, 11 June 1995. Distribution of seats.					
2 Keesing's 2000: 43841. Legislative elections scheduled to be held on 26 November 2000 were postponed until an unspecified later date.					
3 IFES 1999 Vol. 8(1): 29. Cf. Keesing's 1998: 42659; Africa 1999: 457. Presidential election, 14 December 1998.					
4 CNN.com 2001; Keesing's 2001: 44439. Referendum on a third term for President Conté, 11 November 2001.					

67 Guinea-Bissau

Concurrent powers (50–50%)

Parliamentary elections

1999 ¹	Party for Social Renovation	37.3	–	1,187,000	(17.0)
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Presidential elections

1999 ²	A civil war	100.0	0	1,187,000	0
2000 ³	Koumba Yalla	72.0	354,534	1,200,000	29.5

1 IPU 1999. Cf. Africa 1999: 467. National People's Assembly election, 28 November 1999. Distribution of seats. It is assumed that the degree of participation was approximately the same as in the 1994 parliamentary election (17.0 percent).

2 Keesing's 1999: 42924, 43301, 43344. Temporary governments since the civil war broke out in June 1998. The rebel leader, General Mane, ousted President Vieira in May 1999. The country returned to constitutional order through legislative elections in November 1999 and presidential elections on 16 January 2000.

3 IFES 2000 Vol. 8(4): 27. Presidential election, 16 January 2000. Second round.

68 Guyana

Parliamentary dominance

1997 ¹	People's Progressive Party	52.3	347,788	843,000	41.2
2001 ²	People's Progressive Party	53.8	393,709	860,000	45.7

1 IPU 1997; Keesing's 1997: 41954; 1988: 42006. National Assembly election, 15 December 1997. Distribution of seats.

2 IPU 2001; Keesing's 2001: 44049. National Assembly election, 19 March 2001. Distribution of seats.

1	2	3	4	5	6
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69 Haiti

Executive dominance

1995 ¹	René Preval	94.8	862,715	7,180,000	12.0
2000 ²	Jean-Bertrand Aristide	92.0	2,871,602	8,000,000	35.9

1 IFES 1996 Vol. 5(4): 43. Cf. Keesing's 1995: 40860; 1999: 42725; IDEA 1997: 94; WFB 2000: 211. Presidential election, 17 December 1995.

2 CNN.com 2000; Keesing's 2000: 43852. Presidential election, 26 November 2000.

70 Honduras

Executive dominance

1997 ¹	Carlos Roberto Flores	52.7	1,972,646	5,981,000	33.0
2001 ²	Ricardo Maduro	53.0	2,179,181	6,700,000	32.5

1 Keesing's 1997: 41904, 41953; WFB 2000: 215. Presidential election, 30 November 1997.

2 IPU 2001; Keesing's 2001: 44444. Presidential election, 25 November 2001.

71 Hungary

Parliamentary dominance

1998 ¹	Hungarian Socialist Party	43.0	4,509,982	10,114,000	44.6
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1 IFES 1998 Vol. 7(4): 28. Cf. IPU 1998; Keesing's 1998: 42300, 42299–300. National Assembly election, 10 and 24 May 1998. Individual constituencies. Second round.

72 Iceland

Parliamentary dominance

1999 ¹	Independence Party	40.7	165,726	279,000	59.1
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1 IPU 1999; IFES 1999 Vol. 8(2): 29. Parliamentary (Althing) election, 8 May 1999.

73 India

Parliamentary dominance

1999 ¹	National Democratic Alliance	54.5	370,579,743	986,611,000	37.6
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1 IPU 1999; Keesing's 1999: 43199–200. House of the People (Lok Sabha) election, 5 September to 3 October 1999. Distribution of seats.

74 Indonesia

Concurrent powers (50–50%)

Parliamentary elections

1999 ¹	Indonesian Democratic Party for Struggle	37.5	106,586,630	207,437,000	51.4
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Presidential elections

1999 ²	Abdumahaman Wahid	54.4	586	207,437,000	0
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1 IPU 1999. Cf. IFES 1999 Vol. 8(3): 27; Keesing's 1999: 42993, 43068, 43108. House of Representatives election, 7 June 1999. See also Malley 2000.

2 Keesing's 1999: 43203–4. Wahid was elected president by the People's Consultative Assembly on 20 October 1999 by 373 votes to 313.

1	2	3	4	5	6
75 Iran					
Concurrent powers (33.3–33.3–33.3%)					
<i>The supreme leader elections</i>					
1989 ¹	Ali Hoseini Khamenei	100.0	0	53,187,000	0
<i>Parliamentary elections</i>					
1996 ²	Society of Combatant Cleargy	44.0	24,718,661	60,055,000	41.2
2000 ³	May 23 Front	76.6	–	63,600,000	(41.0)
<i>Presidential elections</i>					
1997 ⁴	Mohammad Khatami	69.0	29,076,010	60,939,000	47.7
2001 ⁵	Mohammad Khatami	78.3	27,665,549	64,500,000	42.9

1 Banks 1997: 384–6; World Parliaments 1998: 339–41; *The Middle East* 2000: 244–52; WFB 2000: 231. The Assembly of Religious Experts elected Khomeini as the supreme religious leader for life on 4 June 1989.

2 IDEA 1997: 67; IPU 1995–6. Islamic Consultative Assembly election, 8 March and 19 April 1996. Distribution of seats.

3 IPU 2000; Keesing's 2000: 43434, 43598. Islamic Consultative Assembly election, 18 February – 5 May 2000. Distribution of seats. It is assumed that the degree of participation was approximately the same as in the 1996 parliamentary election. See also Esfandiari 2000; Boroumand and Boroumand 2000.

4 Keesing's 1997: 41661. Presidential election, 23 May 1997.

5 Keesing's 2001: 44242; CNN.com 2001. Cf. Europa 2002: 2056. Presidential election, 8 June 2001.

76 Iraq

Executive dominance

1995 ¹	Saddam Hussein	100.0	8,355,000	20,095,000	41.6
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1 Europa 1996: 1625; Banks 1997: 392; *The Middle East* 2000: 256–63; WFB 2000: 234. Saddam Hussein was confirmed as president for a seven-year term by national referendum on 13 October 1995.

77 Ireland

Parliamentary dominance

1997 ¹	Fianna Fáil	39.3	1,788,985	3,661,000	48.8
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National referendums

2001 ²	1 referendum	–	–	–	5.0
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1 IPU 1997. Cf. IDEA 1997: 68. House of Representatives election, 6 June 1997.

2 Keesing's 2001: 44225. Referendum on the Treaty of Nice, 8 June 2001.

1	2	3	4	5	6
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78 Israel

Parliamentary dominance (50–50%)

Parliamentary (Knesset) elections

1999 ¹	One Israel	20.3	3,309,416	6,125,000	54.0
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Elections for prime minister

1999 ²	Ehud Barak	56.1	3,193,494	6,125,000	52.1
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2001 ³	Ariel Sharon	62.4	2,792,021	6,300,000	44.3
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1 IPU 1999. Cf. IFES 1999 Vol. 8(3): 28; Keesing's 1999: 42969–70. Parliamentary (Knesset) election, 17 May 1999.

2 Keesing's 1999: 42970. Election for prime minister, 17 May 1999.

3 CNN.com 2001; Keesing's 2001: 44025. Election for prime minister, 6 February 2001.

79 Italy

Parliamentary dominance

1996 ¹	Olive Tree Coalition	34.8	37,500,519	57,380,000	65.3
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2001 ²	House of Freedoms	42.5	33,818,743	57,350,000	59.0
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National referendums

1999 ³	1 referendum	–	–	–	5.0
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2000 ⁴	7 referendums	–	–	–	30.0
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2001 ⁵	1 referendum	–	–	–	5.0
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1 IPU 1995–6 (proportional representation vote). Cf. IFES 1996 Vol. 6(2): 29; IDEA 1997: 68. Chamber of Deputies election, 21 April 1996.

2 IFES Election Guide Org. 2001. Cf. IPU 2001; Keesing's 2001: 44175. Chamber of Deputies election, 13 May 2001.

3 IFES Election Guide. Org. 1999. Referendum, 18 April 1999.

4 IFES Election Guide. Org. 2000; Keesing's 2000: 43422, 43593. Referendums, 21 May 2000.

5 Keesing's 2001: 44416. Referendum on a constitutional change, 8 October 2001.

80 Jamaica

Parliamentary dominance

1997 ¹	People's National Party	55.0	720,000	2,540,000	28.3
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1 IPU 1997; Keesing's 1997: 41956; IDEA 1997: 69. Cf. Europa 2000: 2007. House of Representatives election, 18 December 1997.

81 Japan

Parliamentary dominance

1996 ¹	Liberal-Democratic Party	38.6	55,373,302	125,761,000	44.0
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2000 ²	Liberal Democratic Party	48.5	59,844,601	126,600,000	47.3
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1 IPU 1995–6. Cf. IFES 1996 Vol. 6(3): 28–9; IDEA 1997: 68. House of Representatives election, 20 October 1996. Votes in 300 single-member constituencies.

2 IPU 2000; IFES Election Guide. Org. 2000. House of Representatives election, 25 June 2000. Distribution of seats. Votes in the proportional representation election.

1	2	3	4	5	6
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82 Jordan

Concurrent powers (50–50%)

*Parliamentary elections*1997¹ Pro-government groups 75.0 702,200 6,126,000 11.5*Executive elections*1999² King Abdullah 100.0 0 6,482,000 0

1 IPU 1997; Europa 2000: 2064. See also Ryan 1998. House of Representatives election, 4 November 1997. Distribution of seats.

2 World Parliaments 1998: 383–7; Keesing's 1999: 42808–809; The Middle East 2000: 293, 297. Executive power is vested in the King. King Hussein died on 7 February 1999, and was succeeded by his son Abdullah.

83 Kazakhstan

Executive dominance

1999¹ Nursultan Nazarbayev 81.0 7,221,408 14,942,000 48.3

1 IFES 1999 Vol. 8(2): 30; Keesing's 1999: 42736; Europa 2000: 2097. Presidential election, 10 January 1999.

84 Kenya

Parliamentary dominance

1997¹ Kenya African National Union 52.2 5,813,599 33,144,000 17.5

1 IPU 1997; Keesing's 1997: 41988. Cf. Africa 1999: 488. National Assembly election, 29 December 1997. Distribution of seats.

85 Korea, Democratic People's Republic

Executive dominance

1998¹ Kim Jong Il 100.0 687 23,348,000 0

1 Keesing's 1998: 42394, 42501. On 5 September 1998, the Supreme People's Assembly elected Kim Jong Il as chairman of the National Defense Committee (NDC). Under the country's new revised constitution, this position was described as the 'highest office.' See also IPU 1998.

86 Korea, Republic of

Concurrent powers (50–50%)

*Parliamentary elections*1996¹ New Korea Party 34.5 20,118,528 45,545,000 44.22000² Grand National Party 39.0 18,904,740 47,000,000 40.2*Presidential elections*1997³ Kim Dae Jung 40.3 25,642,438 45,991,000 55.7

1 IFES 2000 Vol. 6(1): 32. Cf. Keesing's 1996: 41050; IPU 1995–6. National Assembly election, 11 April 1996.

2 IFES 2000 Vol. 9(1): 30; IPU 2000. National Assembly election, 13 April 2000.

3 Keesing's 1997: 41958; WFB 2000: 266. Presidential election, 18 December 1997.

1	2	3	4	5	6
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87 Kuwait

Concurrent powers (50–50%)

Parliamentary elections

1999¹ Islamist candidates 40.0 90,400 2,107,000 4.3

Executive elections

1977² Emir Jabir al-Ahmad al-Sabah 100.0 0 1,980,000 0

1 IPU 1999; Keesing's 1999: 43084, Europa 2000: 2183. National Assembly election, 4 May 1999. Distribution of seats.

2 Banks 1997: 465; World Parliaments 1998: 401–5; *The Middle East* 2000: 299–302; WFB 2000: 269; 'Time travellers. A Survey of the Gulf' 2002: 15–19. Executive power is vested in the Emir. Sheikh Jabir al-Ahmad became emir upon the death of his cousin Sheikh Sabah al-Salim al-Sabah on 31 December 1977.

88 Kyrgyzstan

Executive dominance

1995¹ Askar A. Akayev 72.4 1,920,223 4,590,000 41.8

2000² Askar A. Akayev 74.5 1,960,201 4,950,000 39.6

1 Keesing's 1995: 40866; IFES 1996 Vol. 5(4): 44; Banks 1997. Presidential election, 24 December 1995.

2 IFES Election Guide. Org. 2000. Cf. Keesing's 2000: 43797. Presidential election, 29 October 2000.

89 Laos

Parliamentary dominance

1997¹ Lao People's Revolutionary Party 99.0 2,284,632 5,032,000 45.4

1 IPU 1997; Keesing's 1997: 41961. National Assembly election, 21 December 1997. Distribution of seats.

90 Latvia

Parliamentary dominance

1998¹ People's Party 21.2 964,667 2,449,000 39.5

National referendums

1999² 1 referendum – – – 5.0

1 IPU 1998; Keesing's 1998: 42577. Parliamentary election, 3 October 1998.

2 Keesing's 1999: 43222, 43284. Referendum, 13 November 1999.

1	2	3	4	5	6
91 Lebanon					
Parliamentary dominance					
1996 ¹	Maronite Catholics	26.6	1,137,040	3,083,000	36.9
2000 ²	Resistance and Development List	18.0	1,370,000	3,300,000	41.5
1 IPU 1995–6; IDEA 1997: 70; Europa 2000: 2250. National Assembly elections, 18 August to 15 September 1996. Distribution of seats.					
2 IPU 2000; Europa 2000: 2250. Cf. Keesing's 2000: 43723, 43768–9. National Assembly elections, 27 August to 3 September 2000. Distribution of seats.					
92 Lesotho					
Parliamentary dominance					
1998 ¹	Lesotho Congress for Democracy	97.5	593,955	2,062,000	28.8
1 Africa 1999: 501–2. Cf. IPU 1998; Keesing's 1998: 42253, 42657; <i>Journal of Democracy</i> 1998 Vol. 9(3): 177. Assembly election, 23 May 1998. Distribution of seats. Allegations of electoral fraud led to protests and an army mutiny. On 9 December 1998, an interim political authority was established to create the necessary conditions for fresh, free, and fair elections. See also Keesing's 2000: 43555.					
93 Liberia					
Concurrent powers (50–50%)					
<i>Parliamentary elections</i>					
1997 ¹	National Patriotic Party	76.6	621,880	2,879,000	21.6
<i>Presidential elections</i>					
1997 ²	Charles Taylor	75.3	621,880	2,879,000	21.6
1 IPU 1997; Africa 1999: 515–16; WFB 2000: 283. House of Representatives election, 19 July 1997. Distribution of seats.					
2 IFES 1997 Vol. 7(3): 61; Africa 1999: 518. Cf. Keesing's 1997: 41724; WFB 2000: 283. Presidential election, 19 July 1997.					
94 Libya					
Executive dominance					
1969 ¹	Col. Moammar Gaddafi	100.0	0	1,870,000	0
1 <i>Africa Independent</i> 1972: 281–2; Banks 1997: 495–6; World Parliaments 1998: 418–19; Africa 1999: 523–8; <i>The Middle East</i> 2000: 335; WFB 2000: 285. Col. Moammar Gaddafi has ruled the country since the military coup on 1 September 1969.					
95 Lithuania					
Parliamentary dominance					
1996 ¹	Homeland Union – Conservatives of Lithuania	29.8	1,306,861	3,710,000	35.2
2000 ²	Social Democratic Coalition	31.1	1,471,247	3,700,000	39.8
1 IPU 1995–6. Cf. IDEA 1997: 71; IFES 1997 Vol. 7(1–2): 29. Parliamentary elections, 20 October and 10 November 1996.					
2 IPU 2000; IFES Election Guide. Org. 2000. Cf. Keesing's 2000: 43810–11. Parliamentary election, 8 October 2000.					

1	2	3	4	5	6
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96 Luxembourg

Parliamentary dominance

1999 ¹	Christian Social Party	30.2	178,880	429,000	41.7
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1 IPU 1999. Chamber of Deputies election, 13 June 1999.

97 Macedonia

Concurrent powers (50–50%)

Parliamentary elections

1998 ¹	Internal Macedonian Revolutionary Organization – Democratic Party of Macedonia	41.2	760,767	2,008,000	37.8
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Presidential elections

1999 ²	Boris Trajkovski	52.9	–	2,011,000	(38.1)
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1 IPU 1998. Cf. Keesing's 1998: 42643–4; Europa 2000: 2346. Assembly election, 18 October and 1 November 1998. Distribution of seats.

2 Keesing's 1999: 43287, 43327; Europa 2000: 2346. Presidential election, 14 November 1999. It is assumed that the degree of participation was approximately the same as in the 1998 parliamentary election.

98 Madagascar

Executive dominance

1996 ¹	Didier Ratsiraka	50.7	3,171,458	14,183,000	22.4
2001 ²	Marc Ravalomana	51.5	4,100,620	16,200,000	25.3

1 IFES 1997 Vol. 7(1–2): 29; Africa 1999: 545. Cf. Keesing's 1997: 41435; Europa 1998: 2177, 2185; Banks 1997: 513; WFB 2000: 297. Presidential election, 29 December 1996.

2 Keesing's 2001: 44495; 2002: 44543, 44712. Presidential election, 16 December 2001. The results of December 2001 presidential election after the recount of votes in April 2002.

99 Malawi

Executive dominance

1999 ¹	Bakili Muluzi	52.4	4,663,751	10,640,000	43.8
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1 IFES 1999 Vol. 8(3): 29; IPU 1999; Keesing's 1999: 42982. Presidential election, 15 June 1999.

100 Malaysia

Parliamentary dominance

1999 ¹	National Front	56.5	6,984,000	22,712,000	30.7
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1 IPU 1999; Keesing's 1999: 43261; Europa 2000: 2397; CNN.com 1999; *Freedom in the World* 2001: 347; Hussein 2002: 105. House of Representatives election, 29 November 1999. See also Case 2001.

1	2	3	4	5	6
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101 Maldives

Executive dominance

1998¹ Maumoon Abdul Gayoom 90.9 (90,000) 271,000 33.2

1 *The Far East and Australasia* 1999: 679–80, 684; Europa 2000: 2414. Presidential election by popular referendum. In the 1999 parliamentary election, the number of voters was approximately 99,000. See IPU 1999.

102 Mali

Executive dominance

1997¹ Alpha Oumar Konare 84.4 1,654,228 11,480,000 14.4

1 Africa 1999: 581. Cf. IFES 1997 Vol. 7(1–2): 30; Keesing's 1997: 41626; WFB 2000: 306. Presidential election, 11 May 1997.

103 Malta

Parliamentary dominance

1998¹ Nationalist Party 51.8 264,492 377,000 70.2

1 IPU 1998; Keesing's 1998: 42523; IFES 1999 Vol. 8(1): 29. House of Representatives election, 5 September 1998.

104 Mauritania

Concurrent powers (50–50%)

*Parliamentary elections*1996¹ Democratic and Social
Republican Party 88.6 541,849 2,351,000 23.12001² Democratic and Social
Republican Party 79.0 560,045 2,700,000 20.7*Presidential elections*1997³ M. Ould Sid'Ahmed Taya 90.9 879,801 2,461,000 35.8

1 Africa 1999: 595–6; IPU 1995–6. Cf. IDEA 1997: 72. National Assembly election, 11 and 18 October 1996.

2 IPU 2001; Keesing's 2001: 44383. National Assembly election, 19 October 2001. Distribution of seats.

3 Africa 1999: 597; Europa 2000: 2462. Cf. *Journal of Democracy* 1998 Vol. 9(2): 188; WFB 2000: 316. Presidential election, 12 December 1997.

105 Mauritius

Parliamentary dominance

1995¹ Mauritius Labor Party 56.5 559,005 1,122,000 49.82000² Alliance of Militant
Socialist Movement and
Militant Mauritian
Movement 51.7 623,463 1,180,000 52.8

1 IPU 1995–6; Keesing's 1995: 40854; Europa 1996: 2146; World Parliaments 1998: 451–7; Africa 1999: 609, 618. National Assembly election, 20 December 1995. Distribution of seats.

2 IPU 2000; Keesing's 2000: 43732. National Assembly election, 11 September 2000.

1	2	3	4	5	6
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106 Mexico

Executive dominance

1994 ¹	Ernesto Zedillo	48.8	34,549,501	89,564,000	38.6
2000 ²	Vicente Fox	43.4	36,814,085	98,500,000	37.4

1 IFES 1994 Vol. 5(1): 28. Cf. Europa 1996: 2164; Keesing's 1994: 40136. Presidential election, 21 August 1994.

2 IFES 2000 Vol. 9(1): 28. Presidential election, 2 July 2000.

107 Moldova

Concurrent powers, 1999–2000 (50–50%)

Parliamentary elections

1998 ¹	Moldovan Party of Communists	39.6	1,622,990	3,652,000	44.4
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Presidential elections

1996 ²	Petru Lucinschi	54.0	1,702,744	4,437,000	38.4
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Parliamentary dominance, 2001

2001 ³	Party of Moldovan Communists	70.3	1,566,393	4,500,000	34.8
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National referendums

1999 ⁴	1 referendum	–	–	–	5.0
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1 IFES 1998 Vol. 7(4): 29; IPU 1998. Cf. Keesing's 1998: 42155–6. Parliamentary election, 22 March 1998. Distribution of seats.

2 IFES 1997 Vol. 6(4): 28. Cf. Keesing's 1996: 41382, 41419; WFB 2000: 327. Presidential election, 1 December 1996. Second round.

3 IPU 2001; Keesing's 2001: 44020; CNN.com 2001. Parliamentary election, 25 February 2001. Distribution of seats.

4 Keesing's 1999: 42954. Referendum, 23 May 1999.

108 Mongolia

Parliamentary dominance

1996 ¹	Democratic Union Coalition	45.5	1,010,157	2,335,000	43.2
2000 ²	Mongolian People's Revolutionary Party	50.2	1,027,985	2,800,000	36.7

1 IPU 1995–6; IFES 1996 Vol. 6(3): 30; Keesing's 1996: 41149; WFB 2000: 332. Cf. IDEA 1997: 73. Great Hural election, 30 June 1996.

2 IPU 2000; Europa 2001: 2753. Cf. Keesing's 2000: 43672. Great Hural election, 2 July 2000. MPRP's share of the seats is 94.7 percent because of the first-past-the post electoral system.

1	2	3	4	5	6
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109 Morocco

Concurrent powers (50–50%)

*Parliamentary elections*1997¹ Koutla bloc 31.4 6,371,630 27,310,000 23.3*Executive elections*1999² King Mohammad VI 100.0 0 28,238,000 0

1 IPU 1997; Africa 1999: 635–6. Cf. Keesing's 1997: 41935–6; IDEA 1997: 74; WFB 2000: 335. Chamber of Representatives election, 5 December 1997. Distribution of seats.

2 Banks 1997: 564–71; World Parliaments 1998: 467–9; Keesing's 1999: 43082; Maghraoui 2002. Executive power is vested in the king. King Hassan II died on 23 July 1999, and was succeeded by his son Ali Mohammad as King Mohammad VI. See also Maghraoui 2001.

110 Mozambique

Concurrent powers (50–50%)

*Parliamentary elections*1999¹ Frelimo 53.2 4,027,794 17,299,000 22.3*Presidential elections*1999² Joaquim Chissano 52.3 4,471,988 17,299,000 25.8

1 IPU 1999. Cf. Keesing's 1999: 43303–4. Assembly of the Republic election, 3–5 December 1999. Distribution of seats.

2 IFES 2000 Vol. 8(4): 28. Presidential election, 3–4 December 1999.

111 Namibia

Concurrent powers (50–50%)

*Parliamentary elections*1999¹ South West Africa
People's Organization 76.2 536,036 1,695,000 31.6*Presidential elections*1999² Samuel Nujoma 76.8 536,000 1,695,000 31.6

1 IPU 1999; IFES 2000 Vol. 8(4): 29. National Assembly election, 30 November and 1 December 1999.

2 IPU 1999; Keesing's 1999: 43302–303. Presidential election, 30 November and 1 December 1999.

1	2	3	4	5	6
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112 Nepal

Concurrent powers (75–25%)

Parliamentary elections

1999 ¹	Nepali Congress Party	54.2	8,649,664	22,367,000	38.7
2001 ²	Nepali Communist Party	48.0	—	23,300,000	(38.7)

Executive elections

1972 ³	King Birendra	100.0	0	11,810,000	0
2001 ⁴	King Gyanendra	100.0	0	23,300,000	0

1 IPU 1999; IFES 1999 Vol. 8(3): 30; Keesing's 1999: 42938. House of Representatives elections, 3 and 17 May 1999.

2 IPU 2001. House of Representatives elections, 27 June 2001. Distribution of seats. It is assumed that the degree of participation was the same as in the 1999 elections.

3 See Banks 1997: 589–91; World Parliaments 1998: 481–3; WFB 2000: 344–5. King Birendra succeeded to the throne on 31 January 1972 after the death of his father, King Mahendra.

4 Keesing's 2001: 44209–210. King Gyanendra succeeded to the throne on 4 June 2001 after the murder of his brother, King Birendra.

113 Netherlands

Parliamentary dominance

1998 ¹	Labour Party	29.0	8,614,000	15,707,000	54.8
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1 IPU 1998; Keesing's 1998: 42293. Second Chamber election, 6 May 1998.

114 New Zealand

Parliamentary dominance

1999 ¹	Labour party	38.7	2,085,381	3,811,000	54.7
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1 IPU 1999; Keesing's 1999: 43268. House of Representatives election, 27 November 1999.

115 Nicaragua

Executive dominance

1996 ¹	Arnoldo Aleman Lacayo	51.0	1,757,775	4,549,000	38.6
2001 ²	Enrique Bolaños	56.3	2,167,514	5,200,000	41.7

1 IFES 1997 Vol. 6(4): 28. Presidential election, 20 October 1996.

2 IPU 2001; Keesing's 2001: 44444–5. Presidential election, 4 November 2001.

116 Niger

Executive dominance

1999 ¹	Tandja Mamadou	58.9	1,912,199	10,400,000	18.4
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National referendums

1999 ²	1 referendum	–	–	–	5.0
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1 Europa 2000: 2754. Cf. Keesing's 1999: 43188, 43245; IPU 1999; Africa 1999: 683. Presidential election, 24 November 1999. Second round. The previous president Barre Mainassara had been assassinated by members of his own guard on 9 April 1999. Maj. Daouda Malam, the head of the presidential guard, ruled the country until the legislative and presidential elections in October and November 1999. See Keesing's 1999: 42876, 42985.

2 Keesing's 1999: 43049. Referendum, 18 July 1999.

1	2	3	4	5	6
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117 Nigeria

Executive dominance

1999¹ Gen. Olusegun Obasanjo 62.8 29,848,441 108,945,000 27.4

1 IFES 1999 Vol. 8(2): 29; Keesing's 1999: 42764. Presidential election, 27 February 1999.

118 Norway

Parliamentary dominance

1997¹ Labour Party 35.1 2,571,809 4,405,000 58.42001² Labour Party 24.4 2,521,879 4,500,000 56.0

1 IPU 1997. Parliamentary (Storting) election, 15 September 1997.

2 IPU 2001; Keesing's 2001: 44362. Parliamentary election, 10 September 2001.

119 Oman

Executive dominance

1970¹ Sultan Qaboos 100.0 0 650,000 01 Banks 1997: 632–4; World Parliaments 1998: 517; *The Middle East* 2000: 349–51; WFB 2000: 369. Oman is an absolute monarchy. Sultan Qaboos (Qabus) assumed power on 23 July 1970 in a *coup d'état* that deposed his father.**120 Pakistan**

Executive dominance

1999¹ Gen. Pervaiz Musharraf 100.0 0 134,510,000 01 Keesing's 1999: 43198–9. Gen. Musharraf assumed power by a military *coup d'état* on 12 October 1999. See also Constable 2001.**121 Panama**

Executive dominance

1999¹ Mrs Mireya Moscoso 44.8 1,274,505 2,809,000 45.3

1 IFES 1999 Vol. 8(2): 30. Cf. IPU 1999. Presidential election, 2 May 1999.

122 Papua New Guinea

Parliamentary dominance

1997¹ People's Progress Party 15.0 — 4,209,000 (42.0)

1 IPU 1997; Keesing's 1997: 41686; Europa 1998: 2667–8, 2675; WFB 2000: 380. Parliamentary election, 14–28 June 1997. It is assumed that the degree of electoral participation was approximately the same as in the previous election in 1992.

1	2	3	4	5	6
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123 Paraguay

Executive dominance

1999 ¹	Luis González Macci	100.0	0	5,356,000	0
2000 ²	Julio César Franco	49.6	1,203,425	5,500,000	21.9

1 Keesing's 1999: 42831, 42885; 2000: 43564, 43700. Congress installed Luis González Macci, the president of the Senate, as the new president after President Cubas was forced to resign on 28 March 1999. The Supreme Court ruled on 27 April 1999 that president Macci could remain in office until 2003 without election.

2 IFES Election Guide. Org. 2000. Vice-Presidential election, 13 August 2000.

124 Peru

Executive dominance

1995 ¹	Alberto Fujimori	64.4	7,446,496	23,532,000	31.6
2000 ²	Alberto Fujimori	73.3	8,127,900	25,600,000	31.7
2001 ³	Alejandro Toledo	53.1	10,453,485	26,000,000	40.2

1 IFES Vol. 5(2): 36. Cf. Europa 1996: 2550; Keesing's 1995: 40498. Presidential election, 9 April 1995.

2 IFES 2000 Vol. 9(1): 29; Keesing's 2000: 43509, 43563. Presidential election, 28 May 2000. Second round. President Fujimori stepped down on 16 September 2000 and fled to Japan. Mr Valentín Paniagua, Speaker of the Congress, assumed ad interim the Presidency of the Republic. See Keesing's 2000: 43741, 43851; IPU 2000; Calderón 2001.

3 CNN.com 2001. Cf. IPU 2001; Keesing's 2001: 44205. Presidential election, 3 June 2001. Second round.

125 Philippines

Executive dominance

1998 ¹	Joseph Estrada	39.9	26,902,536	75,155,000	35.8
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1 Keesing's 1998: 42277, 42496. Cf. IPU 1998; Landé 2001. Presidential election, 11 May 1998. President Estrada was impeached by the House of Representatives in November 2000. In January 2001, the Chief Justice of the Supreme Court declared that the office of president was vacant and forced Estrada out of office. He was succeeded by Vice-President Gloria Macapagal-Arroyo. See IPU 2001; Keesing's 2001: 43945–6.

126 Poland

Concurrent powers (50–50%)

Parliamentary elections

1997 ¹	Solidarity Election Action	33.8	13,088,231	38,650,000	33.9
2001 ²	Left Democratic Alliance	41.0	13,050,198	38,650,000	33.8

Presidential elections

1995 ³	Alexander Kwasniewski	51.7	18,762,615	38,588,000	48.6
2000 ⁴	Alexander Kwasniewski	53.9	17,598,919	38,650,000	45.5

1 IPU 1997. Sejm election, 21 September 1997.

2 IPU 2001; Keesing's 2001: 44354–5. Sejm election, 23 September 2001.

3 Keesing's 1995: 40837; IFES 1996 Vol. 5(4): 44. Cf. IDEA 1997: 97. Second round.

4 ElectionGuide.Org. 2000. Cf. Keesing's 2000: 43810. Presidential election, 8 October 2000.

1	2	3	4	5	6
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127 Portugal

Concurrent powers (50–50%)

*Parliamentary elections*1999¹ Socialist Party 44.0 5,257,115 9,989,000 52.6*Presidential elections*1996² Jorge Sampaio 53.9 5,630,187 9,927,000 56.72001³ Jorge Sampaio 55.8 4,324,786 10,030,000 43.1

1 IPU 1999; Keesing's 1999: 43230. Assembly of the Republic election, 10 October 1999.

2 Europa 1996: 2622. Cf. IFES 1996 Vol. 6(1): 33; IDEA 1997: 97. Presidential election, 14 January 1996.

3 CNN.com 2001. Cf. Keesing's 2001: 43963. Presidential election, 14 January 2001.

128 Qatar

Executive dominance

1995¹ Amir Hamad 100.0 0 548,000 01 See Held 1994: 325–8; Banks 1997: 687–9; World Parliaments 1998: 559; *The Middle East* 2000: 351–4; WFB 2000: 398. Qatar is a traditional monarchy. Amir Hamad bin Khalifa Al Thani assumed power on 27 June 1995 when he ousted his father Amir Khalifa.**129 Romania**

Concurrent powers (50–50%)

*Parliamentary elections*1996¹ Democratic Convention
of Romania 30.2 12,238,746 22,608,000 54.12000² Social Democracy Pole
of Romania 44.9 10,852,697 22,400,000 48.4*Presidential elections*1996³ Emil Constantinescu 54.4 12,972,485 22,608,000 57.42000⁴ Ion Iliescu 66.8 10,020,715 22,400,000 44.7

1 IPU 1995–6. Cf. IDEA 1997: 78. Chamber of Deputies election, 3 November 1996.

2 IPU 2000. Cf. IFES Election Guide. Org. 2000. Chamber of Deputies election, 26 November 2000. Distribution of seats.

3 IFES 1997 Vol. 6(4): 29; Keesing's 1996: 41376. Presidential election, 17 November 1996. Second round.

4 IFES Election Guide. Org. 2000; Keesing's 2000. 43922–3. Presidential election, 10 December 2000.

1	2	3	4	5	6
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130 Russia

Concurrent powers (50–50%)

Parliamentary elections

1999 ¹	Communist Party	24.3	65,250,663	145,559,000	44.8
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Presidential elections

1996 ²	Boris Yeltsin	54.4	73,926,240	147,739,000	50.0
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2000 ³	Vladimir Putin	53.4	74,369,773	144,700,000	51.4
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1 IPU 1999; IFES 2000 Vol. 8(4): 29; Keesing's 1999: 43320. State Duma election, 19 December 1999.

2 IFES 1996 Vol. 6(2): 30. Cf. Europa 1996: 2688; IDEA 1997: 97. Second round.

3 IFES 2000 Vol. 8(4): 30; Keesing's 2000: 43472. Cf. Europa 2000: 3072. Presidential election, 26 March 2000. See also McFaul 2000.

131 Rwanda

Executive dominance

1994 ¹	Transitional government	100.0	0	5,365,000	0
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1 Banks 1997: 708–2; Keesing's 1999: 42983; WFB 2000: 408. After president Habyarima was killed in a plane crash on 6 June 1994, the Rwandan Patriotic Front usurped power and installed Bizimungu as a new president.

132 Saudi Arabia

Executive dominance

1982 ¹	King Fahd	100.0	0	10,231,000	0
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1 Held 1994: 291–4; Banks 1997: 724–7; World Parliaments 1998: 587–8; *The Middle East* 2000: 366–8; WFB 2000: 424; 'Time travellers: A survey of the Gulf', 2002: 15–19. Saudi Arabia is an hereditary monarchy. Crown Prince Fahd was confirmed as a new king by the royal court upon the death of King Khalid on 13 June 1982.

133 Senegal

Executive dominance

1993 ¹	Abdou Diouf	58.0	1,297,216	7,913,000	16.4
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2000 ²	Abdoulayé Wade	58.5	1,657,301	9,500,000	17.4
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National referendums

2001 ³	1 referendum	–	–	–	5.0
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1 IFES 1993 Vol. 3(4): 10; Keesing's 1993: 39354, 39449; *Africa Research Bulletin* 1993: 10924. Cf. Diouf 1994. Presidential election, 21 February 1993.

2 Keesing's 2000: 43396, 43449. Presidential election, 19 March 2000. Second round.

3 CNN.com 2001; Keesing's 2001: 43933–4. Constitutional referendum on 7 January 2001.

1	2	3	4	5	6
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134 Sierra Leone

Executive dominance

1997 ¹	Temporary governments	100.0	0	4,420,000	0
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1 Keesing's 1997: 41625; 1998: 41992, 42048, 42113, 42659; 2000: 43612–13, 43781, 43840; Africa 1999: 801. A civil war and foreign military interventions since 25 May 1997 when president Ahmad Tejan Kabbah was violently overthrown.

135 Singapore

Parliamentary dominance

1997 ¹	People's Action Party	63.4	716,745	3,737,000	19.2
2001 ²	People's Action Party	73.7	625,267	4,000,000	15.6

1 IPU 1997; WFB 2000: 435. Parliamentary election, 2 January 1997.

2 IPU 2001; Keesing's 2001: 44458–9. Parliamentary election, 3 November 2001.

136 Slovakia

Concurrent powers (50–50%)

Parliamentary elections

1998 ¹	Movement for a Democratic Slovakia	27.0	3,359,176	5,391,000	62.3
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Presidential elections

1999 ²	Rudolf Schuster	57.2	2,948,402	5,395,000	54.6
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National referendums

2000 ³	1 referendum	–	–	–	5.0
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1 IPU 1998; Keesing's 1998: 42518; IFES 1999 Vol. 8(1): 30. National Council of the Slovak Republic election, 25–26 September 1998.

2 IFES 1999 Vol. 8(3): 30; Keesing's 1999: 42749, 42954. Presidential election, 29 May 1999. Second round.

3 IFES Election Guide. Org. 2000; Keesing's 2000: 43765. Referendum, 11 November 2000.

137 Slovenia

Concurrent powers (50–50%)

Parliamentary elections

1996 ¹	Liberal Democratic Party	27.0	1,069,204	1,991,000	53.7
2000 ²	Liberal Democratic Party	36.2	1,079,519	1,990,000	54.2

Presidential elections

1997 ³	Milan Kucan	55.6	1,040,681	1,987,000	52.3
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1 IPU 1995–6; Keesing's 1996: 41378; IFES 1997 Vol. 6(4): 29. National Assembly election, 10 November 1996.

2 IPU 2000; IFES Election Guide. Org. 2000. Cf. Keesing's 2000: 43809. National Assembly election, 15 October 2000.

3 Keesing's 1997: 41932; WFB 2000: 440. Presidential election, 24 November 1997.

1	2	3	4	5	6
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138 Solomon Islands

Parliamentary dominance

1997 ¹	Alliance for Change	52.0	–	404,000	(30.0)
2001 ²	People's Alliance Party	40.0	178,161	450,000	39.6

1 IPU 1997; Europa 1998: 3040, 3044. Parliamentary election, 6 August 1997. Distribution of seats. It is assumed that the degree of participation was approximately the same as in the 1993 parliamentary election.

2 IPU 2001; Keesing's 2001: 44517. Parliamentary election, 5 December 2001. Distribution of seats.

139 Somalia

Executive dominance

1991 ¹	Competing governments	100.0	0	7,882,000	0
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State referendums

2001 ²	1 referendum	–	–	–	1.0
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1 Banks 1997: 759–65; World Parliaments 1998: 614; Africa 1999: 813; WFB 2000: 444; Keesing's 2000: 43693. Military governments and a civil war since January 1991 when President Barre was overthrown by rebels.

2 Keesing's 2001: 44142. Somaliland referendum on independence.

140 South Africa

Parliamentary dominance

1999 ¹	African National Congress	66.3	15,977,142	43,054,000	37.1
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1 IPU 1999; IFES 1999 Vol. 8(3): 29; Keesing's 1999: 42980. National Assembly election, 2 June 1999. See also Landsberg 2000.

141 Spain

Parliamentary dominance

1996 ¹	People's Party	38.7	25,078,874	39,270,000	63.9
2000 ²	Popular Party	45.2	22,814,467	39,500,000	57.8

1 IPU 1995–6. Cf. IDEA 1997: 80. Congress of Deputies election, 3 March 1996.

2 IPU 2000; IFES Election Guide. Org. 2000. Cf. Keesing's 2000: 43485. Congress of Deputies election, 12 March 2000.

1	2	3	4	5	6
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142 Sri Lanka

Concurrent powers (50–50%)

Parliamentary elections

1994 ¹	People's Alliance	48.9	7,943,706	17,891,000	44.4
2000 ²	People's Alliance	45.1	8,647,668	19,200,000	45.0
2001 ³	United National Party	45.6	8,955,869	19,400,000	46.2

Presidential elections

1999 ⁴	Chandrika Kumaratunga	51.1	8,335,754	19,043,000	43.8
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1 IPU 1994–5. See also Banks 1997: 786–92. Parliamentary election, 16 August 1994.

2 IPU 2000; IFES Election Guide. Org. 2000. Cf. Keesing's 2000: 43749. Parliamentary election, 10 October 2000.

3 IPU 2001; Keesing's 2001: 44509. Parliamentary election, 5 December 2001.

4 Europa 2001: 3669. Cf. Keesing's 1999: 43311. Presidential election, 21 December 1999.

143 Sudan

Concurrent powers (50–50%)

Parliamentary elections

1996 ¹	National Islamic Front	(80.0)	5,525,280	27,160,000	20.3
2000 ²	National Congress	98.6	—	29,400,000	(20.0)

Presidential elections

1996 ³	Omar H. Ahmad al-Bashir	75.7	5,525,280	27,160,000	20.3
2000 ⁴	Omar Al-Bashir	86.0	—	29,400,000	(20.0)

1 IPU 1995–6; Keesing's 1996: 40986; IDEA 1997: 81, 98; Africa 1999: 852, 857. National Assembly election, 6–17 March 1996. Distribution of seats.

2 IPU 2000; Europa 2002: 3738. National Assembly and presidential elections, 13 December–23 December 2000. Distribution of seats. It is assumed that the degree of participation was approximately the same as in the 1996 elections.

3 Keesing's 1996: 40986; Africa 1999: 858. Presidential election, 6–17 March 1996.

144 Suriname

Parliamentary dominance

1996 ¹	New Front Alliance	45.0	179,416	413,000	43.3
2000 ²	New Front for Democracy	47.3	–	415,000	(43.0)

1 IPU 1995–6; Keesing's 1996: 41091; IDEA 1997: 81. National Assembly election, 23 May 1996.

2 IPU 2000; Keesing's 2000: 43565. National Assembly election, 25 May 2000. It is assumed that the degree of participation was approximately the same as in the 1996 election.

145 Swaziland

Executive dominance

1986 ¹	King Mswati III	100.0	0	668,000	0
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1 Banks 1997: 805–807; World Parliaments 1998: 638; WFB 2000: 461. Swaziland is a traditional monarchy. King Mswati III was installed on 25 April 1986 when he succeeded as head of state Queen Regent Ntombi Thwala.

1	2	3	4	5	6
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146 Sweden

Parliamentary dominance

1998 ¹	Social Democrats	36.6	5,261,122	8,854,000	59.4
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1 IPU 1998; Keesing's 1998: 42515. Parliamentary election, 20 September 1998.

147 Switzerland

Parliamentary dominance

1999 ¹	Socialist Party	22.5	1,970,415	7,140,000	27.6
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National referendums

1999 ²	10 federal referendums	–	–	–	30.0
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2000 ³	15 federal referendums	–	–	–	30.0
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2001 ⁴	11 referendums	–	–	–	30.0
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1 IPU 1999. Cf. IFES 2000 Vol. 8(4): 30; Keesing's 1999: 43223. National Council election, 24 October 1999.

2 *Statistisches Jahrbuch der Schweiz* 2000: 446–54; *Eidgenössische Abstimmungen 1995–1999* 2001.

3 *Daten der Eidgenössischen Volksabstimmungen, 12. März, 21. Mai, 24. Sep., 26. Nov. 2000; Votation populaire du 21 mai 2000; Volksabstimmung vom 24. September 2000; Volksabstimmung vom 26. November 2000; Statistisches Jahrbuch der Schweiz* 2002: 783–6.

4 Confederatio Helvetica, *Ergebnisse der Vorlagen an eidgenössischen Volksabstimmungen* 2001.

148 Syria

Executive dominance

1999 ¹	Hafez al-Assad	100.0	—	16,110,000	(54.0)
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2000 ²	Bashar al-Assad	97.3	8,931,623	16,500,000	54.1
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1 Keesing's 1999: 42814; *The Middle East* 2000: 389. Presidential referendum, 10 February 1999. It is assumed that the degree of participation was approximately the same as in the 1991 presidential referendum.

2 Keesing's 2000: 43689. Presidential referendum, 10 July 2000.

149 Taiwan (Republic of China on Taiwan)

Concurrent powers (50–50%)

Parliamentary elections

1998 ¹	Kuomintang	46.4	10,035,829	21,908,000*	45.8
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2001 ²	Democratic Progressive Party	36.6	10,467,000	22,370,461*	46.8
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Presidential elections

1996 ³	Lee Teng-Hui	54.0	10,766,119	21,311,000	50.5
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2000 ⁴	Chen Shui-bian	39.3	12,786,671	22,113,250*	57.8
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* 1998: *Philip's Encyclopedic World Atlas* 2000: 215; 1999: WFB 2000: 539; 2001: CNN.com 2001.

1 CNN.com 1998. Cf. Keesing's 1998: 42668; *Journal of Democracy* 1999 Vol. 10(1): 175. Legislative Yuan election, 5 December 1998.

2 Keesing's 2001: 44511; IFES Election Guide.Org 2001. Legislative Yuan election, 1 December 2001.

3 Keesing's 1996: 40996; IFES 1996 Vol. 6(1): 34; IDEA 1997: 98. Presidential election, 23 March 1996.

4 IFES 2000 Vol. 8(4): 30; Keesing's 2000: 43460. Presidential election, 18 March 2000.

1	2	3	4	5	6
150 Tajikistan					
Concurrent powers (50–50%)					
<i>Parliamentary elections</i>					
1995 ¹	Communists and supporters	88.0	2,254,000	5,836,000	38.6
2000 ²	People's Democratic Party	60.3	2,622,533	6,350,000	41.3
<i>Presidential elections</i>					
1999 ³	Imamoli S. Rakhmanov	96.0	—	6,237,000	(41.0)
<i>National referendums</i>					
1999 ⁴	1 referendum	–	–	–	5.0
1 IPU 1995–6; Keesing's 1995: 40407, 40453; Banks 1997: 823; IDEA 1997: 98. Supreme Assembly election, 26 February and 16 March 1995. Distribution of seats.					
2 IPU 2000; Keesing's 1999: 43407. Supreme Council election, 27 February 2000. Distribution of seats.					
3 Keesing's 1999: 43258; Europa 2002: 3839. Presidential election, 6 November 1999. It is assumed that the degree of electoral participation was approximately the same as in the 2000 parliamentary election.					
4 Keesing's 1999: 43049. Referendum, 26 September 1999.					
151 Tanzania					
Concurrent powers (50–50%)					
<i>Parliamentary elections</i>					
1995 ¹	Revolutionary Party of Tanzania	80.2	6,440,914	29,086,000	22.1
2000 ²	Revolutionary Party of Tanzania	88.7	6,512,000	33,400,000	19.5
<i>Presidential elections</i>					
1995 ¹	Benjamin William Mkapa	61.8	6,512,745	29,086,000	22.4
2000 ²	Benjamin William Mpaka	71.7	8,172,284	33,400,000	25.9
1 IFES 1996 Vol. 5(4): 46–7; IDEA 1997: 82, 98; IPU 1995–6; Africa 1999: 881–3. Cf. Keesing's 1995: 40810; Banks 1997: 825–30. National Assembly and presidential elections, 29 October 1995. Distribution of seats.					
2 IPU 2000; Keesing's 2000: 43838; Europa 2001: 3821. National Assembly and presidential elections, 29 October 2000. Distribution of seats.					
152 Thailand					
Concurrent powers (75–25%)					
<i>Parliamentary elections</i>					
1996 ¹	New Aspiration Party	31.8	23,712,000	60,003,000	39.5
2001 ²	Thai Rak Thai	49.6	26,917,190	63,000,000	42.7
<i>Executive elections</i>					
1946 ³	King Bhumibol	100.0	0	19,000,000	0
1 IPU 1995–6; Keesing's 1996: 38816, 39093; IFES 1997 Vol. 6(4): 30. House of Representatives election, 17 November 1996. The new 1997 constitution strengthens the position of the parliament. Therefore the weight of parliamentary elections was raised to 75 percent from the previous 50 percent.					
2 IPU 2001. House of Representatives elections, 6 January 2001. Distribution of seats.					
3 Banks 1997: 830–5; World Parliaments 1998: 668–70; WFB 2000: 476. Thailand is a constitutional monarchy. King Bhumibol ascended the throne on 9 June 1946.					

1	2	3	4	5	6
153 Togo					
Concurrent powers (50–50%)					
<i>Parliamentary elections</i>					
1999 ¹	Togolese People's Rally	97.5	1,263,334	4,512,000	28.0
<i>Presidential elections</i>					
1998 ²	Gnassingbé Eyadema	52.1	1,560,263	4,397,000	35.5

1 Africa 1999: 904; IPU 1999; Keesing's 1999: 42825. National Assembly election, 21 March 1999. Distribution of seats. It is assumed that the degree of participation was approximately the same as in the previous parliamentary election in 1994.

2 Keesing's 1998: 42322; Africa 1999: 906; WFB 2000: 479. Presidential election, 21 June 1998.

154 Trinidad and Tobago

Parliamentary dominance

1995 ¹	People's National Movement	48.8	525,326	1,260,000	41.7
2000 ²	United National Congress	52.8	—	1,300,000	(42.0)
2001 ³	United National Congress	50.0	—	1,320,000	(42.0)

1 IPU 1995–6. Cf. Keesing's 1995: 40817–18; IDEA 1997: 83; WFB 2000: 484. House of Representatives election, 6 November 1995.

2 IPU 2000. House of Representatives election, 11 December 2000. Distribution of seats. It is assumed that the degree of participation was approximately the same as in the 1995 election.

3 IPU 2001; Keesing's 2001: 44501. House of Representatives election, 10 December 2001. Distribution of seats.

155 Tunisia

Concurrent powers (50–50%)

Parliamentary elections

1999 ¹	Democratic Constitutional Rally	91.6	3,091,098	9,457,000	32.7
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Presidential elections

1999 ²	Ben Ali	99.4	3,296,020	9,457,000	34.8
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1 IPU 1999. Parliamentary election, 24 October 1999.

2 Keesing's 1999: 43237. Presidential election, 24 October 1999.

1	2	3	4	5	6
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156 Turkey

Concurrent powers (75–25%)

*Parliamentary elections*1999¹ Democratic Left Party 22.3 31,051,199 64,385,000 48.2*Presidential elections*1993² Süleyman Demirel 56.6 0 58,512,000 02000³ Ahmed Necdet Sezer 61.9 0 65,300,000 0

1 IPU 1999; IFES 1999 Vol. 8(2): 30; Keesing's 1999: 42911. Grand National Assembly election, 18 April 1999.

2 Keesing's 1993: 39482–3. The Grand National Assembly elected Demirel as the country's president on 16 May 1993. For the governmental system of Turkey, see Banks 1997: 851–6; World Parliaments 1998: 676–83.

3 Keesing's 2000: 43584–5. The Grand National Assembly elected Sezer the 10th President of Turkey on 5 May 2000.

157 Turkmenistan

Executive dominance

1999¹ Saparmurad Niyazov 100.0 0 4,384,000 0

1 Keesing's 1999: 43312. On 28 December 1999, the Majlis (parliament) approved an amendment to the country's constitution, which allows Niyazov to remain as president for an unlimited period. Cf. IPU 1999.

158 Uganda

Executive dominance

1996¹ Gen. Yoweri K. Museveni 74.2 5,967,548 19,848,000 30.12001² Gen. Yoweri Museveni 69.3 7,389,691 22,600,000 32.7*National referendums*2000³ 1 referendum – – – 5.0

1 Keesing's 1996: 41084; Banks 1997: 863–5; WFB 2000: 498. Cf. IFES 1996 Vol. 6(2): 30; World Parliaments 1998: 684. Presidential election, 9 May 1996.

2 CNN.com 2001; Keesing's 2001: 44036. Presidential election, 12 March 2001.

3 IFES Election Guide. Org 2000; Keesing's 2000: 43610. Referendum, 29 June 2000.

159 Ukraine

Concurrent powers (50–50%)

*Parliamentary elections*1998¹ Communist Party of Ukraine 27.0 24,251,899 50,048,000 48.5*Presidential elections*1999² Leonid Kuchma 57.7 27,506,323 50,106,000 54.9*National referendums*2000³ 1 referendum – – – 5.0

1 IFES 1998 Vol. 7(4): 30; IPU 1998. Cf. Keesing's 1998: 42143, 42232–3, 42296. Parliamentary election, 29 March 1998.

2 IFES 2000 Vol. 8(4): 29; Keesing's 1999: 43214–16, 43283. Presidential election, 14 November 1999. Second round.

3 IFES Election Guide. Org. 2000; Keesing's 2000: 43538. Referendum, 16 April 2000.

1	2	3	4	5	6
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160 United Arab Emirates

Executive dominance

1996 ¹	Zaid bin Sultan al-Nuhayan	100.0	0	2,443,000	0
2001 ²	Sultan al-Nahayan	100.0	0	2,500,000	0

1 Banks 1997: 874–7; World Parliaments 1998: 693; WFB 2000: 503; ‘Time travellers: A survey of the Gulf’, 2002: 15–19. United Arab Emirates is a federation of seven emirates ruled by their emirs. Zaid bin Sultan al-Nuhayan was elected as president by the Federal Supreme Council in October 1996 for a five-year term.

2 Keesing’s 2001: 44535. The Supreme Federal Council re-elected Zaid bin Sultan al-Nahayan as President of the United Arab Emirates for a five-year term on 2 December 2001.

161 United Kingdom

Parliamentary dominance

1997 ¹	Labour Party	43.2	31,287,097	59,009,000	53.0
2001 ²	Labour Party	40.7	26,368,798	58,700,000	44.9

Local referendums

2001 ³	6 referendums	–	–	–	6.0
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1 IPU 1997. House of Commons election, 1 May 1997.

2 IPU 2001. Cf. Keesing’s 2001: 44220–1. House of Commons elections, 7 June 2001.

3 Keesing’s 2001: 44422. Local referendums on mayoral elections, 18 October 2001.

162 United States

Executive dominance

1996 ¹	Bill Clinton	49.2	96,236,625	265,463,000	36.2
2000 ²	George W. Bush	48.7	102,259,436	276,000,000	37.0

State referendums

1999 ³	32 state referendums	–	–	–	30.0
2000 ³	At least 30 state referendums	–	–	–	30.0
2001 ⁴	At least 30 state referendums	–	–	–	30.0

1 Europa 2000: 3885. Cf. Keesing’s 1996: 41357; IDEA 1997: 99; WFB 2000: 509. presidential election, 5 November 1996.

2 Keesing’s 2000: 43832. Presidential election, 7 November 2000.

3 See Beyle 1999: 29–31; 2000: 25–9; Initiative & Referendum Institute 2001; US Department of State, *International Information Programs* 2001.

4 Initiative & Referendum Institute 2001.

163 Uruguay

Executive dominance

1999 ¹	Jorge Battle	51.5	(2,174,000)	3,313,000	65.6
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1 Keesing’s 1999: 43254; IPU 1999; Europa 2000: 3965. Presidential election, 28 November 1999. Second round. It is assumed that the number of valid votes was the same as in the parliamentary election on 31 October 1999.

1	2	3	4	5	6
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164 Uzbekistan

Executive dominance

1995 ¹	Islam Karimov	99.6	10,511,000	22,690,000	46.3
2000 ¹	Islam Karimov	91.9	—	23,900,000	(46.0)

1 Europa 1996: 3498, 3504; Banks 1997: 918–19; IDEA 1997: 85. President Karimov's term was extended to 2000 by popular referendum on 27 March 1995. Data on total votes concern the votes given in the legislative election in 1995.

2 Keesing's 2000: 43362; Europa 2002: 4337. Presidential election, 9 January 2000. It is assumed that the degree of participation was approximately the same as in the 1995 election.

165 Venezuela

Executive dominance

1998 ¹	Hugo R. Chávez Frías	56.2	6,537,304	23,242,000	28.1
2000 ²	Hugo R. Chávez Frías	56.9	6,600,196	24,100,000	27.4

National referendums

1999 ³	2 referendums	—	—	—	10.0
2000 ⁴	2 referendums	—	—	—	10.0

1 Keesing's 1998: 42664; IFES 1999 Vol. 8(1): 30. Presidential election, 6 December 1998.

2 IFES 2000 Vol. 9(1): 30; Keesing's 2000: 43667. Presidential election, 30 July 2000. See also Nafm 2001.

3 IFES Election Guide. Org. 1999; Keesing's 1999: 42775, 42884, 43308. Referendums, 25 April 1999 and 15 December 1999.

4 IFES Election Guide. Org. 2000; Keesing's 2000: 43899. Referendums, 25 April 2000 and 3 December 2000.

166 Vietnam, Socialist Republic of

Parliamentary dominance

1997 ¹	Vietnam Fatherland Front	100.0	43,185,756	76,387,000	56.5
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1 IPU 1997. National Assembly election, 20 July 1997.

167 Yemen

Concurrent powers (50–50%)

Parliamentary elections

1997 ¹	General People's Congress	62.5	2,827,261	16,484,000	17.1
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Presidential elections

1999 ²	Ali Abdullah Salih	96.3	3,577,960	17,676,000	20.2
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National referendums

2001 ³	1 referendum	—	—	—	5.0
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1 IPU 1997; *The Middle East* 2000: 400; WFB 2000: 533. House of Representatives election, 27 April 1997. Distribution of seats.

2 Keesing's 1999: 43177; Europa 2000: 4060. Presidential election, 23 September 1999.

3 CNN.com 2001; Keesing's 2001: 44028. Referendum on constitutional reform, 20 February 2001.

1	2	3	4	5	6
168 Yugoslavia					
Concurrent powers (50–50%)					
<i>Parliamentary elections</i>					
1996 ¹	Socialist Party of Serbia and allied groups	48.2	4,047,230	10,577,000	38.3
2000 ²	Democratic Opposition of Serbia	46.2	4,527,239	10,600,000	42.7
<i>Presidential elections</i>					
1997 ³	Slobodan Milosevic	90.7	129	10,597,000	0
2000 ⁴	Vojislav Kostunica	51.7	4,777,099	10,600,000	45.1

1 IPU 1995–6; IDEA 1997: 85. Chamber of Citizens election, 3 November 1996.

2 IFES Election Guide. Org. 2000. Cf. IPU 2000; Keesing's 2000: 43684–5, 43766, 43874. Federal Assembly election, 24 September 2000.

3 Keesing's 1997: 41748. Cf. WFB 2000: 428. The Federal Assembly elected Milosevic as president on 15 July 1997.

4 IFES Election Guide. Org. 2000. Cf. Keesing's 2000: 43766. Presidential election, 24 September 2000.

169 Zambia

Concurrent powers (50–50%)

Parliamentary elections

1996 ¹	Movement for Multiparty Democracy	87.3	1,277,585	9,454,000	13.5
2001 ²	Movement for Multiparty Democracy	46.0	1,751,354	11,000,000	15.9

Presidential elections

1996 ³	Frederick Chilubu	72.6	1,258,805	9,454,000	13.3
2001 ⁴	Levy Mwanawasa	29.9	1,692,948	11,000,000	15.4

1 Africa 1999: 950–3. Cf. IPU 1995–6; WFB 2000: 535. National Assembly election, 18 November 1996. Distribution of seats.

2 IPU 2001. Cf. Keesing's 2002: 44540. National Assembly election, 27 December 2001. Distribution of seats.

3 Africa 1999: 954. Cf. IFES 1997 Vol. 6(4): 30; Keesing's 1996: 41351; IDEA 1997: 100. Presidential election, 18 November 1996.

4 Keesing's 2001: 44493; 2002: 44540. Presidential election, 27 December 2001.

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
170 Zimbabwe					
Concurrent powers (50–50%)					
<i>Parliamentary elections</i>					
1995 ¹	Zimbabwe African National Union – Patriotic Front	82.9	1,468,191	11,526,000	12.7
2000 ²	Zimbabwe African National Union – Patriotic Front	51.7	2,490,556	13,800,000	18.0
<i>Presidential elections</i>					
1996 ³	Robert Mugabe	92.7	1,557,558	11,908,000	13.1
<i>National referendums</i>					
2000 ⁴	1 referendum	–	–	–	5.0

1 IFES 1995 Vol. 5(3): 39. Cf. IPU 1994–5; Keesing's 1995: 40488; Banks 1997: 969–74; Africa 1999: 973. National Assembly election, 8–9 April 1995.

2 Keesing's 2000: 43608; Europa 2000: 4120. House of Assembly election, 24–25 June 2000. Distribution of seats.

3 Europa 1996: 3641, 3649; Banks 1997: 969–74; IDEA 1997: 100; WFB 2000: 537. Presidential election, 16–17 March 1996.

4 Keesing's 2000: 43348, 43393. Referendum, 12–13 February 2000.

Appendix 2 Data on adult literacy and students in universities per 100,000 inhabitants in 170 countries

	<i>Country</i>	<i>Adult literacy % 1998</i>	<i>Students in universities</i>	<i>Per 100,000 inhabitants</i>	<i>Year</i>	<i>As % from 4,000</i>
1	Afghanistan	32	9,367	63	1990	2
2	Albania	84	33,962	930	1996/97	23
3	Algeria	66	267,142	952	1995/96	24
4	Angola	42	6,331	67	1991/92	2
5	Argentina	97	740,545	2,158	1994	54
6	Armenia	98	35,517 ¹	942	1996/97	24
7	Australia	99	559,365	3,197	1992	80
8	Austria	99	210,639	2,636	1993/94	66
9	Azerbaijan	99	83,711	1,108	1996/97	28
10	Bahamas	96	3,201 ³	1,190	1993	30
11	Bahrain	87	7,676 ¹	1,429	1993	36
12	Bangladesh	40	118,949 ⁴	100	1995/96	3
13	Barbados	97	3,275	1,241	1996	31
14	Belarus	99	212,446	2,073	1996/97	52
15	Belgium	99	250,700 ²	2,480	1995/96	62
16	Belize	93	2,500 ⁵	1,157	1995/96	29
17	Benin	38	14,055	251	1996	6
18	Bhutan	44	3,029 ⁶	144	2000	4
19	Bolivia	84	109,503	1,626	1991	41
20	Bosnia & Herzegovina	95 ¹	–	1,400 ⁷	1996	35
21	Botswana	76	7,275	486	1996/97	12
22	Brazil	85	1,868,529	1,184	1996	30
23	Brunei	91	1,388 ¹	518	1992/93	13
24	Bulgaria	98	237,776	2,846	1996/97	71
25	Burkina Faso	22	8,276	99	1992/93	2
26	Burma (Myanmar)	84	89,717	204	1994/95	5
27	Burundi	46	4,256	74	1992/93	2
28	Cambodia	52	10,019	98	1996/97	2
29	Cameroon	74	31,360	273	1990/91	7
30	Canada	99	867,352	3,094	1991/92	77

	<i>Country</i>	<i>Adult literacy % 1998</i>	<i>Students in universities</i>	<i>Per 100,000 inhabitants</i>	<i>Year</i>	<i>As % from 4,000</i>
31	Cape Verde	73	1,660 ⁸	419	1996/97	10
32	Central African Republic	44	2,923	97	1991/92	2
33	Chad	45	3,274	49	1995/96	1
34	Chile	95	305,193	2,117	1996	53
35	China	83	3,170,936	257	1996/97	6
36	Colombia	91	562,716	1,579	1996	39
37	Comoros	58	348 ¹	57	1995/96	1
38	Congo (Brazzaville)	78	13,806	587	1992/93	15
39	Congo (Zaire)	59	40,765	93	1994/95	2
40	Costa Rica	95	65,268	2,222	1992	56
41	Côte d'Ivoire	45	43,147	315	1994/95	8
42	Croatia	98	85,752	1,908	1996/97	48
43	Cuba	96	111,587	1,013	1996/97	25
44	Cyprus	97	9,982 ¹	1,353	1996	34
45	Czech Republic	99	183,954 ⁹	1,786	1999/2000	45
46	Denmark	99	124,942	2,424	1991/92	61
47	Djibouti	56	161 ¹	26	1996/97	1
48	Dominican Republic	83	123,800 ²	1,538	1996/97	38
49	Ecuador	96	144,500 ²	1,408	1990	35
50	Egypt	54	850,051	1,478	1995/96	37
51	El Salvador	78	66,092	1,293	1990/91	32
52	Equatorial Guinea	81	578 ¹	166	1990/91	4
53	Eritrea	52	3,020	95	1995/96	2
54	Estonia	99	30,072	2,047	1996/97	51
55	Ethiopia	36	36,678	65	1996/97	2
56	Fiji	92	7,908 ¹	741	1991	27
57	Finland	99	124,370	2,455	1993/94	61
58	France	99	1,395,103	2,420	1993/94	61
59	Gabon	67	4,655	444	1994/95	11
60	Gambia	35	1,591 ¹	148	1994/95	4
61	Georgia	99	131,192	2,425	1996/97	61
62	Germany	99	1,838,099	2,244	1996/97	56
63	Ghana	69	9,609	64	1990	2
64	Greece	97	191,070	1,865	1991/92	47
65	Guatemala	67	102,400 ¹⁰	957	1999	24
66	Guinea	38	6,795	95	1995/96	2
67	Guinea-Bissau	37	580 ¹¹	62	1996	2
68	Guyana	98	8,965 ¹	1,080	1996/97	27
69	Haiti	48	6,288 ¹²	97	1990/91	2
70	Honduras	73	49,599	914	1994	23
71	Hungary	99	136,200 ²	1,332	1995/96	33
72	Iceland	99	7,908	2,940	1996/97	74
73	India	56	4,425,247	530	1990/91	13

	<i>Country</i>	<i>Adult literacy % 1998</i>	<i>Students in universities</i>	<i>Per 100,000 inhabitants</i>	<i>Year</i>	<i>As % from 4,000</i>
74	Indonesia	86	1,889,408	970	1995/96	24
75	Iran	75	367,296	600	1996/97	15
76	Iraq	54	46,250 ¹³	250	1991/92	6
77	Ireland	99	56,190	1,583	1992/93	40
78	Israel	96	101,700	1,834	1995/96	46
79	Italy	98	1,604,216	2,859	1992/93	71
80	Jamaica	86	8,434	335	1996/97	8
81	Japan	99	2,311,618	1,865	1991/92	47
82	Jordan	89	89,010	1,499	1996/97	37
83	Kazakhstan	99	260,043	1,619	1995/96	40
84	Kenya	81	35,421	147	1990/91	4
85	Korea, North	99 ²	227,500 ¹⁴	1,088	1987/88	27
86	Korea, South	98	1,556,949	3,418	1996/97	85
87	Kuwait	81	14,658	774	1996/97	19
88	Kyrgyzstan	97	34,800 ²	771	1995/96	19
89	Laos	52	5,273	107	1996/97	3
90	Latvia	99	61,045 ¹⁵	2,475	2000	62
91	Lebanon	85	81,588	2,720	1995/96	68
92	Lesotho	82	2,914	148	1996/97	4
93	Liberia	45	2,404	153	1975	4
94	Libya	78	72,899	1,687	1991/92	42
95	Lithuania	99	58,776	1,584	1996/97	40
96	Luxembourg	99	6,248 ¹⁶	1,467	1997/98	37
97	Macedonia	95	27,713	1,403	1996/97	35
98	Madagascar	65	18,458	130	1996/97	3
99	Malawi	58	3,872	40	1995/96	1
100	Malaysia	86	139,277 ¹⁷	673	1995	17
101	Maldives	96	189 ¹⁸	70	1996	2
102	Mali	38	13,679	134	1996/97	3
103	Malta	92	8,260 ¹	2,214	1996/97	55
104	Mauritania	41	8,171	358	1995/96	9
105	Mauritius	84	7,098 ¹	626	1996/97	16
106	Mexico	91	1,280,006	1,509	1991/92	38
107	Moldova	99	60,445	1,397	1996/97	35
108	Mongolia	81	20,846	893	1996/97	22
109	Morocco	47	242,053	910	1994/95	23
110	Mozambique	42	7,143	40	1996/97	1
111	Namibia	81	1,496	108	1991	3
112	Nepal	39	105,694	507	1996	13
113	Netherlands	99	328,200 ²	2,113	1996/97	53
114	New Zealand	99	105,555	2,970	1993	74
115	Nicaragua	68	48,758	1,044	1997	26
116	Niger	15	4,513	56	1991/92	1
117	Nigeria	61	207,982	221	1993/94	6

	<i>Country</i>	<i>Adult literacy % 1998</i>	<i>Students in universities</i>	<i>Per 100,000 inhabitants</i>	<i>Year</i>	<i>As % from 4,000</i>
118	Norway	99	77,951	1,808	1993/94	45
119	Oman	69	5,135	232	1996/97	6
120	Pakistan	44	260,590 ¹⁹	198	1999/2000	5
121	Panama	91	80,089	3,000	1996	75
122	Papua New Guinea	63	4,669	115	1995	3
123	Paraguay	93	32,520	656	1996	16
124	Peru	89	346,532	1,447	1996	36
125	Philippines	95	1,410,000 ²	2,007	1995/96	50
126	Poland	99	635,777	1,653	1993/94	41
127	Portugal	91	150,510	1,524	1991/92	38
128	Qatar	80	8,475 ¹	1,519	1996/97	38
129	Romania	98	354,488	1,568	1996/97	39
130	Russia	99	2,587,510	1,749	1994/95	44
131	Rwanda	64	7,000 ²⁰	106	2000	3
132	Saudi Arabia	75	241,309	1,282	1996/97	32
133	Senegal	36	23,769 ²¹	270	1997/98	7
134	Sierra Leone	33	2,571	64	1990/91	2
135	Singapore	92	37,791	1,046	1996	26
136	Slovakia	99	97,600	1,816	1996/97	45
137	Slovenia	99	50,687	2,546	1996/97	64
138	Solomon Islands	62	1,000 ²²	333	1988	8
139	Somalia	24 ³	0 ²³	0	1993	0
140	South Africa	85	330,000 ²⁴	733	1999	18
141	Spain	97	1,341,761	3,433	1993/94	86
142	Sri Lanka	91	40,035	221	1995/91	6
143	Sudan	56	59,824	232	1990	6
144	Suriname	93	4,037 ²⁵	975	1999/2000	24
145	Swaziland	78	5,658 ¹	938	1996/97	15
146	Sweden	99	210,266 ²⁶	2,378	1996/97	59
147	Switzerland	99	154,836 ²⁷	2,190	1996/97	55
148	Syria	73	167,186	1,208	1994/95	30
149	Taiwan	94 ⁴	696,000 ²⁸	3,149	1999	79
150	Tajikistan	99	76,613	1,294	1996/97	32
151	Tanzania	74	15,017 ²⁹	50	1995/96	1
152	Thailand	95	481,936	820	1994/95	21
153	Togo	55	11,462	282	1995/96	7
154	Trinidad & Tobago	95	6,007	475	1996/97	12
155	Tunisia	69	115,485	1,270	1996/97	32
156	Turkey	84	737,542	1,235	1994/95	31
157	Turkmenistan	98	53,200 ²	1,450	1990/91	36
158	Uganda	65	15,197	77	1996/97	2
159	Ukraine	99	923,000	1,800	1995/96	45
160	United Arab Emirates	75	16,213	663	1996/97	17
161	United Kingdom	99	1,166,100 ³⁰	2,004	1997/98	50

	Country	Adult literacy % 1998	Students in universities	Per 100,000 inhabitants	Year	As % from 4,000
162	United States	99	8,529,132	3,412	1990/91	85
163	Uruguay	98	67,474	2,081	1996	52
164	Uzbekistan	88	225,177 ³¹	1,054	1992/93	26
165	Venezuela	92	385,500 ³²	1,930	1991/92	48
166	Vietnam	93	208,900 ²	282	1995	7
167	Yemen	44	65,675	412	1996/97	10
168	Yugoslavia	93	140,568	1,329	1996/97	33
169	Zambia	76	7,361	91	1990	2
170	Zimbabwe	87	10,322	87	1996	2

Sources

Adult literacy rate (%) 1998

Human Development Report 2000 2000: Table 1, if not otherwise noted. Cf. Unesco 1999: Table II.S.1; *World Development Report 2002* 2002: Table 1. In the cases of Bhutan, Cambodia, Chad, Djibouti, Gabon, Guinea, Laos, Liberia, Mongolia, and Sierra Leone in which data given in these sources differ from each other more than four percentage points, a mean of different percentages is used.

1 Estimation based on the rate of literacy in Macedonia.

2 *The World Factbook 2000* 2000: 264.

3 *Ibid.*: 444.

4 *Ibid.*: 539.

Students in universities

Unesco 1999: Table II.7, if not otherwise noted. Cf. Unesco 1998: Table 3.9.

- 1 Students in all institutions of higher education.
- 2 70 percent of the number of students in all institutions.
- 3 (Bahamas) Europa 2001: 595, 598. Students at the College of the Bahamas.
- 4 (Bangladesh) Europa 2001: 629. Students in universities.
- 5 (Belize) Europa 2001: 702. Institutions of higher education.
- 6 (Bhutan) Europa 2001: 732. Students in the Degree College affiliated with the University of Delhi (580) and in private schools (2,449).
- 7 (Bosnia & Herzegovina) Estimation based on the number of students per 100,000 inhabitants in Macedonia.
- 8 (Cape Verde) Europa 2001: 963. Students studying in overseas universities.
- 9 (Czech Republic) Europa 2001: 1308. Students in universities.
- 10 (Guatemala) Europa 2001: 1815. 70 percent of the students in tertiary institutions.
- 11 (Guinea-Bissau) Europa 2001: 1848. Teacher-training and tertiary institutions.
- 12 (Haiti) Europa 2001: 1874. Tertiary institutions.
- 13 (Iraq) Europa 2001: 2042. Institutions of higher education.
- 14 (North Korea) Europa 2001: 2321. 70 percent of the number of students in universities (46) and colleges (473).
- 15 (Latvia) Europa 2001: 2419. 70 percent of the students in state higher education institutions.
- 16 (Luxembourg) Europa 2001: 2526. Students in the Higher Institute of Technology, teacher training institutions, and in other university-level institutions.
- 17 (Malaysia) Europa 2001: 2597. Universities and the Institution of Technology.
- 18 (Maldives) Europa 2001: 2621. Teacher-training institutions.
- 19 (Pakistan) Europa 2001: 3077. Professional institutions and universities.
- 20 (Rwanda) Europa 2001: 3349. Students enrolled in higher education.
- 21 (Senegal) Europa 2001: 3447. University students.

- 22 (Solomon Islands) Europa 2001: 3544, 3546. Estimation. Students in overseas universities (405) and in teacher-training schools and in a technical institute.
- 23 (Somalia) Europa 2001: 3550. Somalia's educational system collapsed in 1991 when the country descended into anarchy.
- 24 (South Africa) Europa 2001: 3587. Students in universities.
- 25 (Suriname) Europa 2001: 3706. One university and other institutions of higher education.
- 26 (Sweden) Europa 2001: 3727, 3733. 70 percent of the students in the institutions of higher education.
- 27 (Switzerland) Europa 2001: 3757. Higher education.
- 28 (Taiwan) Europa 2001: 1116. 70 percent of the students in universities and other institutions of higher education.
- 29 (Tanzania) Europa 2001: 3819. Students in universities and teacher-training institutions.
- 30 (United Kingdom) Europa 2001: 4041. Full-time students taking higher education courses.
- 31 (Uzbekistan) Europa 2001: 70 percent of the students in higher education institutions.
- 32 (Venezuela) Europa 2001: 4323. 70 percent of the number of students in all institutions of higher education.

Per 100,000 inhabitants

Data on the total populations used in calculations of students per 100,000 inhabitants are from the United Nations *1998 Demographic Yearbook* 2000, Table 5, and from some earlier *Demographic Yearbooks*.

Appendix 3 The percentage of Family Farms of the total area of agricultural holdings in 170 countries, 1960–1995, and the percentage of the agricultural population in 1999

Variables:

Year=The year of census or other source of data. Estimations concern the situation in 1995.

Criterion of Family Farms=The upper hectare limit of Family Farms, or other criteria described. The other criteria may limit the category of Family Farms to the area owned or in ownerlike possession, or to a certain percentage (usually 50) of the area under indigenous community based tenure. In several cases, the percentage share of the land under community based tenure of the total area is indicated in brackets.

Family Farms%=The percentage share of Family Farms of the total area of holdings or of agricultural land.

AP%=The percentage of agricultural population in 1999. Source: FAO, *Production Yearbook 1998*, Vol. 53, 1999: Table 3.

Abbreviations:

Eastern Europe 1999=*Eastern Europe and the Commonwealth of Independent States 1999*

FAO World Census=FAO, *World Census of Agriculture*, reports from several years
 LTC 1979=Land Tenure Center, *Land Concentration in the Third World: Statistics on Number and Area of Farms Classified by Size of Farms*

World Atlas=*World Atlas of Agriculture*, Volumes 1–4

Country	Year	Criterion of Family Farms	Family Farms%	AP%
1 Afghanistan	1995	20 ha (60%), owned or in ownerlike possession	42	67

Estimation. See Kurian 1987: 38. It is assumed that 70 percent of the holdings are owned by the holder. Cf. *The Far East and Australasia* 1999: 70–71; World Atlas 1970 Vol. 2: 34–5.

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
2 Albania	1995	20 ha	60	25
Estimation. See Stanfield 1998; Eastern Europe 1999: 114; <i>Central and South-Eastern Europe</i> 2000: 178.				
3 Algeria	1995	Private farms, owned or in ownerlike possession	40	25
Estimation. See LTC 1979: 1; FAO 1970 World Census: 51–52; <i>The Middle East and North Africa</i> 1998: 301–302.				
4 Angola	1995	50% of the land under customary tenure (80%)	40	72
Estimation. See Bruce 1998: 205, 209–12. Cf. Kurian 1987: 74.				
5 Argentina	1988	500 ha, owned or in ownerlike possession	15	10
FAO 1990 World Census: 147. Cf. Vanhanen 1997: Appendix 3.				
6 Armenia	1995	Area of family-size private farms	50	13
Estimation. See Eastern Europe 1999: 139; Karatnycky <i>et al.</i> 2001: 81. By the end of 1998, 90 percent of agricultural lands belonged to private farms.				
7 Australia	1990	Percentage of the number of holdings below 500 ha	60	5
FAO 1990 World Census: 219. Cf. FAO 1980 World Census, Census Bulletin No. 27, 1989.				
8 Austria	1990	100 ha	63	5
FAO 1990 World Census: 69, 183.				
9 Azerbaijan	1995	Area of family-size private farms	50	27
Estimation. See Eastern Europe 1999: 160; Karatnycky <i>et al.</i> 2001: 96.				
10 Bahamas	1994	20 ha	18	4
FAO 1990 World Census: 66, 115.				
11 Bahrain	1973/74	20 ha, owned or in ownerlike possession, and 40% of the leased arable land	43	1
LTC 1979: 189; Kurian 1987: 131 (over 93.6 percent of arable land is leased by absentee landlords for periods ranging from 3 to 12 years). Cf. FAO 1980 World Census, Census Bulletin No. 9, 1984.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
12 Bangladesh	1977	2.8 ha, owned or in ownerlike possession	46	57
LTC 1979: 67; Kurian 1987: 149 (over 66 percent of all farmers own their land). Cf. FAO 1980 World Census, Census Bulletin No. 5, 1983; <i>The Far East and Australasia</i> 1999: 135–6.				
13 Barbados	1989	20 ha, owned or in ownerlike possession	14	5
FAO 1990 World Census: 117.				
14 Belarus	1995	Private farms	14	5
Estimation. See Eastern Europe 1999: 188; Karatnycky <i>et al.</i> 2001: 110. The 1996 referendum effectively outlawed the privatization of lands.				
15 Belgium	1990	100 ha	92	2
FAO 1990 World Census: 69, 185.				
16 Belize	1973	40 ha, owned or in ownerlike possession	20	31
LTC 1979: 127; Kurian 1987: 174. It is assumed that 80 percent of the holdings are owned by the holder.				
17 Benin	1995	50% of area under indigenous community based tenure (90%)	45	54
Estimation. See Bruce 1998: 6, 19–23.				
18 Bhutan	1995	10 ha, owner-operated farms	40	94
Estimation. See Shah 1984; Haaland 1986; Kurian 1987: 198.				
19 Bolivia	1970	100 ha and Land Reform Beneficiaries	31	44
See Eckstein <i>et al.</i> 1978: 21–3; LTC 1979: 128–9.				
20 Bosnia & Herzegovina	1980	Family-owned farms	64	6
Karatnycky <i>et al.</i> 2001: 127. Family-owned farms cover 64 percent of arable area. Cf. FAO 1980 World Census, Census Bulletin No. 24, 1986.				
21 Botswana	1995	50% of area under customary tenure (90%)	45	45
Estimation. See Bruce 1998: 205, 211–17. Cf. FAO 1970 World Census, Census Bulletin No. 21, 1978; Kurian 1987: 234.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
22 Brazil	1980	100 ha, owned or in ownerlike possession	15	17
FAO 1980 World Census, Census Bulletin No. 22, 1986. It is assumed that 75 percent of the holdings are owned by the holder. Cf. LTC 1979: 131–2.				
23 Brunei	1964	8 ha (63%), owned or in ownerlike possession	38	1
LTC 1979: 69. It is assumed that 60 percent of the holdings are owned by the holder.				
24 Bulgaria	1995	Area of family-size private farms	60	8
Estimation. See Eastern Europe 1999: 247; <i>Central and South-Eastern Europe</i> 2000: 238; Karatnycky <i>et al.</i> 2001: 142. Close to 100 percent of agricultural land is in private hands.				
25 Burkina Faso	1995	50% of area under community based tenure (80%)	40	92
Estimation. See Bruce 1998: 6, 24–30; FAO 1990 World Census: 85.				
26 Burma	1993	8 ha (84%), 50% of area under state ownership	45	71
Kurian 1987: 304; FAO 1990 World Census: 169.				
27 Burundi	1995	50% of area under indigenous community based tenure (90%)	45	90
Estimation. See Bruce 1998: 141, 149–54.				
28 Cambodia	1995	50% of area under usufructuary rights tenure (80%)	40	70
Estimation. See Childress 2001. Cf. Kurian 1987: 340–1; <i>The Far East and Australasia</i> 1999: 209.				
29 Cameroon	1995	50% of area under community-based tenure (80%)	40	61
Estimation. See Bruce 1998: 6, 31–7. Cf. Kurian 1987: 358.				
30 Canada	1991	Percentage of the number of holdings below 226 ha	69	2
FAO 1990 World Census: 119. Cf. FAO 1980 World Census, Census Bulletin No. 18, 1985.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
31 Cape Verde	1981	10 ha, owned or in ownerlike possession	30	24
Estimation. See FAO 1980 World Census, Census Bulletin No. 23, 1986; Bruce 1998: 6, 38–40. Cf. Kurian 1987: 374.				
32 Central Af. Republic	1995	50% of area under indigenous community-based tenure (90%)	45	74
Estimation. See Bruce 1998: 6, 41–5. Cf. FAO 1970 World Census, Census Bulletin No. 21, 1978.				
33 Chad	1995	50% of area under indigenous community-based tenure (90%)	45	76
Estimation. See Bruce 1998: 6, 46–51. Cf. FAO 1970 World Census, Census Bulletin No. 21, 1978.				
34 Chile	1972	20 Basic Irrigated Hectares	23	16
See Vanhanen 1997: Appendix 3.				
35 China	1995	30% of the area of household responsibility system	30	68
Estimation. See Chai 1998: 11–31; <i>The Far East and Australasia</i> 1999: 245–6.				
36 Colombia	1988	100 ha, owned or in ownerlike possession	40	21
FAO 1990 World Census: 149. Cf. LTC 1979: 137; FAO 1970 World Census: 53.				
37 Comoros	1995	50% of area under indigenous community-based tenure (60%)	30	74
Estimation. See Kurian 1987: 468; Bruce 1998: 141, 155–9.				
38 Congo (Brazzaville)	1995	50% of area under indigenous community-based tenure (90%)	45	42
Estimation. See Bruce 1998: 6, 52–7. Cf. FAO 1970 World Census, Census Bulletin No. 21, 1978; Kurian 1987: 483.				
39 Congo (Zaire)	1995	50% of area under indigenous community-based tenure (90%)	45	64
Estimation. See Bruce 1998: 7, 131–6. Cf. LTC 1979: 62–3.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
40 Costa Rica	1973	100 ha (33%), owned or in ownerlike possession	30	21
LTC 1979: 139; Kurian 1987: 502 (90% of the farms are owner-cultivated).				
41 Côte d'Ivoire	1995	50% of area under indigenous community-based tenure (70%)	35	50
Estimation. See Bruce 1998: 7, 78–82. Cf. FAO 1970 World Census, Census Bulletin No. 24, 1978.				
42 Croatia	1980	20 ha	75	9
FAO 1980 World Census, Census Bulletin No. 14, 1986 (data concern the former Yugoslavia).				
43 Cuba	1995	Private farms	20	15
Kurian 1987: 526 (the state owns some 80 percent of all farmland). Cf. World Atlas 1970 Vol. 3: 224–5; Nohlen and Nuscheler 1982 Vol. 3: 366.				
44 Cyprus	1985	20 ha, owned or in ownerlike possession	68	9
FAO 1990 World Census: 159.				
45 Czech Republic	1995	Area of family-size private farms	30	9
Estimation. See Eastern Europe 1999: 312; <i>Central and South-Eastern Europe</i> 2000: 308.				
46 Denmark	1989	100 ha, agricultural area	80	4
FAO 1990 World Census: 69, 189.				
47 Djibouti	1995	50% of area under traditional tenure (90%)	45	25
Estimation. See Bruce 1998: 141, 160–3.				
48 Dominican Republic	1971	50 ha (43%), owned or in ownerlike possession	24	17
FAO 1970 World Census, Census Bulletin No. 22 (55 percent owned by the holder). Cf. LTC 1979: 143; Kurian 1987: 566.				
49 Ecuador	1974	50 ha (36%), owned or in ownerlike possession	30	27
LTC 1979: 144; Kurian 1987: 587 (area of holdings owned 83 percent). Cf. FAO 1970 World Census: 51–3.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
50 Egypt	1995	8 ha (75%), owned or in ownerlike possession	32	34
Estimation. See LTC 1979: 7–8; Kurian 1987: 612–13 (sharecropping covers 57 percent of the farmland). Cf. <i>The Middle East and North Africa</i> 1998: 412.				
51 El Salvador	1971	50 ha, owned or in ownerlike possession	40	30
LTC 1979: 147; Kurian 1987: 639–49. It is assumed that 80 percent of the holdings are owned by the holder. Cf. FAO 1970 World Census: 53; <i>South America, Central America and the Caribbean</i> 1999: 328–9.				
52 Equatorial Guinea	1995	Area of family-size holdings owned by the holder	35	71
Estimation. See Kurian 1987: 656; <i>Africa South of the Sahara</i> 2000: 438.				
53 Eritrea	1995	50% of area under usufructuary rights to land owned by the state (90%)	45	78
Estimation. See Bruce 1998: 141, 164–8. Cf. Castellani 2000; <i>Africa South of the Sahara</i> 2000: 449–50.				
54 Estonia	1995	Area of private farms	39	12
<i>Agriculture 2000 Yearbook</i> 2001: 14. Cf. Eastern Europe 1999: 338; <i>Central and South-Eastern Europe</i> 2000: 335.				
55 Ethiopia	1989/90	50% of area under alternative community-based tenure (98%)	49	83
Estimation. See Bruce 1998: 141, 169–74; FAO 1990 World Census: 93.				
56 Fiji	1991	20 ha, holdings owned and 50% of the area of holdings under tribal or traditional communal forms of tenure	23	41
FAO 1990 World Census: 223. Cf. Vanhanen 1997: Appendix 3; Boydell 2000.				
57 Finland	1990	100 ha, arable area	98	6
FAO 1990 World Census: 191.				
58 France	1988	100 ha, agricultural area	76	4
FAO 1990 World Census: 193.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
59 Gabon	1995	50% of area under indigenous community-based tenure (90%)	45	39
Estimation. See Bruce 1998: 6, 58–62. Cf. FAO 1970 World Census, Census Bulletin No. 19, 1977; LTC 1979: 13.				
60 Gambia	1995	50% of area under indigenous community-based tenure (90%)	45	79
Estimation. See Bruce 1998: 6, 63–7.				
61 Georgia	1995	Area of family-size private farms	50	21
Estimation. See Eastern Europe 1999: 366; Karatnycky <i>et al.</i> 2001: 193. Over 80 percent of agricultural production is in private hands.				
62 Germany	1991	100 ha	70	3
Estimation. See Vanhanen 1997: Appendix 3.				
63 Ghana	1995	50% of area under community-based tenure (80%)	40	57
Estimation. See Bruce 1998: 6, 68–73. Cf. FAO 1970 World Census, Census Bulletin No. 8, 1975.				
64 Greece	1971	20 ha	91	17
FAO 1970 World Census: 511–13. Cf. World Atlas 1969 Vol. 1: 198.				
65 Guatemala	1980	23 ha	29	47
FAO 1980 World Census, Census Bulletin No. 17, 1985. Cf. LTC 1979: 152–3; Kurian 1987: 772–3.				
66 Guinea	1989	50% of area under community-based tenure (95%)	47	84
Estimation. See FAO 1990 World Census: 95.				
67 Guinea-Bissau	1995	50% of area under community-based tenure (90%)	45	83
Estimation. Bruce 1998: 7, 74–7. Cf. LTC 1979: 15; Kurian 1987: 806.				
68 Guyana	1995	Area of family-size holdings owned by the holder	30	18
Estimation. See Kurian 1987: 821.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
69 Haiti	1971	5 ha, owned or in ownerlike possession	52	63
See LTC 1979: 154; Kurian 1987: 838 (approximately 70 percent of the farms are cultivated by owners). Cf. Nohlen and Nuscheler 1982 Vol. 3: 334–6.				
70 Honduras	1993	20 ha, owned or in ownerlike possession	21	33
FAO 1990 World Census: 127. Cf. LTC 1979: 155; Kurian 1987: 855.				
71 Hungary	1995	Area of family-size private farms	40	11
Estimation. See <i>Central Statistical Office Pocket Book</i> 1996; Eastern Europe 1999: 392; <i>Central and South-Eastern Europe</i> 2000: 394.				
72 Iceland	1967	Owner-operated farms	74	9
Estimation. See Vanhanen 1997: Appendix 3.				
73 India	1986	10 ha, owned or in ownerlike possession	79	60
FAO 1990 World Census: 161.				
74 Indonesia	1963	5 ha, holdings fully owned	50	49
FAO 1960 World Census Vol. 1/c: 72–3. Cf. LTC 1979: 95.				
75 Iran	1988	20 ha, owned or in ownerlike possession	47	27
FAO 1990 World Census: 163. It is assumed that 80 percent of the holdings are owned by the holder. Cf. Kurian 1987: 948; <i>The Middle East and North Africa</i> 1998: 464.				
76 Iraq	1971	50 ha, owned or in ownerlike possession	35	11
FAO 1970 World Census: 100–2. Cf. LTC 1979: 192; Kurian 1987: 972.				
77 Ireland	1970	50 ha	68	11
FAO 1970 World Census: 51–3. Cf. FAO 1990 World Census: 195.				
78 Israel	1980	Area of holdings below 30 ha and 50% of the area of collective farms and other holdings	58	3
LTC 1979: 193–5; FAO 1980 World Census, Census Bulletin No. 24, 1986.				
79 Italy	1990	100 ha	63	6
FAO 1990 World Census: 197.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
80 Jamaica	1980	20 ha	39	21
LTC 1979: 157; FAO 1980 World Census, Census Bulletin No. 15, 1985; Kurian 1987: 1008.				
81 Japan	1970	5 ha	79	4
FAO 1980 World Census, Census Bulletin No. 12, 1984. Cf. LTC 1979: 157.				
82 Jordan	1980	20 ha, owned or in ownerlike possession	42	12
FAO 1980 World Census, Census Bulletin No. 26, 1989. It is assumed that 80 percent of the holdings below 20 ha are owned by the holder. Cf. LTC 1979: 196; Kurian 1987: 1025.				
83 Kazakhstan	1995	Area of family-size private farms	10	18
Estimation. See Eastern Europe 1999: 428; Karatnycky <i>et al.</i> 2001: 218.				
84 Kenya	1980	Small holdings below 8 ha	46	76
FAO 1980 World Census, Census Bulletin No. 25, 1986. Cf. FAO 1970 World Census: 52; LTC 1979: 17–21; Bruce 1998: 141, 175–80.				
85 Korea, North	1995	Area of private farms	0	31
Reed 2001. Cf. Kurian 1987: 1075. All private ownership of land was abolished by 1958.				
86 Korea, South	1990	3 ha	88	11
FAO 1990 World Census: 167. Cf. FAO 1980 World Census, Census Bulletin No. 15, 1985.				
87 Kuwait	1970	20 ha, owned or in ownerlike possession	38	1
LTC 1979: 197; FAO 1970 World Census, Census Bulletin No. 12, 1975.				
88 Kyrgyzstan	1995	Area of family-size private farms	20	26
Estimation. See Eastern Europe 1999: 451; Karatnycky <i>et al.</i> 2001: 231. All land is still considered property of the state.				
89 Laos	1995	50% of area under usufructuary rights (80%)	40	77
Estimation. See Kurian 1987: 1138; <i>The Far East and Australasia</i> 1999: 601.				
90 Latvia	1995	Area of family-size private farms	30	12
Estimation. See Eastern Europe 1999: 474; <i>Central and South-Eastern Europe</i> 2000: 425; Karatnycky <i>et al.</i> 2001: 242.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
91 Lebanon	1970	20 ha, owned or in ownerlike possession	38	4
FAO 1970 World Census: 51–3; Kurian 1987: 1159 (cultivators own over 80 percent of all agricultural land).				
92 Lesotho	1995	50% of area under customary tenure (90%)	45	38
Estimation. See Kurian 1987: 1178; Bruce 1998: 205, 218–19.				
93 Liberia	1971	50% of area under community-based and freehold tenure (43%)	21	68
LTC 1979: 24. Cf. Kurian 1987: 1193; Bruce 1998: 83–7.				
94 Libya	1963	Small farms	20	6
LTC 1979: 26. Cf. Kurian 1987: 1214.				
95 Lithuania	1995	Area of family-size private farms	50	13
Estimation. See Eastern Europe 1999: 499; <i>Central and South-Eastern Europe</i> 2000: 451.				
96 Luxembourg	1990	100 ha	90	2
FAO 1990 World Census: 199.				
97 Macedonia	1980	20 ha	75	14
FAO 1980 World Census, Census Bulletin No. 24, 1986 (data concern the former Yugoslavia).				
98 Madagascar	1995	50% of area under customary tenure (95%)	45	75
Estimation. See Leisz and Gage 1995; Bruce 1998: 223–7. Cf. FAO 1980 World Census, Census Bulletin No. 25, 1986; Kurian 1987: 1235.				
99 Malawi	1995	50% of area under customary tenure (80%)	40	83
Estimation. See Bruce 1998: 205, 230–7. Cf. FAO 1980 World Census, Census Bulletin No. 25, 1986; Kurian 1987: 1252; Lastarria-Cornhies and Melmed-Sanjak 1999: 39.				
100 Malaysia	1960	20 ha, owned or in ownerlike possession	28	19
FAO 1960 World Census Vol. 1/b. Cf. LTC 1979: 109.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
101 Maldives	1995	40% of area under state ownership (80%)	32	23
Estimation. See Kurian 1987: 1289; Nohlen and Nuscheler 1983 Vol. 7: 176.				
102 Mali	1995	50% of area under indigenous community based tenure (90%)	45	82
Estimation. See Bruce 1998: 7, 88–93.				
103 Malta	1980	5 ha	80	2
FAO 1980 World Census, Census Bulletin No. 6, 1983. Cf. World Atlas 1969 Vol. 1: 271.				
104 Mauritania	1995	50% of area under community-based/Islamic tenure (80%)	40	53
Estimation. See Kurian 1987: 1317; FAO 1980 World Census, Census Bulletin No. 26, 1989; Bruce 1998: 7, 95–101.				
105 Mauritius	1971	Area of small farms	27	12
Nohlen and Nuscheler 1983 Vol. 5: 264; Kurian 1987: 1332.				
106 Mexico	1970	100 ha for private properties and 50% of the area of Ejidos and Comunidades Agrarias	32	22
LTC 1979: 159–60. Cf. FAO 1970 World Census: 52, 100; Nohlen and Nuscheler 1982 Vol. 3: 126–30; Lastarria-Cornhies and Melmed-Sanjak 1999: 27.				
107 Moldova	1995	Area of family-size private farms	10	25
Estimation. See Eastern Europe 1999: 550–2.				
108 Mongolia	1995	Share of family-size enterprises of the pastoral livestock	40	25
Estimation. Herding is more important than agriculture in Mongolia. See <i>The Far East and Australasia</i> 1999: 695–6; <i>World Development Report</i> 2003: 66–7.				
109 Morocco	1969	20 ha (66%), owned or in ownerlike possession	36	37
LTC 1979: 30; Kurian 1987: 1380 (about 54 percent of the holdings are privately owned).				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
110 Mozambique	1995	50% of area under customary tenure (60%)	30	81
Estimation. See Kurian 1987: 1400; Bruce 1998: 205, 238–46; Strasberg 1999.				
111 Namibia	1995	50% of area under communal land tenure (43%)	21	42
Estimation. See Bruce 1998: 205, 247–52. Cf. LTC 1979: 36; Kurian 1992: 1370 (some 5,000 white ranchers covered about 80 percent of cultivable land at independence).				
112 Nepal	1992	5 ha, owned or in ownerlike possession	70	93
FAO 1990 World Census: 171.				
113 Netherlands	1980	100 ha	94	4
FAO 1980 World Census, Census Bulletin No. 19, 1985.				
114 New Zealand	1980	2,000 ha	51	9
FAO 1980 World Census, Census Bulletin No. 27, 1989.				
115 Nicaragua	1971	70 ha	25	21
LTC 1979: 168–9. Cf. Kurian 1987: 1446; Stanfield 1995.				
116 Niger	1995	50% of area under community-based tenure (90%)	45	88
Estimation. See FAO 1980 World Census, Census Bulletin No. 16, 1985; Bruce 1998: 7, 102–109.				
117 Nigeria	1995	50% of area under community-based tenure (90%)	45	34
Estimation. See LTC 1979: 38–41; Bruce 1998: 7, 110–15.				
118 Norway	1989	100 ha, agricultural area	99	5
FAO 1990 World Census: 203.				
119 Oman	1995	Area of family-size holdings owned by the holder	40	37
Estimation. See Kurian 1987: 1499; <i>The Middle East and North Africa</i> 1998: 850.				
120 Pakistan	1990	20 ha, owned or in ownerlike possession	49	48
FAO 1990 World Census: 173. Cf. FAO 1980 World Census, Census Bulletin No. 9, 1984; Kurian 1987: 1517.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
121 Panama	1990	50 ha, owned or in ownerlike possession	13	21
FAO 1990 World Census: 133. Cf. FAO 1980 World Census, Census Bulletin No. 11, 1984; Kurian 1987: 1539.				
122 Papua New Guinea	1995	40% of the land under communal tenure (97%)	39	75
Estimation. See Nohlen and Nuscheler 1983 Vol. 8: 289–92; Kurian 1987: 1558 (about 97 percent of the land is owned by native Papuan New Guineans).				
123 Paraguay	1991	200 ha, owned or in ownerlike possession	11	35
FAO 1990 World Census: 153. Cf. LTC 1979: 173–5; FAO 1980 World Census, Census Bulletin No. 24, 1986.				
124 Peru	1994	50 ha, owned or in ownerlike possession	20	31
FAO 1990 World Census: 155. Cf. LTC 1979: 176–7; FAO 1970 World Census: 100–2.				
125 Philippines	1991	10 ha, owned or in ownerlike possession	55	40
FAO 1990 World Census: 175. Cf. FAO 1980 World Census, Census Bulletin No. 23, 1986.				
126 Poland	1995	Family farms	76	22
Estimation. See Vanhanen 1997: Appendix 3; Karatnycky <i>et al.</i> 2001: 293.				
127 Portugal	1989	100 ha	55	13
FAO 1990 World Census: 207. Cf. FAO 1980 World Census, Census Bulletin No. 18, 1985.				
128 Qatar	1995	40% of the Government owned agricultural land	40	16
Estimation. See <i>The Middle East and North Africa</i> 1998: 873. Cf. Nyrop <i>et al.</i> 1977: 244; Bowen-Jones 1980: 56–9; Kurian 1987: 1641.				
129 Romania	1995	Area of family-size private farms	40	16
Estimation. See Eastern Europe 1999: 615–16; <i>Central and South-Eastern Europe</i> 2000: 548; Karatnycky <i>et al.</i> 2001: 307. According to one estimation, 80 percent of Romania's farmland is now in private hands.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
130 Russia	1995	Individual farms and household plots	8	11
Helanterä 1999: 19. Cf. Eastern Europe 1999: 658–9; Karatnycky <i>et al.</i> 2001: 328.				
131 Rwanda	1995	50 % of area under indigenous community based tenure (90%)	45	91
Estimation. See Bruce 1998: 141, 181–6. Cf. FAO 1980 World Census, Census Bulletin 26, 1986.				
132 Saudi Arabia	1980	50 ha	42	11
Estimation. See FAO 1980 World Census, Census Bulletin No. 17, 1985; Kurian 1987: 1701; <i>The Middle East and North Africa</i> 1998: 893–4.				
133 Senegal	1995	50% of area under indigenous community based tenure (80%)	40	74
Estimation. See Bruce 1998: 7, 116–21. Cf. LTC 1979: 47; Kurian 1987: 1723–5.				
134 Sierra Leone	1995	50% of area under indigenous community based tenure (90%)	45	63
Estimation. See Bruce 1998: 7, 122–5. Cf. Kurian 1987: 1753–4.				
135 Singapore	1973	Holdings owned by the holder (7%) and 50% of the area owned by the state	55	0
FAO 1970 World Census, Census Bulletin No. 29, 1980. Cf. Kurian 1987: 1773; <i>The Far East and Australasia</i> 1999: 1062.				
136 Slovakia	1995	Area of family-size private farms	50	9
Estimation. See Eastern Europe 1999: 758; <i>Central and South-Eastern Europe</i> 2000: 583.				
137 Slovenia	1991	20 ha	75	2
Estimation. See FAO 1980 World Census, Census Bulletin No. 24, 1986; FAO 1990 World Census: 209. Cf. Eastern Europe 1999: 787.				
138 Solomon Islands	1995	50% of the land under traditional tenure systems (95%)	47	74
Estimation. See World Atlas 1973 Vol. 2: 664; Kurian 1987: 1787.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
139 Somalia	1995	50% of area under traditional tenure (80%)	40	72
Estimation. See Bruce 1998: 141, 187–91. Cf. Vanhanen 1997: Appendix 3.				
140 South Africa	1995	Land owned by the black population	13	10
Bruce 1998: 205, 253–60. Cf. FAO 1960 World Census Vol. 1/b: 232–3.				
141 Spain	1989	100 ha, total area	38	8
FAO 1990 World Census: 211. Cf. FAO 1980 World Census, Census Bulletin No. 21, 1986.				
142 Sri Lanka	1980	8 ha	73	46
See Vanhanen 1997: Appendix 3.				
143 Sudan	1995	50% of area under mixed tenure systems (70%)	35	62
Estimation. See Bruce 1998: 141, 192–6. Cf. LTC 1979: 54; Kurian 1987: 1842–4.				
144 Suriname	1969	50 ha	32	19
See Vanhanen 1997: Appendix 3.				
145 Swaziland	1995	50% of Swazi Nation Land (63%)	31	34
Estimation. See Bruce 1998: 205, 261–5. Cf. Vanhanen 1997: Appendix 3.				
146 Sweden	1980	100 ha	86	3
FAO 1980 World Census, Census Bulletin No. 21, 1986.				
147 Switzerland	1990	100 ha, productive area	99	4
FAO 1990 World Census: 213.				
148 Syria	1970	50 ha, owned or in ownerlike possession	48	28
Estimation. See FAO 1970 World Census: 53; Kaimowitz 1980. Cf. Kurian 1987: 1889.				
149 Taiwan	1961	5 ha	89	10
LTC 1979: 119. Cf. Vanhanen 1997: Appendix 3.				
150 Tajikistan	1995	Area of family-size farms owned by the holder	10	34
Estimation. See Eastern Europe 1999: 814; Karatnycky <i>et al.</i> 2001: 372. The agrarian sector is still controlled by a large collection of state-owned farms.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
151 Tanzania	1995	50% of area under alternative community based tenures (80%)	40	81
Estimation. See Bruce 1998: 141, 205, 266–9. Cf. Kurian 1987: 1913.				
152 Thailand	1988	22 ha, owned or in ownerlike possession	89	57
FAO 1990 World Census: 177.				
153 Togo	1995	50% of area under community-based tenure (90%)	45	60
Estimation. See Bruce 1998: 7, 126–30. Cf. Kurian 1987: 1954.				
154 Trinidad & Tobago	1963	20 ha	46	9
LTC 1979: 183. Cf. FAO 1980 World Census, Census Bulletin No. 16, 1985; Kurian 1987: 1979.				
155 Tunisia	1961	100 ha, holdings fully owned	53	25
FAO 1960 World Census Vol. 1/c: 199. Cf. LTC 1979: 58–9; Kurian 1987: 1995; <i>The Middle East and North Africa</i> 1998: 992–3.				
156 Turkey	1991	50 ha	83	47
FAO 1990 World Census: 179. Cf. FAO 1980 World Census, Census Bulletin No. 13, 1985; Kurian 1987: 2017.				
157 Turkmenistan	1995	Area of family-size holdings owned by the holder	10	34
Estimation. See Eastern Europe 1999: 836; Karatnycky <i>et al.</i> 2001: 387. State and collective farms dominate Turkmen agriculture.				
158 Uganda	1991	50% of area under indigenous community based tenure (80%)	40	81
Estimation. See Bruce 1998: 141, 197–200; FAO 1990 World Census: 111. Cf. Kurian 1987: 2045; Marquardt 1995.				
159 Ukraine	1991	Private farms and household plots	16	15
Eastern Europe 1999: 859; Karatnycky <i>et al.</i> 2001: 402.				
160 United Arab Emirates	1995	Family-owned holdings	30	5
Estimation. See World Atlas 1970 Vol. 2: 143; Nyrop <i>et al.</i> 1977: 312; Bowen-Jones 1980: 59–62; Kurian 1987: 2059.				

<i>Country</i>	<i>Year</i>	<i>Criterion of Family Farms</i>	<i>Family Farms%</i>	<i>AP%</i>
161 United Kingdom FAO 1990 World Census: 215.	1993	200 ha, total area	53	2
162 United States FAO 1990 World Census: 143.	1987	809 ha, total area	52	2
163 Uruguay FAO 1980 World Census, Census Bulletin No. 8, 1984. Cf. LTC 1979: 184; Kurian 1987: 2075.	1980	500 ha	27	13
164 Uzbekistan Estimation. See Eastern Europe 1999: 892.	1995	Area of family-size holdings owned by the holder	10	28
165 Venezuela FAO 1970 World Census: 53, 56. Cf. LTC 1979: 185–6; Kurian 1987: 2104.	1971	200 ha	15	8
166 Vietnam Estimation. See <i>The Far East and Australasia</i> 1999: 1183.	1995	20% of the area of the production contract system	20	68
167 Yemen Estimation. See FAO 1980 World Census, Census Bulletin No. 10, 1984. Estimated area owned or in ownerlike possession. Cf. Kurian 1987: 2152.	1980	10 ha	46	52
168 Yugoslavia FAO 1980 World Census, Census Bulletin No. 24, 1986. Cf. Karatnycky <i>et al.</i> 2001: 430.	1980	20 ha	75	21
169 Zambia Estimation. See Bruce 1998: 205, 270–5. Cf. Kurian 1987: 2205.	1995	50% of area under customary tenure (80%)	40	70
170 Zimbabwe Estimation. See Bruce 1998: 205, 276–82. Cf. Vanhanen 1997: Appendix 3.	1988	50% of the area under African customary tenure (60%)	30	63

Appendix 4 The estimated degree of decentralization of mainly non-agricultural economic power resources (DD) in 170 countries, 1995–1999

Variables:

- 1 The arithmetic mean of data on the population below national and/or international poverty lines (%) (Below Poverty Line%).
- 2 The arithmetic mean of data on the percentage share of income or consumption of the highest 10 percent minus 10 percentage points (Highest 10%).
- 3 The sum of the first two columns subtracted from 100 (Total).
- 4 Economic Freedom Rating 1997 times 10 (Economic Freedom 1997).
- 5 The transformed score of Economic Liberalization Score (Economic Liberal. 1999).
- 6 The estimated degree of decentralization of mainly non-agricultural economic power resources (DD 1995–9). Estimated DD values which differ from all criterion variables more than 15 scores are marked by asterisk (*).

Estimated values of criterion variables are in brackets.

<i>Country</i>	<i>Below Poverty Line%</i>	<i>Highest 10%</i>	<i>Total</i>	<i>Economic Freedom 1997</i>	<i>Economic Liberal. 1999</i>	<i>DD 1995–9</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1 Afghanistan	(50)	(15)	35	–	–	20
2 Albania	20 ¹	(20)	60	43	40	30
3 Algeria	19	17	64	41	–	30
4 Angola	(50)	(20)	30	–	–	20
5 Argentina	18	(30)	52	84	–	40
6 Armenia	34	25	41	–	49	40
7 Australia	13	15	72	86	–	70
8 Austria	8	9	83	80	–	80
9 Azerbaijan	35	18	47	–	30	20
10 Bahamas	(20)	(20)	60	67	–	40*
11 Bahrain	(20)	(40)	40	79	–	10*
12 Bangladesh	48	19	33	53	–	30
13 Barbados	(30)	(20)	50	63	–	40

<i>Country</i>	<i>Below Poverty Line%</i>	<i>Highest 10%</i>	<i>Total</i>	<i>Economic Freedom 1997</i>	<i>Economic Liberal. 1999</i>	<i>DD 1995-9</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
14 Belarus	23	10	67	-	11	10
15 Belgium	12	10	78	83	-	75
16 Belize	(20)	(30)	50	63	-	35
17 Benin	33	(20)	47	49	-	30*
18 Bhutan	(40)	(20)	40	-	-	30
19 Bolivia	40	33	27	80	-	30
20 Bosnia & Herzeg.	(30)	(15)	55	-	21	30
21 Botswana	47	(20)	33	66	-	25
22 Brazil	24	37	31	59	-	30
23 Brunei	(20)	(40)	40	-	-	10*
24 Bulgaria	19	13	68	53	50	40
25 Burkina Faso	73	30	0	-	-	15
26 Burma (Myanmar)	(40)	(20)	40	21	-	20
27 Burundi	36	17	47	42	-	30
28 Cambodia	36	24	40	-	-	30
29 Cameroon	40	(30)	30	51	-	25
30 Canada	7	14	79	86	-	70
31 Cape Verde	(40)	(20)	40	-	-	30
32 Central African Rep.	75	38	0	43	-	15
33 Chad	64	(20)	16	45	-	15
34 Chile	19	37	44	82	-	40
35 China	36	20	44	62	-	20*
36 Colombia	23	36	41	56	-	30
37 Comoros	(40)	(20)	40	-	-	30
38 Congo (Brazzaville)	(40)	(20)	40	42	-	20*
39 Congo (Zaire)	(40)	(20)	40	31	-	20
40 Costa Rica	23	25	52	81	-	50
41 Côte d'Ivoire	30	19	51	57	-	30*
42 Croatia	(20)	13	67	47	49	40
43 Cuba	(15)	(15)	70	-	-	5*
44 Cyprus	(7)	(15)	78	68	-	60
45 Czech Republic	(10)	12	78	71	71	60
46 Denmark	8	11	81	84	-	80
47 Djibouti	(40)	(30)	30	-	-	20
48 Dominican Republic	19	28	53	70	-	40
49 Ecuador	44	24	32	70	-	30
50 Egypt	38	15	47	66	-	40
51 El Salvador	51	29	20	83	-	20
52 Equatorial Guinea	(40)	(30)	30	-	-	15
53 Eritrea	(40)	(30)	30	-	-	15
54 Estonia	17	20	63	68	73	50
55 Ethiopia	54	24	22	-	-	15
56 Fiji	(20)	(15)	65	61	-	50

<i>Country</i>	<i>Below Poverty Line%</i>	<i>Highest 10%</i>	<i>Total</i>	<i>Economic Freedom 1997</i>	<i>Economic Liberal. 1999</i>	<i>DD 1995–9</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
57 Finland	5	12	83	82	–	80
58 France	11	15	74	80	–	75
59 Gabon	(30)	(30)	40	51	–	25
60 Gambia	59	28	13	–	–	20
61 Georgia	(35)	18	47	–	46	40
62 Germany	10	14	76	81	–	75
63 Ghana	48	20	32	64	–	30
64 Greece	(7)	15	78	74	–	70
65 Guatemala	46	36	18	74	–	15
66 Guinea	40	22	38	–	–	25
67 Guinea-Bissau	49 ²	32	19	40	–	15
68 Guyana	(30)	22	48	62	–	40
69 Haiti	75 ³	(30)	0	62	–	10
70 Honduras	61	34	5	70	–	20
71 Hungary	9 ⁴	10	81	74	73	60
72 Iceland	(4)	(10)	86	80	–	80
73 India	55	24	21	58	–	30
74 Indonesia	41	17	42	72	–	30
75 Iran	53 ⁵	(20)	27	50	–	30
76 Iraq	(50)	(20)	30	–	–	10*
77 Ireland	(15)	17	68	87	–	65
78 Israel	(10)	17	83	65	–	65
79 Italy	(10)	12	78	79	–	75
80 Jamaica	30	19	51	74	–	45
81 Japan	4	12	84	83	–	75
82 Jordan	10	20	70	61	–	50
83 Kazakhstan	38	16	46	–	36	25
84 Kenya	43	25	32	68	–	30
85 Korea, North	(40)	(15)	45	–	–	0*
86 Korea, South	(20)	14	66	73	–	60
87 Kuwait	(10)	(40)	50	75	–	10*
88 Kyrgyzstan	51	22	27	–	43	20
89 Laos	39	21	42	–	–	10*
90 Latvia	15	16	69	67	64	50
91 Lebanon	(20)	(20)	60	–	–	50
92 Lesotho	53	33	14	–	–	15
93 Liberia	(40)	(30)	30	–	–	15
94 Libya	(15)	(20)	65	–	–	10*
95 Lithuania	19	16	65	66	61	50
96 Luxembourg	4	12	84	85	–	80
97 Macedonia	20 ⁶	(20)	60	–	35	30
98 Madagascar	74	27	0	39	–	15
99 Malawi	54	(20)	26	46	–	20

<i>Country</i>	<i>Below Poverty Line%</i>	<i>Highest 10%</i>	<i>Total</i>	<i>Economic Freedom 1997</i>	<i>Economic Liberal. 1999</i>	<i>DD 1995-9</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
100 Malaysia	16	28	56	75	—	45
101 Maldives	(30)	(30)	40	—	—	20*
102 Mali	82	30	0	47	—	15
103 Malta	(7)	(20)	73	63	—	60
104 Mauritania	51	19	30	—	—	20
105 Mauritius	11 ⁷	(20)	69	76	—	60
106 Mexico	23	31	46	77	—	35
107 Moldova	42	21	37	—	43	30
108 Mongolia	43	15	42	—	—	30
109 Morocco	14	21	65	—	—	40*
110 Mozambique	58	22	20	—	—	20
111 Namibia	46	(20)	34	64	—	30
112 Nepal	54	20	26	53	—	30
113 Netherlands	11	15	74	85	—	75
114 New Zealand	(13)	20	67	91	—	70
115 Nicaragua	50	39	11	69	—	20
116 Niger	70	25	5	48	—	15
117 Nigeria	65	31	4	47	—	15
118 Norway	4	12	84	81	—	80
119 Oman	(20)	(30)	50	76	—	10*
120 Pakistan	50	18	32	56	—	30
121 Panama	31	26	43	83	—	30
122 Papua New Guinea	(20)	31	49	56	—	40
123 Paraguay	36	34	30	76	—	25
124 Peru	45	25	30	79	—	25
125 Philippines	37	27	36	79	—	30
126 Poland	22	15	63	60	76	50
127 Portugal	(10)	18	72	80	—	65
128 Qatar	(15)	(40)	45	—	—	10*
129 Romania	36	13	51	46	43	35
130 Russia	35	29	36	54	40	30
131 Rwanda	57	14	29	37	—	25
132 Saudi Arabia	(10)	(40)	50	—	—	10*
133 Senegal	47	24	29	47	—	30
134 Sierra Leone	67	34	0	32	—	10
135 Singapore	(5)	(30)	65	94	—	50
136 Slovakia	8	8	84	61	54	55
137 Slovenia	(10)	13	77	63	70	55
138 Solomon Islands	(20)	(25)	55	—	—	40
139 Somalia	(50)	(30)	20	—	—	15
140 South Africa	24	36	40	73	—	30
141 Spain	18	15	67	82	—	65
142 Sri Lanka	26	18	56	65	—	45

Country	Below Poverty Line%	Highest 10%	Total	Economic Freedom 1997	Economic Liberal. 1999	DD 1995–9
	1	2	3	4	5	6
143 Sudan	(40)	(30)	30	–	–	15
144 Suriname	(30)	(20)	50	–	–	40
145 Swaziland	(40)	40	20	–	–	10
146 Sweden	6	10	84	80	–	80
147 Switzerland	(5)	15	80	85	–	80
148 Syria	25 ⁸	(20)	55	44	–	30
149 Taiwan	(10)	(20)	70	71	–	60
150 Tajikistan	80 ⁹	(20)	0	–	21	10
151 Tanzania	44	20	36	56	–	30
152 Thailand	21	22	57	82	–	45
153 Togo	32	(30)	38	46	–	30
154 Trinidad & Tobago	21 ¹⁰	20	59	75	–	50
155 Tunisia	12	22	66	63	–	40*
156 Turkey	18	22	60	66	–	50
157 Turkmenistan	60	22	18	–	7	10
158 Uganda	40	21	39	61	–	25
159 Ukraine	42	13	45	45	38	30
160 United Arab Emirates	(10)	(40)	50	72	–	10*
161 United Kingdom	15	17	68	89	–	65
162 USA	14	21	65	90	–	65
163 Uruguay	7	23	70	74	–	60
164 Uzbekistan	45	15	40	–	12	10
165 Venezuela	38	28	34	60	–	30
166 Vietnam	51	20	29	–	–	15
167 Yemen	32	16	52	–	–	30*
168 Yugoslavia	(20)	(20)	60	–	24	30
169 Zambia	79	31	0	55	–	15
170 Zimbabwe	42	37	21	50	–	20

*Sources**Below Poverty Line%*

If not otherwise noted, *World Development Report* 2002: Table 2; *Human Development Report* 2000: Tables 4 and 5; 2001: Tables 3 and 4.

1 *The World Factbook* (WFB) 2000: 4.

2 WFB 2000: 207.

3 WFB 2000: 211.

4 See also Karatnycky *et al.* 2001: 206 (25%).

5 WFB 2000: 232.

6 Karatnycky *et al.* 2001: 270.

7 WFB 2000: 318.

8 WFB 2000: 469.

9 Karatnycky *et al.* 2001: 376.

10 WFB 2000: 484.

Highest 10%

World Development Report 2002: Table 2; *Human Development Report* 2001: Table 12.

Economic Freedom

Gwartney and Lawson 2000: 11–14. In Appendix 5, economic freedom ratings for 1997 are multiplied by 10.

Economic Liberalization Scores

Karatnycky *et al.* 2001: 25. These data are percentages based on inversed economic liberalization scores. They concern the year 2001.

DD 1995–9

If not otherwise noted, the estimated DD values do not differ more than 15 scores from the values of the constraining variables (Total, Economic Freedom 1997, and Economic Liberalization Score 2001), or from some of them. The estimated DD values which differ more than 15 scores from all criteria values are marked by asterisk (*) and explained in the following notes:

Bahamas

According to Gwartney and Lawson (2000: 25), the Bahamas has a highly regulated, centrally managed economy.

Bahrain

The estimated DD is much lower than expected on the basis of the criterion variables because the ownership and control of the dominant petroleum and gas industries and offshore banking services are in the hands of the government and multinational companies. See *The Middle East and North Africa* 1998: 332–6; *The Middle East* 2000: 345; ‘Time Travellers: A Survey of the Gulf,’ 2002.

Benin

The estimated DD is slightly lower than expected on the basis of the criterion variables because the manufacturing sector is dominated by the government and foreign-owned enterprises. See Gwartney and Lawson 2000: 29; *Africa South of the Sahara* 2000: 189–92.

Brunei

The estimated DD is much lower than expected on the basis of the criterion variables because the economy is based largely on wealth from natural gas and petroleum and because these industries are owned and controlled by the government and multinational companies. See *The Far East and Australasia* 1999: 178–86.

China

Because the economy is still controlled by the state and because most industrial enterprises are state-owned, the estimated DD is much lower than expected on the basis of the criterion variables. See Chai 1998; *The Far East and Australasia* 1999: 241–50; Wong and Wong 2001; Huang 2001; Dorn 2001.

Congo (Brazzaville)

Because the most important industrial sectors are dominated by state-owned and foreign enterprises, the estimated DD is slightly lower than expected on the basis of the criterion variables. See *Africa South of the Sahara* 2000: 383–6.

Côte d’Ivoire

Because non-agricultural industries are mainly owned and controlled by the government and foreign companies, the estimated DD is clearly lower than expected on the basis of the criterion variables. See *Africa South of the Sahara* 2000: 402–5.

Cuba

Non-agricultural industries are nearly completely state-owned. See *South America, Central America and the Caribbean* 1999: 259–63; WFB 2000: 126.

Iraq

Because state-owned enterprises dominate non-agricultural economy, including petroleum and gas, the estimated DD is much lower than expected on the basis of the criterion variables. See *The Middle East and North Africa* 1998: 534–49; *The Middle East* 2000: 262–3.

Korea, North

The state control of the economy is complete. See *The Far East and Australasia* 1999: 538–44.

Kuwait

The estimated DD is much lower than expected on the basis of the criterion variables because the dominant petroleum and gas industries are completely owned and controlled by the government. Oil accounts more than 90 percent of Kuwait's export earnings and almost half of its gross national product. See *The Middle East and North Africa* 1998: 684–92; *The Middle East* 2000: 299–304; 'Time Travellers: A Survey of the Gulf,' 2002.

Laos

The estimated DD is much lower than expected on the basis of the criterion variables because most sectors of the non-agricultural economy were dominated by state-owned enterprises and foreign companies in the 1990s. See *The Far East and Australasia* 1999: 599–606.

Libya

The estimated DD is much lower than expected on the basis of the criterion variables because the most important sectors of the economy (petroleum and gas) are completely dominated by the government and multinational companies. Oil production accounts for one-third of Libya's gross domestic product and 95 percent of its export earnings. See *The Middle East and North Africa* 1998: 775–88; *The Middle East* 2000: 336–8.

Maldives

Maloney (1995) claims that there 'are a few families who control most assets such as shipping company, tourist hotels, and real estate in Male. These families tend to control the government.' See also *The Far East and Australasia* 1999: 680–2.

Morocco

The ownership and control of the most important industries is highly concentrated (see *The Middle East and North Africa* 1998: 817–30). Abdeslam M. Maghraoui (2002) illustrates the use of economic power resources in politics. He says that through the creation of state companies in the country's more profitable industries, 'the monarchy used the public sector to control and reward prominent domestic allies' (Maghraoui 2002: 25).

Oman

Oman's economy is based largely on revenue from the petroleum sector, and the petroleum and natural gas industries are controlled by the government and foreign companies. Oil production accounts for 80 percent of Oman's export earnings. See *The Middle East and North Africa* 1998: 849–56; *The Middle East* 2000: 350; 'Time Travellers: A Survey of the Gulf,' 2002.

Qatar

The estimated DD is very low for Qatar because crucial non-agricultural economic resources are concentrated in the hands of the government and multinational companies, which dominate petroleum and natural gas industries. See *The Middle East and North Africa* 1998: 869–75; *The Middle East* 2000: 353; 'Time Travellers: A Survey of the Gulf,' 2002.

Saudi Arabia

The economy of Saudi Arabia is dominated by petroleum, and the petroleum and natural gas industries are in the hands of the government and multinational companies (see *The Middle East and North Africa* 1998: 892–905; *The Middle East* 2000: 369–71; 'Time Travellers: A Survey of the Gulf,' 2002). Jean-François Seznec (2002) pays attention to the way in which oil wealth is used to support the hegemony of the royal family. Since the 1960s, a substantial part of the regime's oil benefits has been shared 'with commoners in return for their tacit agreement not to challenge the royal family's ultimate prerogatives' (Seznec 2002: 35).

Tunisia

The government controls large sections of the economy, especially the petroleum and other mining industries. Lardi Sadiki notes that 'the business community not only depends on the

state for protection but also is unable to avoid punitive sanctions, such as by way of denial of financial and political favour.' He continues that 'a handful of families related to the country's president "pillage" the country's economy' (Sadiki 2002: 126–7; see also *The Middle East and North Africa* 1998: 991–1002).

United Arab Emirates

The government, ruling families, and foreign companies own and control most important economic resources (especially petroleum industries) in the United Arab Emirates. Therefore the estimated DD is very low (10). See *The Middle East and North Africa* 1998: 1067–79; *The Middle East* 2000: 357; 'Time Travellers: A Survey of the Gulf,' 2002.

Yemen

The estimated DD is slightly lower than expected on the basis of the criterion variables because the government and foreign companies seem to dominate the most important sectors of the non-agricultural economy, especially its oil sector (see *The Middle East and North Africa* 1998: 1112–26; *The Middle East* 2000: 401–2).

Appendix 5 Data on GNP 1998 and GDP per capita (PPP US\$) 1998 in 170 countries

<i>Country</i>	<i>GNP per capita (US\$) 1998</i>	<i>GDP per capita (PPP US\$) 1998</i>	<i>GDP as a % from 25,000</i>
	<i>1</i>	<i>2</i>	<i>3</i>
1 Afghanistan	(350)	800 ¹	3
2 Albania	810	2,804	11
3 Algeria	1,550	4,792	19
4 Angola	340	1,821	7
5 Argentina	8,970	12,013	48
6 Armenia	480	2,072	8
7 Australia	20,300	22,452	90
8 Austria	26,850	23,166	93
9 Azerbaijan	490	2,175	9
10 Bahamas	12,400 ¹	14,614	58
11 Bahrain	7,660	13,111	52
12 Bangladesh	350	1,361	5
13 Barbados	7,890	12,001	48
14 Belarus	2,200	6,319	25
15 Belgium	25,380	23,223	93
16 Belize	2,610	4,566	18
17 Benin	380	867	3
18 Bhutan	4701	1,536	6
19 Bolivia	1,000	2,269	9
20 Bosnia & Herzegovina	(1,500)	1,720 ²	7
21 Botswana	3,600	6,103	24
22 Brazil	4,570	6,625	26
23 Brunei	24,630 ¹	16,765	67
24 Bulgaria	1,230	4,809	19
25 Burkina Faso	240	870	3
26 Burma (Myanmar)	(400)	1,199	5
27 Burundi	140	570	2
28 Cambodia	280	1,257	5
29 Cameroon	610	1,474	6
30 Canada	20,020	23,582	94
31 Cape Verde	1,060	3,233	13

	<i>Country</i>	<i>GNP per capita (US\$) 1998</i>	<i>GDP per capita (PPP US\$) 1998</i>	<i>GDP as a % from 25,000</i>
		<i>1</i>	<i>2</i>	<i>3</i>
32	Central African Republic	300	1,118	4
33	Chad	230	856	3
34	Chile	4,810	8,787	35
35	China	750	3,105	12
36	Colombia	2,600	6,006	24
37	Comoros	370	1,398	6
38	Congo (Brazzaville)	690	995	4
39	Congo (Zaire)	110	822	3
40	Costa Rica	2,780	5,987	24
41	Côte d'Ivoire	700	1,598	6
42	Croatia	4,520	6,749	27
43	Cuba	(2,000)	3,967	16
44	Cyprus	11,920 ¹	17,482	70
45	Czech Republic	5,040	12,362	49
46	Denmark	33,260	24,218	97
47	Djibouti	(600)	1,266	5
48	Dominican Republic	1,770	4,598	18
49	Ecuador	1,530	3,003	12
50	Egypt	1,290	3,041	12
51	El Salvador	1,850	4,036	16
52	Equatorial Guinea	1,500	1,817	7
53	Eritrea	200	833	3
54	Estonia	3,390	7,682	31
55	Ethiopia	100	574	2
56	Fiji	1,110	4,231	17
57	Finland	24,110	20,847	83
58	France	24,940	21,175	85
59	Gabon	3,950	6,353	25
60	Gambia	340	1,453	6
61	Georgia	930	3,353	13
62	Germany	25,850	22,169	89
63	Ghana	390	1,735	7
64	Greece	11,650	13,943	56
65	Guatemala	1,650	3,505	14
66	Guinea	540	1,782	7
67	Guinea-Bissau	160	616	2
68	Guyana	770	3,403	14
69	Haiti	410	1,383	6
70	Honduras	730	2,433	10
71	Hungary	4,510	10,232	41
72	Iceland	28,010	25,110	100
73	India	430	2,077	8
74	Indonesia	680	2,651	11
75	Iran	1,770	5,121	20
76	Iraq	(1,500)	3,197	13

<i>Country</i>		<i>GNP per capita (US\$) 1998</i>	<i>GDP per capita (PPP US\$) 1998</i>	<i>GDP as a % from 25,000</i>
		<i>1</i>	<i>2</i>	<i>3</i>
77	Ireland	18,340	21,482	86
78	Israel	15,940	17,301	69
79	Italy	20,250	20,585	82
80	Jamaica	1,680	3,389	14
81	Japan	32,380	23,257	93
82	Jordan	1,520	3,347	13
83	Kazakhstan	1,310	4,378	18
84	Kenya	330	980	4
85	Korea, North	741*	1,0003	4
86	Korea, South	7,970	13,478	54
87	Kuwait	20,200 ¹	25,314	100
88	Kyrgyzstan	350	2,317	9
89	Laos	330	1,734	7
90	Latvia	2,430	5,728	23
91	Lebanon	3,560	4,326	17
92	Lesotho	570	1,626	6
93	Liberia	(350)	1,200	5
94	Libya	(4,000)	6,697	27
95	Lithuania	2,440	6,436	26
96	Luxembourg	43,570	33,505	100
97	Macedonia	1,290	4,254	17
98	Madagascar	260	756	3
99	Malawi	200	523	2
100	Malaysia	3,600	8,137	33
101	Maldives	1,230	4,083	16
102	Mali	250	681	3
103	Malta	9,440	16,448	66
104	Mauritania	410	1,563	6
105	Mauritius	3,700	8,312	29
106	Mexico	3,970	7,704	31
107	Moldova	410	1,947	8
108	Mongolia	400	1,541	6
109	Morocco	1,250	3,305	13
110	Mozambique	210	782	3
111	Namibia	1,940	5,176	21
112	Nepal	210	1,157	5
113	Netherlands	24,760	22,176	89
114	New Zealand	14,700	17,288	69
115	Nicaragua	370 ¹	2,142	9
116	Niger	190	739	3
117	Nigeria	300	795	3
118	Norway	34,330	26,342	100
119	Oman	(6,000)	9,960	40
120	Pakistan	480	1,715	7
121	Panama	3,080	5,249	21

<i>Country</i>	<i>GNP per capita (US\$) 1998</i>	<i>GDP per capita (PPP US\$) 1998</i>	<i>GDP as a % from 25,000</i>
	<i>1</i>	<i>2</i>	<i>3</i>
122 Papua New Guinea	890	2,359	9
123 Paraguay	1,760	4,288	17
124 Peru	2,460	4,282	17
125 Philippines	1,050	3,555	14
126 Poland	3,900	7,619	30
127 Portugal	10,690	14,701	59
128 Qatar	12,000 ¹	20,987	84
129 Romania	1,390	5,648	23
130 Russia	2,300	6,460	26
131 Rwanda	230	660	3
132 Saudi Arabia	6,910 ¹	10,158	41
133 Senegal	530	1,307	5
134 Sierra Leone	140	458	2
135 Singapore	30,060	24,210	97
136 Slovakia	3,700	9,699	39
137 Slovenia	9,760	14,293	57
138 Solomon Islands	750	1,940	8
139 Somalia	(150)	600 ⁴	2
140 South Africa	2,880	8,488	34
141 Spain	14,080	16,212	65
142 Sri Lanka	810	2,979	12
143 Sudan	290	1,394	6
144 Suriname	1,660	5,161	21
145 Swaziland	1,400	3,816	15
146 Sweden	25,620	20,659	83
147 Switzerland	40,080	25,512	100
148 Syria	1,020	2,892	12
149 Taiwan	13,233*	16,500 ⁵	66
150 Tajikistan	350	1,041	4
151 Tanzania	210	480	2
152 Thailand	2,200	5,456	22
153 Togo	330	1,372	5
154 Trinidad & Tobago	4,430	7,485	30
155 Tunisia	2,050	5,404	22
156 Turkey	3,160	6,422	26
157 Turkmenistan	650 ¹	2,550	10
158 Uganda	320	1,074	4
159 Ukraine	850	3,194	13
160 United Arab Emirates	18,220	17,719	71
161 United Kingdom	21,400	20,336	81
162 United States	29,340	29,605	100
163 Uruguay	6,180	8,623	34
164 Uzbekistan	870	2,053	8
165 Venezuela	3,500	5,808	23
166 Vietnam	330	1,689	7

Country		GNP per capita (US\$) 1998 (PPP US\$)	GDP per capita 1998	GDP as a % from 25,000
		1	2	3
167	Yemen	300	719	3
168	Yugoslavia	(1,500)	2,300 ⁶	9
169	Zambia	330	719	3
170	Zimbabwe	610	2,669	11

Sources

GNP per capita 1998

World Development Report 1999/2000 2000: Table 1 and Table 1a, if not otherwise noted. For historical data, see Lynn and Vanhanen 2002: Appendix 2.

1 *Human Development Report* 2000: Table 13.

* North Korea for 1997: *The Far East and Australasia* 1999: 539.

* Taiwan for 1997: *The Far East and Australasia* 1999: 322.

Estimations are in brackets.

GDP per capita (PPP US\$) 1998

Human Development Report 2000: Table 1, if not otherwise noted. The percentage of GDP is calculated from 25,000 dollars. The percentage is 100 for all countries in which GDP per capita was 25,000 dollars or higher in 1998. For per capita national income, see also *World Development Report 2000/2001* 2001: Table 1.

1 *The World Factbook* 2000: 2.

2 *The World Factbook* 2000: 63.

3 *The World Factbook* 2000: 265.

4 *The World Factbook* 2000: 444.

5 *The World Factbook* 2000: 540.

6 *The World Factbook* 2000: 429.

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Index

- accuracy of predictions 109–10, 116, 119, 187
- Afghanistan 180
- Africa 10, 36, 41–2, 55, 82, 105, 112:
North 40, 114; *see also* sub-Saharan Africa
- Albania 76, 93, 144, 166–7
- Alexander, R.D. 26
- Algeria 75–6, 114, 117, 149, 161–2, 180
- Allardt, E. 38
- Almond, G.A. 12
- al-Shayehji, A. 159
- alternative approaches to explain democracy and democratization
1–3: economic development and modernization 7–10; income inequality 15–16; modernization theory challenged 16–17; multivariate models 10–12; other studies and theories 18–21; political culture 13–15; resource distribution theory of democracy 25–31; summary of approaches 21–4, 32–3; transition and consolidation studies 12–13
- America: North 112, 116, 181; South 10, 12; *see also* Latin America
- analysis of single countries: categories of countries 147, 166, 178–80; countries at the transition levels of IPR and Mean 149; countries with large negative residuals 174–79; countries with large positive residuals 166–74; countries with small and moderate residuals 179–80; democracies and non-democracies as expected 148; deviating democracies 149–56; deviating non-democracies 156–61; Muslim countries 163–5; regional groups 147, 161–3, 179–82
- Angola 180
- anomalous cases 40–1, 59
- Antigua and Barbuda 31
- Apter, D. 49
- Arab countries 117, 149, 157–8, 160–1, 176–7
- Arat, Z.F. 18–19, 24, 40, 42–3, 49, 87, 132, 185
- Argentina 72–3, 180
- Aristotle 23, 48
- Armenia 162, 179
- Arnhart, L. 19
- Asia 42, 87, 115: East and Southeast 14, 40, 118; group of Asia-Pacific 162–3; South 95, 118, 138, 156, 189
- Asia and Oceania (Pacific), region of, 147, 180–3, 189
- Asian values and democracy 14–15
- Aung San Suu Kyi 174
- Australia 72, 115, 162, 179
- Austria 72, 179
- Azerbaijan 139, 149, 156, 162, 180; New Azerbaijan Party 156; president Geidar Aliyev 156
- Bahamas 180
- Bahrain 114, 157, 159, 164, 179
- Bangladesh 115, 118, 138, 144, 150, 156, 164; Awami League 150; Bangladesh Nationalist Party 150
- Banks, A.S. 8, 31, 49, 80
- Barbados 180
- Barber, C.T. 46
- Barkow, J.H. 26
- Barro, R.J. 10

- behavioral predispositions (epigenetic rules) 19, 24–5, 29, 32, 39, 41, 49, 185
- Belarus 116, 139, 146, 157; president Lukashenka 157
- Belgium 71–2, 90, 179
- Belize 149, 180
- Below Poverty Line% variable 94–6
- Ben-Dor, G. 164
- Benin 115, 118, 150–1, 156, 180
- Berg-Schlosser, D. 20–1, 24, 36, 44, 83, 96
- Beyle, T.L. 61
- Beyme, K. von 57
- Bhutan 180
- biological factors 19, 39;
sociobiological argumentation 38–9
- Blalock, H.M. 101–2, 129
- Blondel, J. 14–15, 37, 57
- Bolivia 149, 180
- Bollen, K.A. 8, 15, 35, 37, 39, 49–52, 59–60, 63, 66, 78; index of political democracy 50
- Boroumand, L. 164
- Boroumand, R. 164
- Bosnia and Herzegovina 75–6, 90, 93, 104, 144, 167
- Botswana 74–5, 112, 115, 149, 180
- Braizat, F. 44–5
- Brazil 144, 149, 167
- breakdowns of democracy 18, 21, 24, 189
- Brown, D.E. 26
- Brownlee, J. 177
- Bruce, J.W. 92–3
- Brunei 118, 157–9, 164, 179
- Brynen, R. 158, 164
- Buchanan, W. 137
- Bulgaria 146, 167–8
- Bunce, V. 8, 10
- Burkina Faso 75, 180
- Burma (Myanmar) 73, 115, 149, 174, 179; ethnic wars in 174; military rule 174
- Burundi 149, 180
- Butler, D.A. 61, 67
- Calvert, P. 41
- Cambodia 115, 118, 149, 180
- Cameroon 149, 180
- Cammack, P. 87
- Canada 72, 144, 162, 169, 175, 177, 179
- Cape Verde 112, 115, 149, 180
- capitalism as an explanatory factor 45, 87, 132, 184; Marxist definition of 87
- Carothers, T. 13
- Carson, R.L. 85
- causal relationships 101–2, 106–7, 131, 187; requirements of 101–2
- causes of democratization 3, 7, 21–24, 41, 45, 184–5
- Central African Republic 76, 112, 115, 151, 156, 180
- Chad 115, 151, 156, 180
- Chan, S. 42
- Chile 72, 113, 180
- China 118, 149, 175, 179;
democratization in rural China 175
- civil liberties and rights; *see* political rights and civil liberties
- civil wars 76; in Congo (Brazzaville) 176; in Lebanon 170; in Mosambique 153–4; in Nicaragua 154
- Clague, C. 10, 14
- Collier, D. 48
- Colombia 71–4, 76, 180
- Comoros 75–6, 118, 180
- comparison with alternative datasets:
contradictory classifications 71–8;
correlation analysis 69–70;
dichotomous classifications 70–1;
Freedom House ratings 75–8; Polity scores 71–5, 77–8; structural differences 78
- comparison with some other explanatory theories: differences between explanations 32–3; different levels of explanation 33; economic development 33; Huntington 32; income inequalities 33; Moore's theory 33; proximate and ultimate factors of democratization 33
- Competition (political variable) 4, 35, 41, 55–73, 108, 119, 123–7, 134, 154, 170, 176; and countries without popular elections 58; definition of 56–7; definition of the 'largest party' 57; impact of party systems 59; and independent candidates 57–8; and indirect elections 57; the smaller parties' share 53–5, 59; threshold of democracy 65–66, 76, 114, 115–18, 134, 152, 155–6; upper limit of 59

- concentration of the means of violence 111; in Burma 174; in Syria 169
- concentration of power resources 30, 45, 111, 113, 187; in Azerbaijan 156; in Bahrain 157; in Belarus 157; in Brunei 157; in Cuba 176; in Egypt 177; in Honduras 152; in Kuwait 158; in Libya 177; in Nicaragua 154; in Oman 177; in Peru 171–2; in Qatar 159; in Russia 172; in Saudi Arabia 159; in Turkmenistan 178; in Ukraine 173; in the United Arab Emirates 161
- conclusions 119–20, 131–2, 140, 146, 161–3, 180–2: capitalist (economic) development and democratization 184; dominant explanatory factor 184–5; income inequality 185; most deviating countries 188; operationally defined measures of democracy and explanatory variables 186; political culture 185; results supporting the hypotheses 186–8; strategies of democratization 189; theoretical arguments 185–6; the state of democracy in 1999–2001 187–9
- Congo (Brazzaville) 114, 144, 149, 175–6, 179; president Pascal Lissouba 176; president Sassou-Nguesso 175
- Congo (Zaire) 149, 180
- Coppedge, M. 16, 24, 40, 49, 50–2, 63, 66, 96, 184
- Cornell, S.E. 156
- Corning, P.A. 20
- correlations 5, 31, 34, 121–33; in 1850–1998 104–10, 186–7; with HDI 129; multiple 128–9; in Muslim countries 163–5; partial correlation analysis 130; with the Polity and Freedom House measures of democracy 69–70; results supporting the theory 105, 108, 131, 133, 187
- Costa Rica 71–3, 180
- Côte d'Ivoire 180
- Coulter, P. 8, 49, 60, 78, 80–1
- countries with large negative residuals 140, 144–6, 166, 174–81, 188; Burma (Myanmar) 174; Canada 175; China 175; Congo (Brazzaville) 175–6; Cuba 176; Egypt 176–7; France 177; Japan 177; Libya 177; Oman 177–8; Rwanda 178; Thailand 178; Turkmenistan 178–9
- countries with large positive residuals 140, 144–6, 166–74, 180–1, 188; Albania 166–7; Bosnia & Herzegovina 167; Brazil 167; Bulgaria 167–8; Croatia 168; Cyprus 168; Czech Republic 168–9; Fiji 169; Lebanon 169–70; Mauritius 170; Panama 170; Papua New Guinea 171; Peru 171; Russia 172; Slovakia 172; Solomon Islands 172–3; Ukraine 173; Uruguay 173
- countries with small or moderate residuals 166, 179–80
- Croatia 75–6, 93, 146, 168
- Crystal, J. 159
- Cuba 73, 112, 114, 117, 149, 176, 179
- Cutright, P. 8, 49, 65, 80–2
- Cyprus 146, 162, 168
- Czechoslovakia 72
- Czech Republic 144, 168–9, 172, 175
- Dahl, R.A. 9–11, 13, 34–5, 49–50, 59, 85; conditions for democracy 11, 22–3; polyarchy 9, 34; two theoretical dimensions of polyarchy (democracy) 50, 54–6
- Darwin, C. 26, 42, 53
- Darwinian interpretation of politics 3–4, 79, 102
- Darwinian (neo-Darwinian) theory of evolution by natural selection 1, 4, 42, 44, 185–6; basic arguments 25–6
- Dasgupta, B. 34
- data on political variables 67
- debate on Vanhanen's theory and studies of democratization: Allardt 38; Arat 42–3; Berg-Schlusser and De Meur 36; Blondel 37; Bollen 35; Braizat 44–5; Calvert 41; Chan 42; Coppedge 40; Dahl 34–5; Dasgupta 34; Decalo 41; Dix 36; Forje 41; Gaber 44; Grenshaw 39; Henderson 41; Idehuru 43; Karvonen 38–9; Landman 45; Lijphart 43; McLeon 36–7; Mahoney 43; Mbaku 36; Marsh 46; Moore 37–8; Munck and Verkuilen 46; Neher 42; Poppovic and Pinheiro 37; Sanderson 46; Schmidt 45–6; Seligson 40;

- Simpson 39–40; Soares 34; Stepan and Skach 35; Suter 38; Trainee 44; Turan 40–1; Welzel 44; Whistler 35–6
- Decalo, S. 40–1
- degree of decentralization of (mainly) non-agricultural economic power resources (DD) 46, 80, 84–90, 93–6, 98–100, 105–8, 122, 126, 128–9, 164, 172–3, 186; Below Poverty Line% variable 94–6; and capitalist economic development 86–7; critique of Coppedge 40; definition of 85–6, 94–6; degree of resource concentration 85–7; economic freedom ratings 95–6; Highest 10% variable 94; index of the concentration of economic power resources 85–6; as a measure of non-agricultural economic power resources 84–5, 93, 96; scores of economic liberalization 95–6; sources of data 94–5
- degree (level) of democratization 5, 23, 29, 41, 44–5, 63–4, 103–4, 109–11, 119, 151, 155, 158–61, 166–74, 177–9, 183, 187
- degree (rate) of explanation 109, 126–7, 183
- degree of resource concentration 29, 31, 85–6, 119
- degree of resource distribution 28–31, 37, 47, 79, 100, 111, 124, 148, 151, 158, 165, 168–75, 183–4, 187–9; *see also* distribution of power resources
- De Meur, G. 36
- democracies 133–40, 148–82, 188; as expected 148, 188–9; deviating democracies 138–9, 144–46
- democracy, definitions of: Bollen 49–50; Inter-Parliamentary Union 49; Linz and Stepan 12, Lipset 48–9; Przeworski *et al.* 51; Schumpeter 49; Vanhanen 49
- democracy and democratization: alternative approaches to explain 1–2, 7–24; analysis of single countries 147–82; arguments for democracy 2; debate on Vanhanen's theory and studies of democratization 34–47; definitions of democracy 28, 48–9; empirical analysis 104–46; explanatory variables 79–100; measures of democracy 49–66; resource distribution theory of democratization 25–31
- Democratization and Power Resources 1850–2000* dataset 105
- Denmark 72, 179
- Dennet, D.C. 26
- Deutsch, L.W. 81–2, 96
- deviating cases (countries) 40, 102, 134–5, 140–7, 153, 171, 173, 188–9
- deviating democracies 144–6, 149–56, 166, 188–9; Bangladesh 150; Benin 150–1; Central African Republic 151; Chad 151; Gambia 151–2; Guinea-Bissau 152; Honduras 152; Madagascar 153; Malawi 153; Mosambique 153–4; Nicaragua 154; Nigeria 154–5; Senegal 155; Uganda 155–6
- deviating non-democracies 144–6, 156–63, 166, 174, 188–9; Azerbaijan 156; Bahrain 157; Belarus 157; Brunei 157–8; Jordan 158; Kazakhstan 158; Kuwait 158–9; Qatar 159; Saudi Arabia 159; Singapore 160; Syria 160; Tunisia 160–1; United Arab Emirates 161
- Diamond, L. 8, 11, 13–14, 22–3, 48–50, 60, 66, 78, 80, 96; on human development 22
- dichotomous classifications 66, 70–1, 77
- Dickerman, C. 84
- different approaches to measuring democracy: Bollen's index of political democracy 49–50; Coppedge and Reinicke's scale of polyarchy 50; Dahl's two theoretical dimensions of polyarchy 50; Diamond's typology of regimes 52; Diamond, Linz, and Lipset's classification of regimes 50; evaluation of approaches 52–3; Freedom House's ratings 51; Munck and Verkuilen 49; Perry and Robertson's four indicators of democracy 52; Polity project's scales 51–2; Przeworski *et al.* 51; Reich 52
- distribution of political power 1, 27–8, 54–5, 111
- distribution of power resources (sanctions) 1, 26–9, 32, 43–5, 53–4, 87, 89, 98, 110–12, 127, 176, 186;

- as the fundamental (dominant) factor of democratization 32, 87, 121, 132, 184, 186–7
- Diuk, N. 173
- Dix, R.H. 36
- Djibouti 75, 164, 180
- Dobzhansky, T. 26
- Dogan, M. 101
- Dominica 31
- Dominican Republic 74, 90, 180
- Doorenspleet, R. 50
- Duverger, M. 57
- economic development (and modernization) as an explanatory factor 7–10, 16–17, 21–2, 32–3, 37, 113, 131–2, 175, 184–5; Barro 10; Bunce 10; Dahl 9; Diamond 8, 22; Lerner 7–8, 22; Lipset 7–8, 21–2; Marks and Diamond 8; Muller 9; Rueschmeyer 9–10, 22, 132; as a special case of resource distribution 32–3, 43, 131–2, 183
- economic freedom ratings 95, 126; definition of 95; and values of DD 95
- economic liberalization scores 95–6, 126
- economic systems 85–7, 126, 185; capitalism 86–7; centrally planned economy 86–7; market economy 22, 86–7, 185, 189; socialist system 87
- Economist* 151, 175
- Ecuador 73, 90, 149, 180
- Egypt 149, 162, 164, 176–7, 179; president Mubarak 176
- Eibl-Eibesfeldt, I. 26
- electoral democracies 68
- electoral participation 35, 53–4, 77–8, 172, 175, 177
- electoral systems 59, 169–70, 175; indirect elections 57; plurality or majoritarian 59, 170; proportional 36, 59; in Singapore 160
- Elgström, O. 8
- El Salvador 74, 149, 180
- Ember, M. 16
- Emminghaus, C. 45
- empirical analysis 4–5: conclusions 183–9; cross-sectional correlations in 1850–1998 104–7, 186–7; deviations from the regression lines 140–6; multiple correlations 128–9; multiple regressions 129–31; of single countries 148–82; review of previous predictions 110–20; the first research hypothesis 105–9, 121–7, 133, 146, 165–6, 179; the second research hypothesis 133–46, 147–63; summary of correlation analysis 131–2; transition levels of resource distribution 134–40
- Equatorial Guinea 149, 180
- Eritrea 104, 149, 180
- Ersson, S. 15, 19, 23, 36, 86–7, 96, 164, 185
- Estonia 21, 72, 93, 179
- Ethiopia 180
- ethnic conflict (war) 167, 169, 173–4, 178
- ethnic groups 171, 176, 178
- ethnic heterogeneity (diversity): in Bosnia & Herzegovina 167; in Brazil 167; in Chad 151; in Congo (Brazzaville) 176; in Fiji 169; in Jordan 158; in Malawi 153; in Mauritius 170; in Nigeria 154–5; in Papua New Guinea 171; in Singapore 160; in Solomon Islands 173
- Europa World Year Book 2001* 90
- Europe 18, 36, 55, 116, 181; Eastern 88, 94–5, 107, 113; post-communist 12; Southern 12; Western 112
- Europe and European offshoot countries, region of, 147, 161–2, 179, 182
- evolutionary arguments 25–8
- evolutionary resource distribution theory of democratization; *see* resource distribution theory of democratization
- evolutionary theory: *see* Darwinian (neo-Darwinian) theory of evolution by natural selection
- excluded small countries 31
- explanatory variables 4, 30–1, 40, 79–103, 105, 107–9, 119, 121–2, 124, 129–31, 133, 186; alternative explanatory factors 7–24, 127, 183; the degree of decentralization of (mainly) non-agricultural economic power resources (DD) 84–8, 93–6; Extended Index of Power Resources (IPR-2) 99; Family Farms (FF) 82–4, 91–3; Index of the Distribution of Economic Power Resources (DER)

- 88; Index of Economic Power Resources (ER) 99; Index of Intellectual Power Resources (IR) 99; Index of Knowledge Distribution (IKD) 88; Index of Occupational Diversification (IOD) 87; Index of Power Resources (IPR) 4, 87–9, 99; Index of Power Resources and Structural Imbalances (IPRI) 89; Index of Structural Imbalance (ISI) 89; indices of power resources 98–100; Literates 82, 91; Mean 99–100; the means of violence 30; non-agricultural population (NAP) 40, 80–1, 89; previous explanatory variables 80; real GDP per capita (PPP\$) 96–8; Students 81–2, 90–1; summary of 100; theoretical explanatory factor 98; Urban Population (UP) 40, 80, 89
- Extended Index of Power Resources (IPR-2) 99–101, 122, 127–8, 133–7, 148, 183–4; definition of 99
- Family Farms (FF) variable 46, 80, 82–4, 88–93, 98–100, 107, 115, 121–2, 125–6, 129, 164, 172–3, 178; and community-based land tenure systems 84, 92; definition of 83–4, 91; in former socialist countries 93; and large farms 84; as a measure of the relative distribution of economic power resources 82–3, 93; in other studies 83; problems of measurement 83–4; sources of data 84, 92–3; in sub-Saharan Africa 84, 92–3
- FAO's (Food and Agriculture Organization of the United Nations) reports 84, 92, 93
- Feng, Y. 10, 13
- Fiji 115, 118, 144, 169
- Finland 21, 72–3, 179
- Fitzgibbon, R.H. 49
- Flanigan, W. 80–1
- Fogelman, E. 80–1
- Forje, J.W. 40–1
- former socialist countries 105, 116, 149, 157, 166
- France 71–2, 177, 179
- Freedom House 4, 44, 51, 66, 68; *Comparative Survey of Freedom* 51, 60; comparison with Vanhanen's dataset 68–70, 75–8; *Freedom in the World 2000–2001* 151–6, 158, 160–1, 167, 170, 173–4; ratings of political rights and civil liberties 4, 46, 48, 51–2, 61
- Friedrich, C.J. 30
- Fuller, G.E. 164
- Gaber, R. 44
- Gabon 149, 180
- Gallagher, M. 61
- Gambia 75–6, 112, 115, 118, 151–2, 156, 180
- Gardner, H.S. 98
- Gasiorowski, M.J. 49
- Gastil, R.D. 51, 65
- Georgia 75, 162, 179
- Germany 36, 72, 179; Hitler's dictatorship in 36
- GDP per capita 8, 10, 97, 129; measured at PPP 97
- GDP% (variable) 98–100, 122, 126–31, 136, 146, 157, 164; *see also* real GDP per capita (PPP\$)
- Ghana 112, 114–15, 117, 149, 180
- Gill, G. 13, 22, 96
- GNP per capita 97, 127; measured at PPP 97
- Goddard, M. 164
- Gómes Buendía, H. 13
- Gongadze, M. 173
- Goodin, R.E. 61
- governmental systems: *see* institutional power arrangements
- Grandjean, B.D. 50
- Greece 71–3, 179
- Grenada 31
- Grenshaw, E. 39
- Guatemala 73–6, 90, 114, 117, 149, 180
- Guinea 75–6, 164, 180
- Guinea-Bissau 75, 152, 156, 180
- Gurr, T.R. 49, 61, 68; and the Polity project 51–2
- Gwartney, J. 95
- Guyana 75, 114, 180
- Hadenius, A. 11–12, 18, 23, 49, 60, 66, 80–3, 96
- Haiti 75, 112, 114, 117, 180
- Hall, J.A. 86
- Harrison, L.E. 14
- Haynes, J. 13
- Hegel's theory 44–5

- Henderson, J. 40–1
 Herb, M. 157, 159
 Highest 10% variable 94–6
 Hinnebusch, R.A. 160
 Honduras 72, 116–17, 138, 146, 149, 152, 156
 Hudson, M.C. 164
 Human Development Index (HDI) 8, 129; explanatory power of 129
Human Development Report 2, 15, 21, 49, 52, 60, 70, 94–5, 98, 129
 human nature 24–5, 38–9, 49, 189; *see also* resource distribution theory of democratization
 human rights 18–19, 24, 38
 Hungary 90, 93, 179
 Huntington, S.P. 11, 14, 23, 32, 41, 49, 71, 164, 184
 Hyden, G. 8, 14
 Hyman, G. 13
 hypotheses: basic hypothesis 1–2, 28, 34, 37, 41, 79, 100–1; central hypothesis 3, 28–9, 35, 183, 185–6; research hypotheses 100–1, 121, 147–8, 165
- Ibrahim, S.E. 164
 Iceland 72, 179
 Idehuru, O.M. 43
 income inequality and democracy 15–16, 23–4, 185; as an indicator of resource distribution 185; Lenski's arguments 15; Midlarsky's historical analysis 16, 23; Muller's test of hypothesis 15–16, 23; Simpson 16
- Index of Democratization (ID) 4, 29, 34–5, 43–4, 46, 56, 59, 61, 63–78, 89, 97, 101–3, 105–10, 123–40, 144, 147–8, 152–3, 163–5, 167–70, 173, 175, 177, 183–4, 186–8; characteristics of the ID measure 64, 77–8; combines two theoretical dimensions of democratization 56, 63–4; as a continuous variable 65, 77; definition of 63–4; and subjective judgements 64
- Index of the Distribution of Economic Power Resources (DER) 46, 88–9, 106, 113; definition of 88
- Index of Economic Power Resources (ER) 99–100, 122, 126–8, 130; definition of 99
- Index of Intellectual Power Resources (IR) 99–100, 122, 125, 127–30; definition of 99
- Index of Knowledge Distribution (IKD) 88, 113; definition of 88
- Index of Occupational Diversification (IOD) 87–9, 113; definition of 87
- Index of Power Resources (IPR) 4–5, 31, 37, 43–6, 87–9, 96–7, 99–103, 105–19, 122, 127–8, 130–1, 133–40, 144–9, 151–79, 181–4, 186–9; definition of 88, 99; as the principal explanatory variable 88
- Index of Power Resources and Structural Imbalances (IPRI) 89, 99, 118; definition of 89
- Index of Structural Imbalance (ISI) 89; definition of 89; and Eastern Europe 88–9
- India 1, 115, 118, 149, 180
- Indonesia 115, 118, 180
- Inglehart, R. 14, 21, 23
- Inkeles, A. 8
- Inoguchi, T. 14
- institutional power arrangements 58–9; concurrent powers 58; executive dominance 58; impact of institutional differences 35–6; parliamentary dominance 58; weighting of elections 58–9
- International Foundation for Electoral Systems 67
- Inter-Parliamentary Union 49, 67; *Chronicle of Parliamentary Elections* 67
- Iran 114, 117, 149, 180
- Iraq 180
- Ireland 72, 179
- Islam: *see* Muslim (Islamic) countries
- Israel 180
- Italy 72, 179
- Jackman, R.W. 15
- Jagers, K. 49, 52, 61, 68
- Jamaica 74–5, 180
- Japan 73, 144, 177, 179
- Jordan 114, 139, 144, 146, 158, 161, 164, 179
- Karatnycky, A. 49, 51, 58, 68, 76, 95
- Karvonen, L. 8, 38–9
- Kazakhstan 139, 149, 158, 162, 164, 180
- Keesing's Record of World Events* 67, 151, 152–4, 157, 176
- Kenya 75–6, 149, 180

- Kim, C.L. 8
 Kimber, R. 44, 89
 Kiribati 31
 Klingemann, H.-D. 61
 Komarov, E. 46
 Korany, B. 176–7
 Kuwait 114, 158–9, 164, 179
 Kyrgyzstan 90, 149, 162, 180
- Landman, T. 10, 13, 45
 land reforms 167; agrarian reforms 107
 Land Tenure Center 92
 Lane, J.-E. 15, 19, 23, 36, 86–7, 96, 164, 185
 Laos 73, 180
 LaPalombara, J. 57
 large deviations 40, 188; criteria of 40
 Lastarria-Cornhiel, S. 92
 Latin America 13, 18, 34, 38, 112, 181; countries of 40, 92, 114, 138, 144, 146, 149, 156, 172, 189
 Latin America and the Caribbean, region of, 113–14, 116, 147, 162, 180, 182
 Latvia 72, 90, 179
 Lauth, H.-J. 44–5, 49
 Lawson, R. 95
 Lebanon 73–6, 146, 169–70; religious communities in 169; Syrian troops in 170; the Taif accord 169
 Lenski, G. 15, 23
 Lenski, J. 15
 Lerner, D. 7–8, 18, 22, 80, 82; modernization hypothesis 7–8
 Lesotho 149, 180
 level of economic development 1–2, 6–7, 131–2
 Levitsky, S. 48–9, 52, 65
 Liberia 74, 76, 115, 180
 Libya 149, 162, 164, 177, 179
 Liedka, R.V. 16
 Lijphart, A. 43, 59
 Limongi, F. 8, 17, 96
 Lindblom, C.E. 85
 Linz, J. 12, 18, 24
 Lipset, S.M. 1–2, 7–10, 17–18, 42–3, 48–50, 61, 80–2, 96; Lipset's hypothesis (thesis) 2, 8–10, 16–17, 21–2
 Literates (variable) 80, 82, 88–9, 91, 98–100, 122, 129, 164, 171; definition of 82, 91; and the level of socio- economic and educational development 82; as a measure of intellectual power resources 82, 91; sources of data 82, 91
- Lithuania 179
 Londregan, J.B. 8
 Lorenz, K. 26
 Luxembourg 72, 179
- McCargo, D. 178
 Macedonia 90, 93, 179
 McFaul, M. 13
 McLeon, I. 36–7
 Madagascar 112, 115, 138, 149, 153, 156, 180
 Mahoney, J. 43
 Mainwaring, S. 49, 52
 Malawi 115, 138, 144, 149, 153, 156
 Malaysia 73, 75–6, 115, 180
 Maldives 118, 149, 164, 180
 Mali 75, 76, 164, 180
 Malta 179
 Mannheim, J.B. 101
 market economy: *see* economic systems
 Marks, G. 8
 Marquette, J.F. 8, 82
 Marshall Islands 31
 Marsh, C. 46
 Marsh, I. 14–15
 Marvick, D. 8
 Mauritania 164, 180
 Mauritius 112, 114, 117, 146, 170
 May, J.D. 8, 96
 Mayr, E. 26
 Mbaku, J.M. 36
 Mean (variable) 4, 99–101, 107–9, 122, 127–8, 133–49, 151–64, 166–9, 171–9, 181–4, 186–9; definition of 99
 measures of democracy 4, 29, 38–40, 42–3, 48–78, 107, 112, 116, 119, 121, 123, 125, 128, 131–2, 169, 182–3, 186; alternative measures 49–53; comparison with alternative datasets 68–78; Competition 4, 55–63; data on variables 67; democracy defined 48–9; excluded aspects of democratization 60–1; Index of Democratization 4, 63–4; origin and evolution of Vanhanen's measures of democracy 53–6; Participation 4, 55–63; referendums 4, 61–3; threshold values of democracy 65–6

- measures of resource distribution 2, 80, 100–1, 104, 108, 182; *see also* explanatory variables
- Melmed-Sanjak, J. 92
- methods of analysis 4–5, 29–31, 100–3, 121; Arat's critique 42–3; Bollen on electoral participation 35; causality 101–2; Coppedge on explanatory variables 40; correlation analysis 31, 101–2; falsification 31, 44, 101–2, 121; Moore's critique 37–8; operationalization of hypothetical concepts 29, 31; periods of analysis 4–5, 31, 103–4, 107, 121; regression analysis 102, 121, 133; Soares' critique 34; Trainee's arguments 44; transition levels of resource distribution 134–7
- Mexico 74, 76, 180
- Micronesia 31
- Middle East 37, 114, 158, 189; states of 8
- Middle East 2000* 157–9, 161, 169, 177
- Middle East, North Africa, and Central Asia, region of, 40, 117, 147, 162–3, 180–2
- Midlarski, M. 16, 29, 83
- military rule 174–5
- Mitchell, J. 20–1, 24, 36, 83, 96
- modernization: *see* economic development (and modernization) as an explanatory factor
- modernization theory challenged 16–17, 24; Coppedge: theory's claims tested 16–17, 24; Przeworski *et al.*: little predictive power 17, 24
- Mohnot, S.R. 85
- Moldova 116, 149, 179
- Mongolia 115, 149, 180
- Moore, M. 20, 22, 37–8, 59–60, 96; 'revenue-bargaining' theory of democratization 20, 33
- Morocco 75, 149, 161–2, 164, 180
- Morris, R. 26
- Mousseau, M. 8
- Mozambique 112, 115, 153–4, 156, 180
- Muller, E.N. 8–9, 15–16, 24, 96, 185
- Multiple correlation analysis 5, 128–9
- Multiple regression analysis 5, 36–7, 129–31, 133
- multivariate models 10–12, 22; Dahl's set of conditions favoring democracy 10–11, 22–3; Diamond *et al.*: cluster of factors 11, 23; Hadenius: seven variables 11–12, 23; Huntington: causes of democratization differ 11, 23; Lipset's list of factors 10, 22; Powell's factors 11
- Munck, G.L. 13, 46, 49, 60, 64, 68
- Muslim (Islamic) countries 14, 117, 139, 146, 161–5, 189; culture 14, 117, 139, 163–4; negative mean residuals 163–4; prospects for democracy 164
- Myanmar (Burma) 118
- Nafziger, E.W. 98
- Namibia 75–6, 149, 180
- Nauru 31
- Needler, M.C. 8, 96
- Nee, V. 16
- Neher, C.D. 42
- Nepal 75–6, 115, 118, 149, 180
- Netherlands 72, 90, 179
- Neubauer, D.E. 8, 80–2
- Newman, E. 14
- New Zealand 71–2, 115, 162, 179
- Nicaragua 72, 74, 76, 138, 144, 149, 154, 156; Constitutional-Liberal Party 154; Sandinista National Front 154
- Niger 75–6, 118, 180
- Nigeria 112, 115, 154–6, 180; General Obasanjo 154
- non-agricultural population (NAP) 80, 87, 89, 99, 186; definition of 80–1; as a measure of economic and human resources 80; and socio-economic development 81
- non-democracies 133–40, 153–4, 156–61, 174–5, 179, 188; as expected 148, 188–9; deviating non-democracies 138–9, 144–6, 156–61, 188
- Nord, A. 45
- North Africa, the Middle East, and Central Asia, region of, 40, 114, 117, 147, 162–3, 180–2
- North Korea 90, 180
- Norway 72, 179
- obstacles of democratization 176–7
- Oceanian countries 41, 118
- O'Donnell, G. 12, 13
- Olsen, M.E. 8, 80–2, 96

- Oman 149, 164, 177–9
 O'Regan, A. 8, 11
 origin and evolution of Vanhanen's measures of democracy:
 Competition (the smaller parties' share) 53–6; Dahl's two crucial dimensions of democracy 54–6; distribution of power 54; index of democratization 53, 56; index of power distribution 54; 1968 book 53; 1971 book 53–4; 1977 and 1979 books 54–5; 1984 book 55; Participation 53–6; pluralism in the party system 53; two political variables 54–5
- Pacific Island states 41, 115, 172
 Pakistan 75–6, 118, 180
 Palmer Harik, J. 170
 Panama 73, 113, 146, 170
 Papua New Guinea 115–16, 119, 144, 149, 171–2, 174; ethnic heterogeneity in 171
 Paraguay 114, 116–17, 149, 180
 Participation (political variable) 4, 35, 41, 55–73, 75, 105, 108, 119, 123–7, 134, 186; critique of Bollen 60; definition of 56; and importance of elections 60; Munck and Verkuilen 60; threshold of 75, 114, 118, 134, 155; upper limit of 60; and variation in age structures 59–60
 party system 1, 53, 59; in Canada 175; in the Czech Republic 169–70; multiparty system 59, 170; pluralist 53; in Slovakia 172
 Pennings, P. 45, 98, 102, 129
 per capita income 21–2, 97–8, 126–7, 131–2, 146, 177, 184
 Perry, R.L. 52, 102
 Peru 71, 73, 75–6, 146, 149, 171–2
 Peterson, S.A. 19
 Phi coefficient 137–8
 Philippines 73, 90, 180
Philip's Encyclopedic World Atlas 163
 Pickel, G. 44–5
 Pinheiro, P.S. 37
 Pinkney, R. 96
 Plato 48
 Poland 72, 93, 113, 187, 179
 political culture and democracy 10, 13–15, 23, 40, 185; Asian values 14; Clague's arguments 14; Diamond: political culture as a central factor 13–14; and failure of democracy in Muslim societies 14; Hyden: cultural pluralism 14; Inglehart 14; Lane and Ersson: hypotheses about cultural effects 15
 political parties 54, 57–9; in Azerbaijan 156; in Bangladesh 150; in Bulgaria 168; communist party 87; in Egypt 176; in Gambia 152; in Jordan 158; the 'largest party' 57; in Nicaragua 154; party alliances 57; in Singapore 160; in Solomon Islands 172; in Syria 160; in Tunisia 161; in Uganda 155
 political regimes (systems) 17, 66, 107, 110, 113
 political rights and civil liberties 46, 51, 56, 60–1, 68, 76, 78; Freedom House's survey of 51, 68, 78
 political variables: *see* measures of democracy
 politics 1–2, 26–8; evolutionary theme of 26–7; as a forum of the struggle for existence 26
 Polity (dataset) 66, 68; comparison with Vanhanen's dataset 68–75, 77–8; Democracy–Autocracy variable 4, 68; scores (index) 44, 48, 51–2; ten-point scales 51–2; threshold values of democracy 68–9
Polyarchy Dataset 36, 67, 104–5
 Poole, K.T. 8
 poor countries and democracy 1, 37, 42, 45, 148–50, 156, 184
 Popper, K. 49, 101, 110
 Poppovic, M. 37
 Portugal 72, 179
 Potocki, R. 157
 Potter, D. 87
 poverty 1, 94, 136, 146; in Bangladesh 150; in Benin 150; in India 1; indicators of 94–6
 Powell, G.B. 11, 96
 power 1–2, 26–8, 30, 53–5, 58, 79; based on sanctions 27, 79; definition of 27; distribution of 28–30, 54–5; political 28, 106, 113, 183, 189; power resources 28–30, 79–82, 84–91, 93–101, 106–7, 111–12, 116–17, 119–21, 125–7, 146, 150, 172, 181–3, 186, 189
 predictions on the prospects of democracy 34, 42, 103, 109–19,

- 148, 156, 187–8; accuracy of predictions 3, 116, 119, 187; for African countries 112; Albania 167; Asian countries 115; Bahrain 114, 157; Bangladesh 118, 150; Belarus 157; Benin 150; Bosnia & Herzegovina 167; Brazil 167; Brunei 118, 157; Bulgaria 168; Burma 118, 174; Cambodia 118; Central African Republic 151; Chad 151; Chile 113; China 118, 175; Congo (Brazzaville) 175; Croatia 168; Cuba 114, 117, 176; Cyprus 168; Czech Republic 169; East Asia and Southeast Asia 118; Egypt 176–7; Europe and North America 116; Fiji 115, 118, 169; Guatemala 117; Guinea-Bissau 152; Haiti 114, 117; Honduras 117, 152; India 115, 118; Indonesia 118; Japan 177; Jordan 114, 158; Kazakhstan 158; Kuwait 114, 159; Latin America and the Caribbean 112–14, 116–17; Libya 177; Madagascar 153; Malawi 153; Malaysia 115; Mauritania 117; Mauritius 170; Mosambique 154; Muslim countries 117, 161, 163; Nepal 118; Nicaragua 154; Nigeria 155; North Africa, the Middle East, and Central Asia 114, 117; Oman 177; Pacific (Oceania) countries 115, 118–19; Pakistan 118; Panama 113, 170; Papua New Guinea 115–16, 118, 171; Paraguay 117; Peru 171; Qatar 114, 159; Russia 172; Rwanda 178; Saudi Arabia 159; Senegal 155; Singapore 160; Slovakia 172; socialist countries 111–12, 116; Solomon Islands 115–16, 118, 173; South Asian countries 118; Soviet Union and Eastern Europe 113; sub-Saharan Africa 114–15, 117–18; Suriname 114; Syria 160; Taiwan 118; Thailand 178; Tunisia 161; Turkmenistan 178; Uganda 155; Ukraine 173; United Arab Emirates 117, 161; Uruguay 173; Western Europe and North America 112; Yemen 117
- Pride, R.A. 80–1
- prospects of democracy 6, 111–13, 116, 119
- Przeworski, A. 8, 17, 24, 49, 51–2, 57, 61, 65–6, 96, 184; classification of regimes 51
- purchasing power parity (PPP) 97–8
- purpose of this study 3, 5–6, 104, 189
- Qatar 114, 159, 164, 179
- Quinlan, D. 15
- random factors in politics 33, 103
- Ranney, A. 61, 67
- Ray, D. 98
- real GDP per capita (PPP\$) 96–8, 100, 186; definition of 97–8; as a measure of the distribution of socio-economic power resources 98; and other indicators of per capita income 97–8; sources of data 98; transformed into percentages 98; *see also* GDP% (variable)
- referendums 4, 59, 61–3, 186; added to the Participation variable 62; effect on the Index of Democratization 63; as a form of direct democracy 61–2, 186; national referendums 62; and plebiscites 63; research literature on 61–2; state referendums 62; in Switzerland and the United States 61, 63
- regional groups 147: Europe and European offshoot countries 162, 179–82; the Middle East, North Africa, and Central Asia 162–3, 180–2; Latin America and the Caribbean 162, 180–2; other parts of Asia and Oceania 162–3, 180–2; sub-Saharan Africa 162–3, 180–2
- regression analysis 5, 36–7; 102–3, 109–11, 133–47, 164–5, 187; deviations from the regression lines 134, 140–6; multiple regressions 129–31, 133; regression equations 134; results examined at the level of single countries 147–81; results for single countries 140–6
- Reich, G. 52, 68, 70
- Reilly, B. 49, 171
- Reinicke, W. 49–52, 63, 66
- research hypotheses 100–3, 109–10, 151, 153, 157, 161, 165–6, 173, 179, 187–8; the first research hypothesis tested by correlation analysis 121–32, 144, 187–8; the

- second research hypothesis tested by regression analysis 133–48, 149, 161, 188; tested by historical evidence 104–10
- residuals 5, 103, 111, 134, 140–6, 150, 152–82, 188–9; criteria of large residuals 140, 166; *see also* countries with large negative residuals; countries with large positive residuals; countries with small or moderate residuals
- resource distribution 38–9, 109–10, 113, 115, 118, 122, 127, 131–3, 138, 149, 183–4; *see also* degree of resource distribution; distribution of power resources
- resource distribution theory of democratization 3–4, 25–33, 44–7, 79, 101, 104, 116, 120, 131–2, 148, 171, 175, 183, 185–7; basic hypothesis 1–2, 27–8, 79; central hypothesis 3, 28–30; critique of Arat 42–3, 132; critique of Trainee 44; and Darwinian theory of evolution by natural selection 25–6, 29; definition of power 27; distribution of political power 27–8; distribution of power resources 27–30, 32; evolutionary arguments 25–8; evolutionary (Darwinian) interpretation of politics 26, 28–9, 79; evolutionary theme of politics 26–7; evolved behavioral predispositions 29; evolved characteristics of human nature 25, 32; explanatory variables 30–1; methods of analysis 29–31; operationalization of hypothetical concepts 29–31; permanent scarcity of resources 26–7; political variables 29–30; politics as a struggle for scarce resources 26, 28; power resources 27; resource distribution 27–31; research hypotheses 101; sanctions 27; struggle for existence 25–6, 28; units of analysis 31; variation of political systems 28
- review of previous predictions: in *The Emergence of Democracy* 111–12; in *The Process of Democratization* 12–16; in *Prospects of Democracy* 116–19; summary of previous predictions 119–20
- Rich, R.C. 101
- Riddell, F.W. 84
- Robertson, J.D. 52, 102
- Romania 179
- Rose, R. 164
- Rubinson, R. 15
- Rueschemeyer, D. 9–10, 22, 45, 184
- Russett, B.M. 80–3, 96
- Russia 46, 59, 75, 107, 144, 149, 172–3; collapse of the communist system 172
- Rustow, D.A. 18, 24
- Rwanda 149, 178–9; ethnic conflict in 178; Rwandan Patriotic Front 178
- Sadiki, L. 161
- Saine, A. 152
- St. Kitts & Nevis 31
- St. Lucia 31
- St. Vincent & the Grenadines 31
- Samoa (Western) 31, 75
- Sanderson, S.K. 46, 78, 82; ‘Superdemocracy’ variable 46
- Sao Tome and Principe 31
- Sartori, G. 49, 57, 66
- Saudi Arabia 159, 164, 179
- Schaffer, H.B. 150
- Schedler, A. 52
- Schmidt, M.G. 21, 45–6, 48–9, 59–62, 183
- Schumpeter, J.A. 49
- Seligson, M.A. 34, 40, 89
- Senegal 75–6, 115, 118, 155–6, 180
- Seychelles 31, 76
- Seznec, J.-F. 159
- Shin, D.C. 13
- Siaroff, A. 13
- Sierra Leone 74, 115, 180
- Simpson, M. 39–40
- Singapore 74–7, 115, 118, 139, 144, 146, 160–1, 179; People’s Action Party 77, 160
- Skach, C. 35
- Slovakia 104, 144, 172
- Slovenia 93, 179
- Smith, A.K. 8, 80–2
- Soares, C.A.D. 34
- socialist (communist) systems 87, 106, 149, 172, 187; collapse of 107, 167, 172, 176; post-Communist regimes 14
- Solomon Islands 115–16, 119, 144, 149, 172–3; ethnic war in 173
- Somalia 180

- Somit, A. 19
- South Africa, Republic of, 112, 115, 117, 149, 180
- South Korea 73–4, 76, 180
- Soviet Union 113, 116, 176
- Spain 72, 179
- Sri Lanka 118, 180
- Stepan, A. 12, 18, 24, 35, 49
- strategies of democratization 35–6, 43, 120, 189
- struggle for democracy 2, 117, 149, 159, 174
- struggle for existence (survival) 25–8, 44, 53, 94, 183, 186, 189
- struggle for power 26, 30, 32, 44, 79, 183, 186, 189
- struggle for scarce resources 26–7, 29, 79
- Students (variable) 80–1, 83, 88–91, 98–100, 122, 125, 129, 164; definition of 81, 90; and level of socio- economic development or education 81; as a measure of intellectual power resources 81, 91; sources of data 81– 2, 90–1
- studies of democracy and democratization: Arat 18–19; Barro 10; Berg-Schlosser and Mitchell 20–1; Blondel and Marsh 14–15; Bunce 10; Carothers 13; Clague *et al.* 14; Coppedge 16–17; Dahl 9–11; Diamond 11, 13–14; Feng and Zak 13; Gill 13; Hadenius 11–12; Huntington 11; Inglehart 14, 18; Inoguchi and Newman 14; Lane and Ersson 15, 19; Lenski 15; Lerner 7–8; Linz and Stepan 12, 18; Lipset 7–8, 10; Marks and Diamond 8; Midlarsky 16; Moore 20; Muller 9, 15–16; O'Donnell *et al.* 12; Powell 11; Przeworski *et al.* 17; Rueschemeyer 9–10; Rustow 18; Schmidt 21; Simpson 16; Somit and Peterson 19; Welzel 8, 21; Whitehead 12
- sub-Saharan Africa 40–1, 43, 95, 114–15, 147, 162–3, 180– 2, 189; countries of 20, 92–3, 117–18, 122, 138, 149, 151, 156, 176; foreign aid and democracy 20; land tenure systems 92–3
- Sudan 74, 162, 164, 180
- Suriname 74, 114, 180
- Suter, C. 38
- Swaziland 149, 180
- Sweden 72, 90, 179
- Switzerland 59, 61, 63, 67, 71–2, 179, 186
- Syria 139, 144, 149, 160, 179; Ba'th party 160
- Taiwan 31, 90, 118, 180
- Tajikistan 149, 162, 180
- Tanzania 149, 180
- Thailand 74, 115, 144, 146, 178, 179; military interventions in 178
- theory of democratization: *see* alternative approaches to explain democracy and democratization; resource distribution theory of democratization
- threshold of democracy 5, 34, 38, 65–6, 68–9, 71–7, 102, 112, 114–18, 134–8, 148–55, 158–64, 171, 173–4, 176, 188; for Competition 65, 68–9; democracies and autocracies 66; for Freedom House ratings 68; for ID 65– 6; for Participation 65, 68–9; for Polity scores 68
- Thurston, A.F. 175
- Tocqueville, de 10, 23
- Togo 75–7, 149, 180; Togolese People's Rally 77
- Tonga 31
- Traine, M. 44
- transition and consolidation studies 12–13, 23; Carothers' criticism 13; Feng and Zak 13; Gill's list of factors 13, 22; Linz and Stepan: consolidation of democracy 12; O'Donnell *et al.*: significance of political actors 12
- transition levels of resource distribution 102–3, 134–40, 188; IPR 111, 114, 116–19, 134–40, 148–9, 163, 167, 153– 4; IPR-2 134–7, 173–8, 188; Mean 134–40, 148–9, 154, 163, 167, 173–8, 188
- Trinidad and Tobago 180
- Tunisia 139, 144, 146, 160–2, 164, 179; Democratic Constitutional Rally 161
- Turan, I. 40
- Turkey 73, 76, 180
- Turkish Republic of Northern Cyprus 31

- Turkmenistan 90, 149, 162, 178–9;
 president Niyazov 178
- Tuvalu 31
- Uganda 115, 138, 149, 155–6, 180;
 president Museveni 155
- Ukraine 144, 173–4
- UNDP's *Human Development Report* 82,
 91, 94, 98
- Unesco's *Statistical Yearbook* 81–2, 90
- unexplained part of variation, 21, 33,
 119, 127
- United Arab Emirates 159, 161, 164,
 179
- United Kingdom 72, 179
- United Nations' *Demographic Yearbook*
 67, 91
- United States 59, 61, 63, 67, 71–2,
 162, 186, 179
- units of analysis 3, 31, 104, 107;
 excluded small countries 31;
 sample of countries 34
- Urban Population (variable) 80–1, 87,
 89, 186; definition of 80; as a
 measure of economic and
 organizational power resources 80
- Urdal, H. 46
- Uruguay 72–3, 146, 173
- Uzbekistan 90, 149, 162, 180
- Vanhanen, T. 1–2, 25, 27–9, 31, 33–46,
 49, 52–64, 66–8, 75, 77–8, 80,
 83–4, 86, 88–9, 93, 97, 105,
 111–12, 163
- Vanuatu 31, 119
- variables: *see* explanatory variables;
 measures of democracy
- Vaus, D. de 34, 101, 129
- Venezuela 90, 180
- Verkuilen, J. 46, 49, 60, 64, 68
- Vietnam 90, 149, 180
- Wagner, C. 150
- Wagschal, U. 45, 59, 101, 129, 137
- Walle, N. van de 17
- Ward, M.D. 46
- Way, L.A. 49, 52, 65
- Weber, M. 10
- Weiner, M. 57
- Weinstein, J.M. 154
- Welzel, C. 8, 14, 21, 23, 44
- Whistler, D.E. 35–6
- Whitehead, L. 12
- Wiley, J.A. 8, 82
- Wilson, E.O. 26
- Winham, G.R. 8
- Wollack, K. 13
- World Bank's *World Development Report*
 82–3, 91, 94–5, 98
- World Factbook* (CIA) 91, 163
- Yemen 149, 164, 180
- Yugoslavia 59, 72, 75–6, 93, 113, 179,
 187
- Zak, P.J. 13
- Zambia 149, 180
- Zimbabwe 149, 180