tion coordinate the interests of its members, how does it adapt to change in the environment, and how does it work to achieve specific goals. (Katsuji Nakagane)

Economic Growth and Social Equity in Developing Countries by Irma Adelman and Cynthia Taft Morris, Stanford, Stanford University Press, 1973, ix+257 pp.

I

As is clear from their previously published series of articles, these two women economists have made a unique contribution to development theory, an achievement worthy of praise. The reasons are twofold. First, they have not only placed the problem of less developed nations in the framework of economic theory (in particular growth theory with a heavy emphasis on material capital formation) they have also broadened their approach to include social, political, and cultural aspects. Second, Adelman and Morris have utilized the latest statistical techniques, not following a standard econometric model, but have developed a series of new quantitative analyses and operational approaches. Combining these two characteristics, this book extends the theme of previous works, and although basic analytic techniques are different, one can see strong influence from their earlier *Society, Politics, and Economic Development*, rev. ed. (Baltimore: Johns Hopkins, 1971), conclusions from which are used throughout.

After World War II, development theory for the emerging nations shifted, broadly speaking, from a central concern on savings and investment in the early stages of development, to focus on the development of human resources, then advanced toward a theory of social system reform encompassing the whole range of political, cultural, and economic considerations. Needless to say, of these academic trends, this book is in the third group social system reform theory. However, unlike the earlier assertions of G. Myrdal or the recent work of A. O. Hirschman, the book does not use deductive reasoning to positively discuss the relation between economic growth and social equity; rather, it is concerned with hypothesis testing to statistically scrutinize assertions on the ability of economic growth to raise the level of political participation and equalize income distribution. According to the authors, there are problems in the notion that economic growth stimulates the average citizens to participate in the political process in turn providing impetus for the equalization of income distribution and the realization of social equity. Around the latter half of the 1960s this sequence began to be regarded as doubtful, and the completely opposite view was offered—that economic growth brought more of a decline in mass political participation and a trend toward further greater inequality in income distribution. Taking a broad overview of these issues and using the latest statistical procedures, such as discriminant analysis and variance technique, Adelman and Morris use a typology to quantitatively analyze various social, political, and economic factors influencing political participation and income distribution in the less developed countries. The authors then examine characteristics by which to classify the various countries, with their diverse political forms and income distribution structures.

II

The book consists of an introduction, five chapters, and three appendixes. In the introduction, the authors refer briefly to the book's purpose, structure, problem areas, conclusions, and other points. In the main text, forty-eight social, political, and economic variables are considered in seventy-four less developed nations of the non-communist zone. Cross-sectional data for particular years and periods (differing according to country and variables) are used covering the entire period 1950–63.

In Chapter 1, "Methodology: Sociocultural Variables," and Chapter 2, "Methodology: Political and Economic Indicators," the forty-eight variables (which in the calculations are actually combined in groups of from thirty-five to thirty-nine variables) are discussed in detail, including the reasons for selection, special characteristics, number of categories, and data source. Within the forty-eight variables, one, level of political participation, is the dependent variable, and three indices—influence of political decisions on the governmental level, possibility of selecting political channels, and level of actual individual political participation—are combined into a single composite index. Scores are assigned to each country, and the countries are divided into seventeen categories based on the total of those scores. The forty-seven independent variables include thirteen sociocultural indicators (such as size of traditional agriculture sector and extent of dualism); sixteen political indicators (including degree of centralization of political power, and degree of freedom for political opposition and press); and eighteen economic indicators (including abundance of natural resources and gross investment rate). These are classified into three groups, and the number of categories particular to each of the forty-seven variables is set, ranging from a minimum of three to a maximum of twenty.

In Chapter 3, "Political Participation in Underdeveloped Countries," Adelman and Morris take the position that political participation is influenced by many factors in addition to economics, and that economic growth does not necessarily have only positive effects on political participation. Using the forty-seven independent variables, they then analyze the factors related to international differentials in levels of political participation. Discriminant analysis is first performed on the full sample of seventy-four countries, which are then classified into three subsamples (low, intermediate, and high, according to level of economic development). A second discriminant analysis is independently performed on each, resulting in variables that significantly explain the difference in political participation for each country. For the full sample, eight variables are obtained in order of explanatory power: extent of social mobility, predominant basis of the political party system, political strength of the traditional elite, per capita GNP in 1961, degree of social tension, extent of mass communication, strength of labor movement, and extent of direct government economic activity. In the low development sample, three variables were isolated: strength of the labor movement, length of colonial experience, and degree of modernization of outlook. For the intermediate development sample, three variables are used: degree of freedom for the political opposition and the press, importance of the indigenous middle class, and political strength of the traditional elite. For the high development sample, there are five variables: strength of the labor movement, dominant basis of the political party system, improvement in human resources, degree of competitiveness of political parties, and level of social mobility. From these results, one can see that it is mainly political variables which exert significant influence on political participation, with the economic factors having only an indirect influence.

Chapter 4, "Who Benefits from Economic Development?" considers the factors related to international disparities in income distribution among the less developed nations, and indicates that economic development is more associated with trends toward further inequality, rather than towards the equalization of income distribution. Because of data limitations, calculations on income structure by class were made for only forty-three countries. With income structure as the dependent variable and thirty-five of the forty-seven social, political, and economic indicators selected as independent variables, a stepwise analysis of variance technique was used to investigate the factors related to disparities in income distribution between countries. The results show that for the poorest countries, the bottom 60 per cent, those variables which best explain international differences in income structure are: extent of dualism, potential for economic improvement in human resources, and per capita GNP. For the top 5 per cent, the wealthiest, three variables—abundance of natural resources, importance of the indigenous middle class, and extent of direct government economic activity—have the most explanatory power. For the intermediate 20 per cent, five explanatory variables were outstanding: extent of dualism, structure of foreign trade, character of agricultural organization, potential for economic development, and factor scores of level of socioeconomic development. Here too political and social factors exert a good deal of influence on economic growth, though the influence is not as strong as it is with political participation. Attention is also given to the point that factors involved in the inequalization of income distribution, such as dualism, the indigenous middle class, and natural resources, play important roles.

In the fifth and last chapter, "Social Equity and Economic Growth," after presenting conclusions to the effect that economic growth makes no contribution to improving political participation and does not exert significant influence on the equalization of income distribution, the authors turn to concrete proposals on three points: policies for improving the distribution of income, measures to promote political participation, and the most desirable forms of development planning. The discussion is based on the analysis developed in Chapters 3 and 4.

After the main text, three appendixes are added: classification scheme for political participation, results of discriminant analysis, and a digression on regression. A very detailed bibliography completes the book.

III

My first contention is that for a developmental economist, the problem orientation of the book is not sufficient. The book statistically verifies that economic growth does not increase the levels of political participation, and that growth has not brought about an equalization of income distribution. However, developmental economists cannot be satisfied with just that. For example, Gunnar Myrdal, who, like Adelman and Morris, discusses the relationship between economic growth and social equity, asserts that social equity in less developed nations stimulates economic growth. His idea of the causal relationship between social equity and economic growth is the opposite of this one, and his main concern is always on how to speed up economic growth. Myrdal's theory is particularly appropriate for densely populated and destitute countries of South Asia such as India, Pakistan, and Bangladesh (the theory is concerned with improving labor productivity through improvements in nutrition and health and the spread of elementary education; to be accomplished by the equalization of income distribution). And I cannot agree with the idea that the Myrdal's theory generally explains the situation of the less developed nations, though from the problem orientation of developmental economics his way of constructing theory seems to be the more correct of the two. The problem is whether social inequity hinders economic development itself, and whether the equalization of income distribution makes rapid economic growth possible. The authors of this book provide no answers for these questions. To the extent that it is not positively proven that an equalization of income distribution spurs economic growth, it is incorrect to totally deny the present economic growth process (even if it stimulates inequality in income distribution, for example) in the less developed nations. Differing with Myrdal, I consider the equalization of income distribution to be a result of economic growth, not a means to achieve it. Even if modern labor unions, pension and taxation systems, and the like were suddenly created in the less developed countries, where social organization, political systems, and economic structures are still incomplete, it would not necessarily bring about increases in labor productivity. According to the situation, there is also a good possibility that just the opposite would occur, that there would be a decline in productivity. As many theorists have indicated, a temporary increase in the inequity of income distribution in the process of rapid economic development might be unavoidable. It seems fundamentally impossible that a modern democratic society, where economic growth at first stimulates political participation and then contributes to equalization of income distribution, would spring up in the emerging nations of today. One wonders whether Adelman and Morris did not predict in advance that level of political participation would be mainly due to noneconomic variables, and that economic growth as well would be influenced not only by economic but by political and social variables, as well. Moreover, the definition of social equity in this book is inappropriate, limited completely to equalizing income distribution. There is of course a close relationship between the two types of equity, but they are certainly not the same.

My second question is about the analytical procedures that Adelman and Morris use. When discrete category variables are analyzed, like the indicators in this studies, discriminant analysis or variance analysis is very powerful; and this perhaps is the book's greatest merit. However, having appropriate conceptual stipulations for the variables to be used is a precondition for deriving that advantage. Forty-eight category variables are defined, and a suitable score assigned to each, but there are several difficulties with this method of treating data. First, as the authors also state, the conceptual definition concerning what "political participation" entails is vague. Because of the type of method used for assigning subjective scores, which form the base for the three structural factors, the classification of country to category has to be rather arbitrary. The next problem is that the number of categories varies greatly according to variable; from a minimum of three to a maximum of twenty categories.

Because of characteristics peculiar to the variables, the number of categories for the qualitative variables, which can only be treated as ordinals, is small; and the number of categories for the quantitative variables, treated as cardinals, is quite large. Putting together qualitative and quantitative variables in this way produces artificially discrete category variables, and the fact that the domain of change varies greatly according to the variable inevitably produces bias in calculations and results. The final problem with this analytic procedure is, as the authors themselves note, that it is based only on cross-sectional analysis. The seventy-four countries in the sample encompass an extremely broad range of developmental stages, and each country has its own peculiar historical background. This is a very heterogeneous sample for cross-sectional analysis. Technically, the use of devices such as pooled time-series and cross-sectional data is needed.

My third point concerns the accuracy of data used. For the majority of the countries in the sample, basic statistical data, such as those for population, capital stock, or GNP, are not sufficient. For those countries, requiring the use of high-order qualitative variables like social mobility, strength of the labor movement, and the degree of freedom of political opposition imposes severe limits. The classification of country to category, in this instance as well, cannot help but be very arbitrary; and assigning a score to the category presents an additional problem. For example, in classifying countries according to "predominant type of religion," I cannot understand why Christianity and Judaism receive high scores, and Buddhism and Islam low scores. One can see this type of problem in other variables as well. It seems that there is an imbalance between precision of techniques and sufficiency of data. Moreover, the standards for selecting the seventy-four less developed countries are unclear. Japan is included in the sample, yet even using data from around 1960, there is no basis at all for classifying Japan in the less developed group of nations. And if Spain and Portugal are excluded as less developed nations, then Israel and Greece should be excluded too.

IV

As indicated above, this book contains a number of problems. However, I consider it valuable for the following reasons. First, development problems in the emerging nations cannot be understood only from the economic dimension, but require an integrated approach covering the broad range of culture, society, and politics. Myrdal was first and more recently other theorists are using this approach. The second point is that by using the new procedure of discriminant analysis, the book has succeeded in quantitatively analyzing qualitative variables. Because many of the characteristics particular to the less developed nations are discrete category variables, the methods of analysis in this book provide good suggestions for future research in the field. The third point is the expansion of data collected. I would like to thank Adelman and Morris for their labor in collecting such a large amount of data on the less developed nations, for collecting statistical materials in this area is extremely difficult.

(Tetsuya Tokoro)