THE DISTRIBUTION OF INCOME AND ITS DETERMINANTS

INCOME DISTRIBUTION IN COLOMBIA. By ALBERT BERRY and MIGUEL URRUTIA. (New Haven and London: Yale University Press, 1976. Pp. 281. $15.00.)

INCOME DISTRIBUTION IN LATIN AMERICA. Edited by ALEJANDRO FOXLEY. (London and New York: Cambridge University Press, 1976. Pp. 244. $19.95.)

The achievement of the twin goals of rapid economic growth and development and greater equality in the distribution of income is likely to remain the supreme challenge of Third World countries in Latin America and elsewhere for some time to come. Quite fittingly, the recent literature of development economics has been attempting to meet that challenge, and further scholarly efforts, such as those represented by the two works under review here, are to be welcomed. The appearance of these books at the same time, on the same topic, and for the same geographical area prompts the reviewer to reflect on the already large and rapidly growing literature in order to distinguish what we know from what we do not know about this important subject and thereby to evaluate the contributions of the two books in the light of what we need to know. Since both concentrate on the determinants of the distribution of income, we, too, shall limit our attention to that aspect of the overall relationship between income distribution and development.

WHAT WE KNOW AND HOW

The usual procedure (and the studies under review are no exception) for measuring or analyzing the distribution of income begins with the computation of an index of inequality of income in the population or sample under investigation. The index—be it the Gini coefficient, the Theil information index (which are used in these studies), or some other index—is usually supplemented by data on income shares of specific groups in the population, e.g., the poorest 40 percent, the richest 20 percent, etc. Sometimes several different indexes are used as each tends to emphasize a different portion or aspect of the overall distribution. The analyst then compares the calculated value of the index and/or income share of the target group of one area with that of another area, or for one time period with another. Usually one is interested in the magnitude and direction of the change (difference) in this index, and above all in trying to identify certain factors that would account for that change (difference).

The following generalizations have emerged from such studies:

1a. Incomes in less developed countries (LDCs) tend to be considerably more unequally distributed than in developed countries (DCs).

2a. Incomes in socialist countries are more equally distributed than in capitalist countries.

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3a. As income rises, income inequality at first tends to rise but eventually tends to fall, thereby displaying an inverted U-shape. Often, but not always, the income share of the middle class rises while the corresponding shares of the poor and the rich decline with the rise in income.

4a. Income tends to be more unequally distributed in urban areas and in nonagricultural activities than in rural agriculture except in countries where land ownership is highly concentrated.

5a. Labor income tends to be more equally distributed than income from property or capital.

6a. Greater income inequality is often identified with certain structural characteristics, such as a greater degree of socioeconomic dualism, less government intervention, an unbalanced economic structure, weaker labor union movements, and sometimes with greater dependence on foreign capital and technology, though these relationships are more controversial and not necessarily causal.

7a. The influence of education on the distribution of income is ambiguous, the effect depending both on the strength of the effect of education on productivity and on the distribution (rather than the level) of education.

8a. Conditions of labor supply can have a dominant impact on income distribution. With open immigration of unskilled labor the distribution of income and indeed the share of the poor is likely to decline.

9a. Families headed by young and old people and those employed in agriculture are found in disproportionate numbers among the poor.

10a. Rural-urban migration is a pervasive phenomenon in LDCs, often taking place on a massive scale. Since it might seem reasonable that it is the poorest people who migrate and that they migrate to become better off, it is often supposed that rural-urban migration would tend to narrow urban-rural wage gaps and thereby would lower income inequality. However, the fact is often that rural-urban migration does not decrease the wage gap and frequently even increases it, leading to greater income inequality.

11a. Some ingredients of the intergenerational propagation of inequality have been documented, e.g., that the poor tend to have more children than the rich, that their children are less healthy and less educated than those of the rich, that the poor tend to save less than the rich, that intelligence and other determinants of one's position in this income distribution are either inherited or transmitted perhaps unconsciously by one's parents through intimate contact in early life.

12a. Because of urban-rural wage and income differentials, and to some extent also the lesser degree of inequality in rural areas, integrated programs of rural development are likely to decrease income inequality.

13a. Macroeconomic conditions, in particular the overall rate of unemployment, are correlated with the overall index of income inequality.

14a. The fiscal tools for redistributing income that are so heavily relied upon in DCs are both less politically feasible and less effective in LDCs. What tools there are may work more effectively together as part of a coordinated package than individually.

WHAT WE DO NOT KNOW AND WHY

Despite the considerable progress that has been made in recent years, there is still a great deal to be learned.

1b. Since most of the above generalizations about what we know have been derived from studies using cross-section data or from simulation experiments of questionable realism, we still don't know how many and to what extent they hold for individual countries over time.

2b. Even in the comparatively few countries for which two or more observations of the distribution of income are available, the observations are invariably too close together and too few in number to distinguish long-term trends from random, temporary changes. For the same reason little is known about the distribution of lifetime income.[1]

3b. Even if there were a solid base of comparative static studies of income distribution, it would reveal little about how and why such changes take place. What personal, group, or institutional factors determine the probability, timing, and velocity of individuals moving from one rank to another in the distribution of income? Dynamic analyses of distribution would, of course, be required to answer such questions, but are virtually nonexistent. Proper dynamic analyses might well require a disciplinary mix that would include anthropology and political science in addition to economics.

4b. For the same reasons even less is known about intergenerational inequality. Undoubtedly there are some factors operating in the direction of equality but also others moving toward inequality.

5b. Detailed studies of the distributional effects of inflation are very rare in LDCs.

6b. While it may be generally recognized that structural changes can influence the distribution of income, the nature, extent, and conditions under which such effects take place are much disputed.[2]

7b. One of the difficulties in predicting the distributional effects of specific policy changes is that the overall general equilibrium effects may be quite different than the partial equilibrium or direct effects. General equilibrium models wherein such effects can be estimated are again practically nonexistent.[3]

8b. Although *ex ante* estimation of distributional effects is now a standard part of benefit cost analysis, *ex post* evaluations of the actual distributional effects of individual development programs are practically nonexistent.

9b. While sweeping generalizations have frequently been made about the influence of technological and ecological changes on the distribution of income, especially the effects of the Green Revolution on LDC agriculture, there is a dearth of detailed studies carefully measuring and analyzing the effects of various kinds of technological changes, e.g., changes in the elasticity of substitution, economies of scale, factor intensity and productivity, and distinguishing them from changes in factor prices. Some closely related factors, such as changes in ecology and in the utilization of the productive factors due to product complementarity and their effects on income distribution, have been totally ignored.

Naturally until we know more about the how and why of distributional dynamics in such circumstances, we all remain relatively powerless to prescribe appropriate policies for securing a more equal distribution in the process of development.

CONTRIBUTION OF BERRY-URRUTIA AND FOXLEY

The long list of unknowns about the distribution of income and its determinants given above underscores the need for additional contributions to the subject. As stated at the outset, both volumes reviewed here are welcome additions to the literature, although as will be explained below, they are not without their shortcomings. Our comments are divided into three categories—methodology, coverage and findings, and policy.

Methodology

In view of item (1b) in the list, the fact that both studies have utilized the case study approach, with some emphasis on time series analysis, is encouraging indeed. The use of this approach in both volumes, is, however, not without certain shortcomings. On the one hand, Berry and Urrutia try their hardest to stretch existing theoretical models to fit their special needs even though the fit isn't always very good. For example, they rely on the familiar, but perhaps insufficiently realistic, neoclassical two-factor model of the functional distribution of income to draw inferences about the personal distribution of income, something which is difficult to do without making a great many additional assumptions of dubious realism. The justification for this procedure is, of course, that it utilizes data that are available, namely, time series data on factor prices. Another example is their reliance on the surplus labor model despite the fact that little, if any, support for the applicability of that model to Latin America has been offered.[4] Nevertheless, their use of the thereotical models serves as a basis for their research design and allows their presentation to proceed systematically.

The Foxley volume, on the other hand, eschews any kind of a theoretical model. In view of the wide variety of neoclassical as well as nonneoclassical (structural, Keynesian, etc.) tools that are available,[5] the complete rejection of theory seems not only unwise and unjustified but leaves the reader without any framework for evaluating or integrating the eleven individual papers that comprise the volume.[6]

By restricting their case study to that of a single country (Colombia), Berry and Urrutia are able understandably to investigate their subject more systematically and comprehensively than the individual authors of the Foxley volume, each of whom deals with one or more of nine Latin American countries.[7] The disadvantage of less concentration, detail, and depth that is inevitable in achieving the broader country coverage of the Foxley volume could, of course, have been offset if the different case studies had been used for comparison purposes. However, the aforementioned lack of a common research design, as well as the unfortunate absence of any attempt on the part of the editor to elicit common threads or themes from or at least to point out important differences in the findings of the individual papers, leaves this opportunity a foregone one.

On methodological grounds, the Weisskoff and Fishlow papers in the Foxley volume are important, the former for its use of intercountry comparisons and the latter for its use of the Theil inequality index, which affords a statistical breakdown of overall inequality into each of several different components and some interaction terms. The papers by Foxley and Munoz, Foxley, and Tokman represent examples of simulation experiments.[8] The Berry and Urrutia study represents a nice example of step-by-step confrontation of ideas with judicious use of the limited time series data available; one is surprised, however, that more of an attempt was not made to use the detailed cross-section data that for Colombia are available by locality.

Coverage and Findings

With respect to specific findings and the above lists of what we know and do not know about income distribution, one hastens to point out that two of the previously published papers in the Foxley volume, namely those by Weisskoff and by Fishlow, are already well known and indeed have been instrumental in the establishment of some of the generalizations mentioned above. Berry and Urrutia provide additional evidence for some of the generalizations though, not surprisingly, they also find some qualifications necessary for the case of Colombia. One such qualification, perhaps attributable to the idiosyncracies of that country's topography and climate, is that regional inequality is both relatively small and declining.

Webb (in Foxley) adeptly puts his finger on the heart of what we need to know when he underscores the need to understand the dynamics of income inequality, along the lines discussed under items (2b) and (3b). Several of the authors in Foxley put the blame for increased income inequality on macroeconomic policies and price and wage controls, thereby corroborating generalizations (12a) and (13a); but, as Morley and Williamson demonstrate for Brazil and the U.S., respectively, such conclusions may be biased by the omission of other determinants of the distribution of income, such as technological requirements and change, that may have occurred simultaneous to the policy actions studied.

Another qualification offered by Berry and Urrutia for the Colombian case stems from their finding that, because of the high degree of inequality in land holdings among agriculturalists, the distribution of agricultural incomes is not more equal than that of industrial and urban incomes, as in most other countries.

Virtually all authors agree that the majority of any country's poorest people are to be found in rural areas and that urban-rural differences in income are closely related to sector and educational differences between urban and rural areas. Much good advice is given about the limitations of traditional policy instruments to affect redistribution in such circumstances, especially in the short run. There seems to be almost universal agreement that the rural poor are more fragmented and harder to reach with antipoverty and redistribution programs than their urban counterparts.

Policy

Pinto and DeFilippi (in Foxley) provide a useful classification system for analyzing policy influences and organizing the present discussion by distinguishing between policies that influence the original distribution of income and those that merely redistribute it.

Policies Affecting the Original Distribution of Income / Among policies with this purpose are those of direct intervention in the determination of factor prices, such as setting the structure of wage rates by the levels of skill and responsibility, and the imposition of interest rate, wage, and price ceilings and floors. With respect to wage structure, many governments are, of course, relatively powerless to intervene directly. This is not the case in Cuba, however, where in a fascinating account, Mesa-Lago and Hernandez (in Foxley) show that efforts to reduce wage rate inequalities have usually been accompanied by decreased efficiency. The distributional consequences of other forms of price regulation and control are more difficult to assess. A number of the studies in these books show that these policies can easily backfire. For example, according to Berry and Urrutia, interest rate ceilings designed to benefit supposedly poor borrowers relative to rich creditors may actually encourage the rationing of scarce credit to rich debtors with good collateral and away from credit-thirsty small farmers who are riskier and more costly to reach.

Another type of policy affecting the original distribution of income is that of confiscation and redistribution of property. While in many countries there are substantial political constraints on the initiation and implementation of such programs, in view of the potential importance of such efforts for redistribution purposes one cannot help but be surprised by the lack of attention given to land reform in the portions of the Foxley volume dealing with Cuba, Peru, Chile, and other countries where substantial redistributions have taken place. Figueroa's paper on Peru is an exception in this regard. He attributes the limited effectiveness of asset redistribution programs in that country to the fact that the redistributions were organized on a mini-sector basis, decreasing inequality within such sectors but not between sectors. Once again, policies can sometimes backfire. For example, Berry and Urrutia point out that a Colombian law to compensate tenant farmers for their investments actually resulted in tenant dispossession and hence a more unequal distribution of land, increased unemployment, reduced wage rates, and greater income inequality.

Policies influencing the level and distribution of education, savings and investment, and productive structure are generally more completely treated. With respect to education the lesson seems to be that the initial level and distribution of human capital is likely to be of considerable importance in determining the distributional consequences of further government investments in education. Thus, in countries where low levels of educational attainment prevail, the expansion of opportunities for primary education would be more likely to reduce income equality than would expansions of other types of educational opportunities. According to the findings of several authors in these volumes, policies to stimulate savings and investment and to instill greater competition among capitalists are of potential importance for distribution purposes, but the likely magnitudes of their effect are still unknown.

Relatively little is made of the distributional consequences of internal terms-of-trade influences in these volumes despite the fact that such changes have been of great magnitude in several Latin American countries and that studies in other parts of the world have found them to be of primary importance. The lack of a systematic treatment of the distributional consequences of inflation is for the same reason a glowing omission and shortcoming of these books.

Redistribution Policies / Since many government services are provided free (or at nominal prices), the provision of government services to target areas or groups provides a potentially attractive redistribution mechanism. However, as has already been pointed out, these volumes highlight the difficulties and costs of delivering such services to the poorest members of the population who are generally in hard-to-reach rural areas. Many perhaps well-intentioned efforts to spread the supply of such services, therefore, merely serve to increase the real income of the urban middle class. Taxation is, of course, the most obvious mechanism for redistribution. Its use is, however, restricted by political constraints, the result being that the tax structure of several Latin American countries is regressive. From the evidence presented in these volumes, there seems to be growing confidence that from virtually all points of view (administrative costs and resource mobilization as well as distribution), consumption taxes may be a more appropriate form of taxation than income taxes in developing countries.

Bearing in mind that the rural poor benefit neither from social security systems (because these are generally confined to urban occupations) nor from subsidies to or price controls on basic necessities (because of the relative importance of subsistence activities in their overall income), one can understand why Berry and Urrutia, Ffrench-Davis, and other authors in the Foxley volume have found such policies to increase rather than decrease inequality in such circumstances. Finally, several of the papers, especially those of Foxley and Foxley and Muñoz, emphasize the importance in overall economic policy of consistency among the goals of growth, distribution, and efficiency, and demonstrate procedures for making more systematic use of consistency analysis in the planning and policymaking process.

With the exception of the aforementioned serious omissions of inflation, technological change, and sectoral composition, these volumes provide some important findings with respect to the large research agenda in this field and numerous useful examples of the methods in the economist's tool kit that can be brought to bear in evaluating the distributional consequences of certain policies. Although written by sophisticated economists, both volumes are capable of being understood by noneconomists. The potential readership of both books may be somewhat reduced by the fact that substantial portions of the material have been previously published in journal articles and, in the case of the Foxley volume, in its entirety in Spanish. Yet, they are good and interesting books, the reading of which should in the long run contribute to better policy.

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NOTES

1. This is important because of contentions that the distribution of current (measured) income is considerably more unequal than that of permanent (lifetime) income. Since the former is dominated by random and generally uncontrolled events, it is claimed that there is nothing either surprising or undesirable about an unequal distribution of current income.
2. Compare, for example, the article by Irma Adelman, Cynthia Taft Morris, and Sherman Robinson ("Policies for Equitable Growth," *World Development* 4, no. 7 [1976]:561–82) with the work by Hollis B. Chenery et al. (*Redistribution with Growth* [New York: Oxford University Press, 1973]). Some of the disagreements are no doubt attributable to the important role of initial conditions, as, for example, in the initial distributions of land, human capital, and physical capital.
3. See, however, Irma Adelman and Sherman Robinson, *Income Distribution Policies in Developing Countries* (Stanford, Calif.: Stanford University Press, 1977).
4. The model is also contradicted by some of their own findings, in particular (1) that the gap between urban and rural wage rates is large and growing and that it cannot be attributed to cost-of-living differences and (2) that the wage share in value added has increased in nonagriculture and decreased in agriculture, exactly the opposite of what would be expected from the labor surplus model.
5. See, for example, William R. Cline, "Distribution and Development: A Survey of Literature," *Journal of Development Economics* 1, no. 4 (1975):359–400.
6. The authors of the individual papers are Richard Webb, Richard Weisskoff, Albert Fishlow, Carmelo Mesa-Lago and Roberto E. Hernandez, Anibal Pinto and Armando DeFilippo, Ricardo Ffrench-Davis, Alejandro Foxley and Oscar Muñoz, Adolfo Figueroa, Alejandro Foxley, Victor Tokman and Miguel Urrutia, and Clara Elsa de Sanduval.
7. The nine countries or territories of Latin America are: Argentina, Brazil, Chile, Colombia, Cuba, Mexico, Peru, Puerto Rico, and Venezuela.
8. Other, perhaps more interesting, examples are those of Adelman and Robinson and Samuel A. Morley and Jeffrey G. Williamson, "Class Pay Differentials, Wage Stretching, and Early Capitalist Development," in M. Nash, ed., *Essays in Economic Development and Cultural Change in Honor of Bert F. Hoselitz* (Chicago: University of Chicago Press, 1977), pp. 407–27.