

BOOK REVIEWS

Equity and Poverty under Rapid Economic Growth: The Japanese Experience by Toshiyuki Mizoguchi and Noriyuki Takayama, Institute of Economic Research, Hitotsubashi University, Economic Research Series, No. 21, Tokyo, Kinokuniya Co., 1984, xi + 244 pp.

This book is a valuable contribution to the literature on the distributive aspects of Japan's postwar economic growth. The authors have taken advantage of the wealth of data on distribution in the postwar decades, and applied their statistical and analytical skills to interpreting the statistical findings. I know of no country in the world which has undertaken so many surveys (about half a dozen) on income distribution and conducted them so frequently as in Japan. The first part of this review summarizes the findings of the volume while in the second part issues are raised which may be pertinent for further research. Of the five chapters and four appendices, the most interesting are the first chapter and its appendix dealing with the changes in the distribution of family incomes in the postwar decades (up to 1975). As my comments are limited to income distribution, the summary of findings will start with the other chapters.

I

Chapter 2 deals with the distribution of wealth, and is a preliminary attempt as the available data on household wealth distribution are said to be limited to monetary assets of nonagricultural households and real estate holdings of farm families, with estimation of holdings of others based on imputed rents of occupied housing. With such limited information, the authors are aware that not much can be said about overall wealth distribution, especially of the richer households whose wealth is largely in nonmonetary financial assets such as stocks, bonds and assets of non-corporate enterprises, and real estate rented out, besides personal property such as jewelry, art works, and the like. The available data largely gives a picture of the wealth distribution of the middle or lower income groups (say, below the highest quintile) of households without nonagricultural enterprises, in other words farm households and employee households. For the latter groups, monetary assets and real estate holdings have become more equally distributed from 1962 to 1974 with the Gini falling more than 10 per cent (pp. 67 and 71). This finding is reported to be due to the decline in family income disparities during the 1960s.

The appendix to Chapter 2 compares housing conditions in Japan, Hong Kong, Taiwan, and the Republic of Korea but, here too, there are limitations of the data on housing quality. The finding is that the Republic of Korea has the highest housing shortage, defined as number of dwelling units divided by the number of households (p. 84).

Chapters 3 and 4 discuss measures of poverty with application to Japanese data. In poverty studies, two definitions are needed before one can proceed to measure the poor. One is the determination of the poverty income line, i.e., at what income level

in the basic frequency distribution of household by size of incomes below which the households are said to be poor. The other is how to characterize the degree of poverty below the poverty line. The latter problem is taken up in Chapter 3 and the former in Chapter 4. In Chapter 3, the authors propose an elaborate measure which modify the percentage of the poor households to the total by taking into account the *shape* of the curve in the distribution of the households below the poverty income line, the *position* of the curve relative to the poverty line, and the cumulative income share going to the poor relative to the share of those above the poverty line. Thus, given the poverty cutoff line, the authors' index of poverty will rise (1) with the increase of the share in the number of poor households, (2) with the increase in the cumulative share of the income of those above the poverty line, (3) with the increase in the disparities in the distribution of income among the poor, and (4) with the fall in the average income of the poor households.

The more difficult, and crucial determination in poverty studies is the poverty income cutoff, discussed in Chapter 4. The authors feel that this cutoff rises with the development stage. Nutrition is found to be a good basis for selection of the cutoff in the early stages while expenditures on education and health and consumer durable ownership including housing can be used for higher income economies.

Contrary to these studies, I prefer to think of poverty more as an absolute rather than a relative phenomenon which underlies the book's approach, both in selecting the cutoff and constructing the index of poverty. There are emulative aspects to poverty but these are less serious than the absolute aspects and should not be given much weight in policy considerations. When too much concessions to the relative aspects are given, the result is the extreme example of the Ceylonese welfare policies which subsidize food, transportation, health, etc. for all income groups, including the richest, leaving insufficient attention to those who really need more help while depriving the nation of funds for capital formation, and weakening the work ethics and saving propensity of those better off. This is a matter that is of increasing concern in Western societies as well. An index of poverty which gives as much weight to the share of the upper income groups as to the share of the poverty groups overemphasizes the relative aspects of poverty and may not be suitable for poverty policies. I prefer poverty policies to be based much more on absolute deprivation whether this be nutrition, health, education, housing, etc. with more help to the absolute poor. The uniqueness of Japanese postwar policies has been that the government encouraged private occupational groups to establish their own systems of pensions and public health which did not encourage the beneficiaries to regard the benefits as entitlements from the state. But these systems could not have expanded to cover large enough groups if growth did not take place under conditions of low income inequality.¹

In Chapter 1 and the appendix, the authors find that the household income inequalities increased during the latter 1950s, decreased during much of the 1960s and rose slightly in the 1970s. The explanation for the increase in the 1950s is attributed

¹ But assistance for the absolute poor was inadequate throughout Japanese history, as the authors' tables show, especially in the prewar decades when so much was spent for military adventures. In the authors' relative poverty index, a situation in the depression years of the 1930s can be conceived whereby the income share of the lowest 5 per cent of families could have sharply fallen (due to unemployment) but offset by a even sharper fall in the share of those above the poverty line so that the index could have remained unchanged.

to the rise in rural-urban differences, the rise in the share of property incomes and to increases in bonuses which were disproportionately received by the various occupational groups in the urban areas. The figures for the farm sector show the Gini to be stable from 1953 to 1962 at 0.24 (p. 38). Much of this section of the book is devoted to reasons for the decreasing tendencies in the 1960s of ordinary households and the rise in the 1970s. This section is the main contribution of the volume.

The decrease in disparities of household income in the 1960s is mainly attributed to the full employment reached around the turn of the decade into the 1960s which had an equalizing tendency in the incomes of employee, agricultural households and in the average urban-rural households. The tightening of the labor market forced even small firms to raise their wages, and large firms to expand their operations to the small cities, to be able to use labor away from the large cities. These tendencies also contributed to a substantial decline in the regional income disparities. In addition, there was a decline in the size of families especially in the lower income groups, in part due to the lower birth rates and in part to rural-urban migration. Finally, disparities declined in the rural sector due to increasing off-farm employment of farm families, utilizing the employment opportunities opened up by the location of factories in the outlying cities.

In the 1970s, because of the decline in growth rate of the economy (from about 8 per cent to 4 per cent) there was a loosening of the labor market with consequent tendencies (1) for the disparities within employee households to widen, (2) farm subsidies going mainly to the large farmers, (3) employment opportunities declining, population aging, and (4) housewives in the higher income households going to work—all factors tending to widen income disparities in the 1970s (pp. 56–60). An additional factor noted on pp. 40–42 was the decline in disparities among small proprietors of retail and handicraft firms who were forced to operate with fewer employees as the labor market tightened in the 1960s and when it loosened the decline in disparities ceased in the 1970s. These observations are supported with a wealth of data, pp. 18–46, on Gini's and other measures for each sector, on decomposition analysis, and on population, making Chapter 1 and its appendix a notable contribution to the income distribution literature, and more than making up for the lackluster chapters of the rest of the volume.²

II

My comments will be confined to Chapter 1 and the appendix, since the discussions on wealth distribution and poverty pointed to the favorable impact of the declining tendency of income disparities on wealth distribution and on poverty groups. Thus, one can say that the crux of the distributive problems lies in the distribution of income.

Although the book's statistical findings agree with those of Richard Wada for the 1950s, there is a major difference for the 1960s. Wada's estimates from the *Employment Status Survey* for all households show stability of the Gini from 1962 to 1968 (at around a Gini of 0.38).³ On the other hand, if the one-person households are

² In the analysis of the 1970s, it would have been better to bring in the data on the latter 1970s so that the trends for the entire 1970s could be observed and analyzed.

³ For Wada's pioneering study, see Paper 12, "Impact of Economic Growth on the Size Distribution of Income: The Postwar Experience of Japan," in *Income Distribution, Employment, and Economic Development in Southeast and East Asia*, Vol. 2 (Tokyo:

left out and only multi-person households are considered, both estimates show declines in the disparities for the 1960s. The discrepancies in the trends of all household disparities are due to the use of different data set, with Mizoguchi/Takayama relying on the *Survey of People's Living Condition* which they consider to be more reliable than the *Employment Status Survey*. But not enough evidence is adduced in Chapter 1 to make a convincing case, and one hopes the authors will discuss the matter further in the future.

Until this is done, the puzzle may be partly resolved by the conjecture that the *Employment Status Survey* which is a much larger sample may cover the lowest and highest income groups much more comprehensively than the smaller *Survey of People's Living Condition*, especially the one-person households. (This may account for its higher level of Gini, by 10 per cent or so.) In the Philippines (1975 survey) and Indonesia (1976 survey), which were very much larger surveys than the others, much higher disparities are shown. It is noted on page 55 that the *Survey of People's Living Condition* was "not successful in getting information on young single-member households with no occupation such as students living away from their parents." The one-person households occupy the lowest income brackets of income distributions and in the postwar United States they were largely responsible for keeping the income disparities from declining for all household distributions. Wada shows that the importance of one-person households in the lowest income decile rose from 53 per cent in 1962 to 72 per cent in 1971.⁴

On the other hand, the contention of the book that the multi-person households and not the all household distribution are the important ones for most purposes in distributive analysis seems plausible for the 1960s. The one-person households in Japan in the 1960s included large numbers of students living away from parents and salaried employees of large companies living away from, and sending most of their pay to their families, as argued on page 45. But the situation might have changed in the 1970s with the expansion of other types of single-person employees, which is in line with Western trends. Modern economic growth appears to be decimating even the nuclear family, and increasingly the single-person household with a regular earner is becoming a normal institution, just as the extended family is disappearing with modernization. For the 1980s and beyond, Japan's income distribution will be increasingly compared with the Western countries on an all household basis, as well as ordinary households. It may, therefore, be worthwhile that the single-person households be studied extensively in income distribution in future research, not only to resolve this issue between Wada and Mizoguchi for the 1960s which started with the conference in Tokyo in 1974.⁵

It was also in the 1974 Tokyo conference that Simon Kuznets (and also Richard Wada) emphasized the great importance of taking into account the size of families since the poor tend to have more children than the affluent. This suggests the need in future work to measure income inequalities not only on the basis of total family income but per person family incomes—that is to array and rank each household in

Japan Economic Research Center; Manila: Council for Asian Manpower Studies, 1975). For Mizoguchi's paper see Paper 11, "The Distribution of Household Income in Post-war Japan," containing the data for the 1950s and 1960s.

⁴ Wada, "Size Distribution of Income," p. 537.

⁵ Wada, "Size Distribution of Income"; and Mizoguchi, "Distribution of Household Income."

the original data not on the basis of the size of total incomes of each family but on the basis of the size of total family income divided by the number of family members, as Kuznets has strongly recommended. If this is done, there will be two income distributions whose inequality coefficients will differ substantially from the new one, and will be more useful for studies on poverty, consumption, demographic changes such as the aged, households, and so on. Hence, it will be most interesting to see what happened to the inequality coefficients of per person family income during the 1950s, 1960s, 1970s, and this may prove to be more interesting than the conventional approach.

Life cycle aspects in the conventional distribution also pose major problems. The smaller families tend to be dominated by the youngest and oldest family heads. The former are just starting in their working life cycle and the latter have come to the end of it. The conventional distributions tend to exaggerate the inequality of family incomes if incomes are conceived as the average of the entire span of life cycle incomes. Kuznets has been suggesting that income distribution by detailed socioeconomic or occupational groupings instead of by income-size brackets will minimize life-cycle effects. For Taiwan, he found that the level and trends of distribution of per person family incomes and of occupations differed markedly from the conventional distribution.⁶ An occupational or better still socioeconomic (with occupations divided into employers, employees, and own-account) groupings of income together with the others may open up many new avenues for income distribution research, particularly in Japan where earnings are linked to age through seniority. With so much family income statistics collected, it is a pity that various tabulations other than the conventional are not made to expand income distribution research which is vital to the study of growth.⁷

The Gini coefficient is used profusely throughout the volume. The Gini gives an exaggerated impression of inequality by cumulating the lower income shares into those in the higher incomes shares, thereby including them more times and giving larger weights to the former. An inequality coefficient can be worked out easily by taking the income share of each income bracket (or occupational, socioeconomic, or any quintile groupings) and compared with the share of the number of households in the bracket. The sum of the non-algebraic differences in the two shares in each bracket gives a straightforward measure of inequality more useful than the Gini, more convenient for decomposition analysis, and easier to use for growth analysis. It can be made into a coefficient or index when divided by 200 (the maximum disparity) and compared with the Gini coefficient. The latter is always larger from about 20 to 25 per cent, because a Gini coefficient of 0.5 means that half of the *cumulated* area

⁶ Paper 10 by Simon Kuznets, "Demographic Components in Size Distributions of Income," in *Income Distribution, Employment, and Economic Development in Southeast and East Asia*, Vol. 2 (Tokyo: Japan Economic Research Center; Manila: Council for Asian Manpower Studies, 1975). This paper became the first of a series of about half a dozen papers in various journals by Kuznets which have had a major impact on not only income distribution but also on demographic research. See also his paper on Taiwan, "Notes on Income Distribution in Taiwan," in *Quantitative Economics and Development: Essays in Honor of Ta-Chung Liu*, ed. L. R. Klein, M. Nerlove, and S. C. Tsiang (New York: Academic Press, 1980).

⁷ I am told that new tabulations from existing surveys are very difficult to get done in Japan; if so these new tables must be tabulated by the Statistical Bureau in the Prime Minister's Office if the research on distributions is to progress.

is included between the diagonal and the Lorenz curve while 0.5 in our index pertains to half the *uncumulated* deviations. The rationale for the Gini is largely statistical, lacking an adequate analytical justification.⁸

More research on the analysis of the findings for the 1960s may be helpful for other countries, especially the NICs. Full employment was mentioned by the authors to explain the fall in inequalities of the ordinary households in the 1960s. But full employment per se under rapid growth could generate inflationary pressures which in turn could produce results unfavorable to equality. Instead, prices rose only slightly in the 1960s after the first few years. I have hypothesized elsewhere that after full employment small but efficient machines were extensively substituted for low paid workers in agriculture and industry, thereby raising the elasticity of substitution and hence total factor productivity.⁹ In the 1970s, however, machine/labor substitution slowed down as most operations became mechanized so that there was the conversion of full employment into labor scarcity. This meant that mechanization took the form increasingly of using bigger and more powerful machines to replace the smaller machines instead of workers; this lowered the substitution elasticity and the growth of total factor productivity, and therefore the growth of GNP per capita, especially in the larger firms, farms, and stores. These tendencies might partly explain the rise in income inequalities. More research into this process of mechanization may be enlightening.

We conclude with the comforting thought that whatever may be the changes within the postwar decades, the average level of income inequalities was probably lower than the prewar decades of twentieth century, as the authors conjecture. The latest *World Development Report, 1984* of the World Bank shows that in the late 1970s Japan's inequality index was the lowest among the fifteen leading industrial market economies of the world, indicating that rapid growth and structural changes can be consonant with low levels of income disparities.¹⁰ Of course, this is partly due to the great population densities of monsoon Asia with its pronounced mode of labor-intensive tiny farms, firms, and shops, restricting the range of variations in income size. But it is reassuring to find that the income share in the lowest quintile was highest in Japan and lowest in the highest quintile, the two most important quintile in the study of income distribution. I doubt that the distribution in the Soviet Union if it is published can look much better.

(Harry T. Oshima)

⁸ Kuznets worked out this simple measure and called it the total disparity index; see Kuznets, "Demographic Components." See the appendix to my paper, "Changes in Philippine Income Distribution in the 1970s," *Philippine Review of Economics and Business*, June 1983 for discussion on the Gini and the attempt to work out decomposition measures for the disparity index which are more useful than the decomposition of the Gini.

⁹ See my paper, "Reinterpreting Japan's Postwar Growth," *Economic Development and Cultural Change*, Vol. 31, No. 1 (October 1982); this hypothesis is extended to Taiwan and R.O.K. in my draft volume on *Comparative Asian Economic Growth*, Chapters 5 and 10.

¹⁰ The statement assumes that the World Bank figures represent distribution of all household incomes, including that of Japan. On minor matters, foreign readers of the book will be happier if the publishers did a better editing job and will find the book more valuable if the basic frequency distributions of households by incomes and other data underlying the inequality coefficients and decompositions were presented in a statistical appendix. They may be puzzled by the presentation of measures of inequality and decomposition by four decimal places when property and proprietor's incomes in the survey are so understated that two or three places would be appropriate.