

RESEARCH REPORTS

POPULATION INCREASE AND ECONOMIC DEVELOPMENT IN ASIA

The Institute of Asian Economic Affairs: *Ajia no Jinkō Zōka to Keizai Hatten* (Population Increase and Economic Development in Asia), Tokyo, 1962. 516 pp.

This is a joint study by Ryōzaburō Minami, Toshio Kuroda, Ryōshin Minami, Masao Ueda, Tadao Yoshida, Minoru Tachi, Kazumasa Kobayashi, Rokurō Tsuchiya, Toshinobu Katō, Yoshitaka Hatai, Nangoku Seki, Akira Ono, Asao Mizuno, Fujio Tomita, and Masashi Kaneda.

In some Asian countries like India and Ceylon, a census has been taken since early times. But most Asian countries took a census first only after World War II. There are even countries where one has never been taken. Further, it is generally agreed that the censuses taken in some countries leave much to be desired in coverage and reliability. It is no wonder, then, that very few countries in Asia have detailed statistical data. Consequently, it is extremely difficult to conduct demographic, socio-economic observations covering the whole of Asia. What we could do under these circumstances was to obtain not only government-released figures but also all the other available statistical data and to give due consideration to their reliability in conducting a demographic survey of the Asian region, particularly member countries of the ECAFE.

The subject of our research, which was completed in 1961, was *Ajia no Jinkō Zōka to Keizai Hatten* (Population Increase and Economic Development in Asia). It consists of seven chapters. The first three chapters are devoted to a purely demographic analysis of fertility and mortality in Asia. They also discuss the prospects of population increase and possible changes in the composition of populations on the basis of these two factors. The remaining four chapters outline the socio-economic aspects of the Asian population, including the questions of economic growth, industrial structure, income levels, and the concentration of population in urban areas. Two researchers were assigned to organize each chapter, and the results of research work were submitted to joint discussions in which all the members of this research group participated.

1. *Asian Fertility*

The question of fertility was taken up first as a factor determining the long-range trend of Asian population. Our analysis was made on the basis of the following: (1) crude birth-rate; (2) specific birth-rate according to the age of mothers; (3) gross and net reproduction rates; (4) child-woman ratio; (5) average births for woman and average number of surviving infants; and (6) size of family. The analysis showed a strong trend of fertility in Asia. Research revealed that the lowest birth-rate in Asia, 38.3 per 1,000, was in Hongkong. The

highest—50 per 1,000—was recorded in Pakistan. The average for the whole of Asia was 44.7 per 1,000. Size of families averaged smallest in India with 4.9 persons and largest in Singapore with 9.6 persons. This high rate of fertility appears to be unprecedented in world history, and we failed to detect signs that it will decline in the future. This was in spite of the fact that some signs of decline were observed in Ceylon.

2. *Asian Mortality*

Mortality trends in Asia have a decisive effect on its population now and in the future. In some countries of Asia like Japan and Ceylon, the crude death-rate has been tending to fall since the 1920's. But in most countries it began to show a rapid tendency toward decline only after World War II. According to recent figures, the death-rate is 12.1 per 1,000 for India, 9.1 for Ceylon, 7.1-7.3 for Hongkong, Taiwan and the Philippines, and 6.5 per 1,000 for Singapore. These crude death-rates are unfit for international comparison because they ignore factors of age compositions. If these crude death-rates were expressed in terms of standardized death-rates, the latter would be higher than the former in Asia where the proportion of juvenile population is higher. But, even using standardized death-rates, we can conclude that there has been a marked mortality decline in Asian countries. Particularly remarkable is the decline in infant mortality. The former infant mortality of 200 per 1,000 for India has now been reduced to half. In almost all countries it is far below the 100 per 1,000 level. Burma, however, with an infant mortality rate of slightly more than 100 per 1,000, is an exception.

3. *Outlook for the Increase and Structural Change of Asian Population*

If we study the figures given above, it is easy to understand the tremendous potential population explosion of Asia. Moreover, it is important to remember that there are as yet no signs of decline in fertility. In Asia there also remain some differentials among countries with regard to mortality. The evening out of these differentials would mean there is a further change of population increase in Asia. The crude death-rate for mainland China stood at 17 per 1,000 in 1953, according to official figures. But recent research has revealed that the actual death-rate at that time was at the comparatively high level of 21 per 1,000. If China, with a total population of some 600 million and other densely populated countries succeed in reducing mortality, the population of Asia will almost certainly grow.

Changes in the age composition are bound to accompany this tendency toward a sharp increase in Asian population. The problem of old-age population will be serious only in the comparatively distant future in countries other than Japan, but a grave change that will take place in the near future is that the coefficient of the dependent burden on the working population will inevitably be raised by the increase in juvenile population. As will be clear from Table 1, the proportion of the juvenile and old-age population to the expanded, economically active population, between 15 and 64 years of age, is expected to be 42.5 per cent

Table 1. ESTIMATED DEPENDENT POPULATION INDEX

Countries	Year	Age group of 15-59 years (percentage)			Age group of 15-64 years (percentage)		
		Juvenile population	Old-age population	Dependent population	Juvenile population	Old-age population	Dependent population
13 Southeast Asian countries	1960	75.0	9.2	84.2	72.3	5.3	77.6
	1970	81.3	10.2	91.5	78.1	5.9	84.0
	1980	81.0	10.7	91.7	77.9	6.4	84.3
India	1961	72.2	9.4	81.6	69.5	5.3	74.8
	1971	77.2	10.7	87.9	74.1	6.2	80.3
	1981	80.3	11.4	91.7	76.9	6.7	83.6
Japan	1960	48.7	14.4	63.1	46.3	8.9	55.2
	1970	34.0	15.8	59.8	32.3	9.9	42.2
	1980	32.6	18.1	50.7	30.8	11.7	42.5

Sources: Figures for 13 Southeast Asian countries and India: *Report to the Economic and Social Council on the Eleventh Session of the Population Commission*, Feb. 1961; figures for Japan: Institute of Population Problems, Ministry of Health and Welfare, *Danjo Nenreibetsu Suikei Jinkō*, (Estimated Male and Female Population Classified by Age Groups), Research Data No. 138, 1960.

in Japan in 1980, while 83.6 in India 1981, and 84.3 in 13 Southeast Asian countries excluding India in 1980. In other words, the dependent burden on the economically active population in most of Asia will be double that in Japan.

4. Population Increase and Economic Growth in Asia

Starting from the demographic analysis above, we proceeded to an analysis of economic factors in Asian countries on the basis of these demographic observations. As a first step in this analysis, we took up the general question of economic growth. Table 2 shows the growth rates of per capita real national income. They were calculated on the basis of the data for recent years, taking into consideration different rates in the rise of commodity prices in different countries.

The growth rate of population in Taiwan is exceedingly high, and that of per capita national income is far higher than the average for the Asian region. This is an exception among Southeast Asian countries. It may be conceivable that foreign aid which Taiwan seems to receive because of its peculiar position in international relations is behind this high growth rate of national income. All the other countries except Japan show a low rate of economic growth, which is a common feature of all the less developed nations of Asia.

5. Industrial Structure and Disguised Unemployment in Asia

A comparatively large proportion of the world population is still concentrated on primary industries, and particularly on agriculture. This situation is quite

Table 2. GROWTH RATE OF PER CAPITA REAL NATIONAL INCOME

Country	(A) Rate of population increase	(B) Growth rate of national income	(C) Commodity price increase rate	(D) Growth rate of real national income (B)-(C)	(E) Growth rate of per capita real national in- come(D)-(A)
India	1.32%	3.61%	2.0~2.1%	1.6.~15%	0.3~0.2%
Pakistan	1.36	1.66	2.6	-1.0	-2.4
Ceylon	2.49	4.35	0.9	3.4	0.9
Burma	0.99	6.12	0.18~-0.24	6.0~6.4	5.0~5.4
Thailand	1.89	7.52	2.6~5.7	4.9~1.8	3.0~0.0
Philippines	2.57	5.75	0.8~0.3	5.0~5.5	2.3~2.9
Taiwan	3.65	24.00	7.7~7.2	16.0~17.0	12~13
Cambodia	...	5.49	5.6	-0.1	...
Japan	1.10	13.3	4.5~4.1	8.8~9.2	7.8~8.1

Sources: (A) U.N., *Demographic Yearbook 1959*, New York, 1959, *passim*.

(B) U.N., *Economic Survey of Asia and the Far East, 1959*, Bangkok, 1960, *passim*

(C) Bank of Japan, Statistical Bureau, *Gaikoku Keizai Tôkei Nenkan* (Statistical Yearbook of Foreign Economies), Bank of Japan, 1959, *passim*

overwhelming in the Asian region. According to the ILO *Yearbook of Labor Statistics, 1958*, about 385,440,000, or about 73 per cent of the 530 million economically active persons of Asia, are engaged in agriculture. Our analysis of the industrial structure of population was based on the method employed by C. Clark, in which women are excluded. The following, as shown in Figure 1, were the conclusions reached.

(1) An overwhelmingly larger proportion of population is engaged in primary industries in Asian countries, excluding Singapore and Japan. The proportion of population engaged in secondary industries is extremely limited. (2) It is true that the small proportion of population engaged in secondary industries will necessarily increase the proportion of the population engaged in primary industries. In Asian countries, however, the former finds rather a concentrated expression in low level, and a wider gap is again seen among different countries in the proportion of population engaged in tertiary industries. (3) A comparatively higher proportion of population engaged in tertiary industries is observed in some Asian countries like Ceylon (34.3 per cent) and Malaya (30 per cent). They are, however, mostly concentrated on service departments. This rather indicates the weakness of economic foundations in these countries, where the development of secondary industries is retarded.

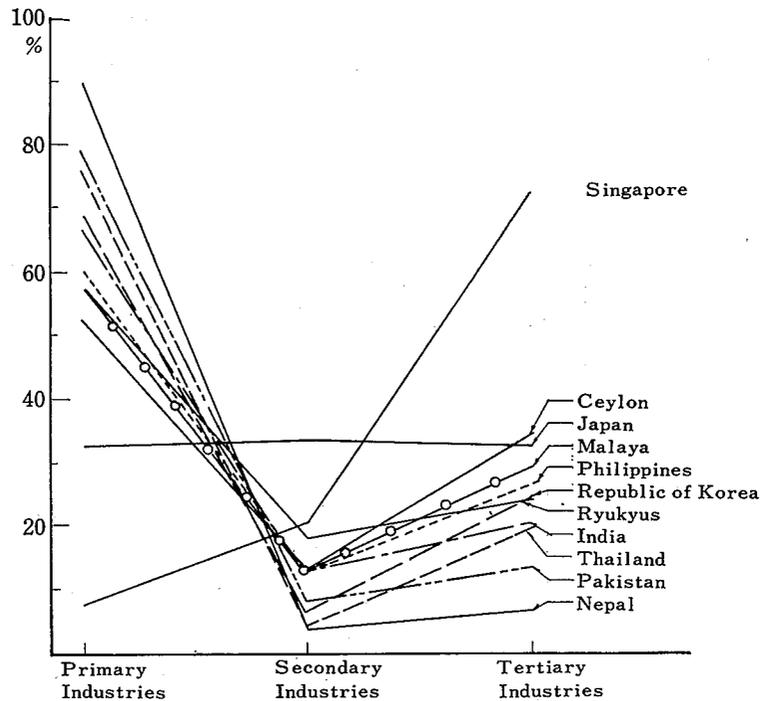
Statistical data on employment are particularly lacking in most Asian countries where secondary industries, and consequently modern employer-employee relations are not yet developed. Even when they are available, different methods are employed for compiling such statistics in different countries, making it extremely difficult to compare these data statistically. But what we can glean from such incomplete data is the fact that figures on complete unemployment are unexpectedly

small. This may also be regarded as an Asiatic characteristic. The only exception is the Philippines, where the unemployment rate is 9 per cent. It is very low in most Asian countries, beginning with India and Pakistan, in each of which the rate is below the one per cent level, according to available statistics. We are inclined to believe that only "frictional unemployment" is seen expressed in the unemployment figures. But what attracted our attention in analyzing employment conditions in these countries is that working hours are unexpectedly short (more than 90 per cent of the total number of gainfully employed persons work 43-48 hours a week). Consequently there is an unmistakably widespread "over-employment" in Asia. This over-employment is both the cause and effect of the low level of labour productivity.

6. *Income Levels and Distribution in Asia*

If the industrial structure is in an undeveloped state, and if the symptoms of "over-employment"—the cause and effect of the low level of labour productivity—are apparent in each sector of industry, it follows that income levels are low

Figure 1. COMPOSITION OF ECONOMICALLY ACTIVE POPULATION BY INDUSTRIES IN ASIAN COUNTRIES (AROUND 1950)



Source: ILO, *Yearbook of Labor Statistics, 1958*, Geneva. Figures for the Republic of Korea were added by us.

in Asian countries. Reference is made partially to the low levels of income in Chapter IV, where an analysis is made on the question "Population Increase and Economic Growth in Asia." Excluding Japan, Ceylon, and the Philippines, the only countries where the annual per capita national income barely exceeded the \$100 level between 1951 and 1958, were Taiwan and Thailand. Such countries as Burma, India, Pakistan, Indonesia failed to reach this level. In Burma and Pakistan, it averaged \$30-50. However, in analyzing income levels, we noticed the narrow income disparities between different sectors of industry, rather than the absolutely low levels of income.

Here is a table to illustrate this fact. There were some differences according to countries in the methods employed in estimating the economically active population as well as in the classification of industries. However, we processed these figures so as to make them more or less comparable with each other. In this Table, income levels in different industries are expressed on a scale of 100 for per capita income for manufacturing industries. For example, in Burma, income levels are higher in the mining and quarrying industries, and in the transportation, communication and storage industries. But, in the Philippines and in Pakistan incomes are higher in the mining and quarrying industries. In the above-mentioned countries, there are several-fold income disparities between the

Table 3. INCOME DISPARITIES AMONG INDUSTRIES

Industries		Agriculture, fishing, and hunting	Mining and quarrying	Manufacturing	Construction	Electricity, gas, and water	Transportation, communication & storage	Commerce	Service
Countries	Year								
Burma	1953	41.6	642.0	100.0	176.8	171.9	348.9	150.2	170.9
Taiwan	1955	...	40.0	100.0	...	...	107.9	..	...
	1956	...	47.1	100.0	...	...	102.5	...	...
	1957	...	40.6	100.0	...	...	113.2	...	...
Philippines	1956	58.7	500.0	100.0	118.4	99.9		...	155.6
	1957	53.5	436.0	100.0	104.1	90.1		...	166.1
Japan	1954	34.1	120.9	100.0	82.3	145.3		72.1	...
	1955	40.3	106.4	100.0	82.0	89.8		75.7	...
	1956	30.9	141.4	100.0	77.7	135.3		64.4	...
Pakistan	1954	100.7	285.0	100.0	...	...	...	152.1	68.2
	1955	85.4	276.0	100.0	...	...	...	132.2	61.1
	1956	86.0	276.0	100.0	...	...	...	133.0	57.5
India	1951	66.1	179.0	100.0			201.3		52.8
Ceylon	1953	86.5	48.3	100.0	90.4	...	...	107.0	59.4

Sources: U.N., *Yearbook of National Accounts Statistics, 1959*, New York, 1960; ILO, *Yearbook of Labor Statistics, 1960*, Geneva, 1960; U.N., *Economic Bulletin for Asia and the Far East*, Vol. XI, Bangkok, 1960.

manufacturing industries and the high-income industries. This suggests that in these countries there are almost unthinkable imbalances in income levels among different sectors of industry. These imbalances are due largely to three factors—to difference in the nature of capital invested on the development projects; to the international positions of various industries in these countries; and to the undeveloped state of labour markets. However, if we view income levels in Asia as a whole—apart from the extraordinary imbalance in the above countries—we will note that there is not any remarkable income disparity between primary industries such as agriculture, fishing and hunting, and manufacturing industries as the core of the secondary industries. In Japan, incomes in primary industries are about one-third those in secondary industries. But in Burma and India, the former is about half, while in Pakistan and Ceylon income levels in the primary industries reach something like 86 per cent of those of secondary industries. We concluded, therefore, that income disparities between primary and secondary industries in Asia are extremely narrow. Here, too, we see a characteristic feature of the newly developing countries in Asia. Our findings on this question led us to conclude that this situation arises not from the high level of productivity in primary industries, but from the low level of productivity in secondary industries.

We also extended our research to the question of income distribution among different classes in Asian countries. We learned that the proportion of earned income to the total national income is smaller than that in advanced countries. In investigating income distribution among different classes, we learned that the proportion of medium-income earners is very small and the proportion of large income earners also small. The majority of persons are small income earners. In this situation a middle class, which is an economic basis for a democracy, is undeveloped.

7. Industrialization and Urbanization in Asia

It is no wonder that there is no process of full-fledged industrialization in the newly developing countries of Asia. In these countries the industrial structure is characterized by the fact that 73 per cent of the total, economically active population is concentrated on agriculture. Income levels in industrial sectors are not much higher than those in agricultural sectors. Two questions arise: What bearing does this retarded industrialization have on the population increase in Asian countries? What is the present condition of the population growth in Asian cities? (Population growth in urban areas of Western countries was both the cause and result of industrialization in those countries.)

It is generally conceived by the researchers on less developed countries in Asia that population increase eats up capital and curbs the rise in the living standard of the people. This situation makes it extremely difficult for these countries to place Western-type industrialization on the beam. We were unable to obtain data convincing enough to disprove this common conception among students of Asian affairs. However, there may be various different cycles in question and consequently different inferences may be drawn. Stagnation in the process of industrialization is not a phenomenon that is seen for the first time after a popula-

tion began to rise at a rapid pace, as is the case in Asia today. It was after the long lapse of many centuries that industrialization was started in these Asian countries and during this long period, the population of Asia remained stagnant in contrast to the expansion of population in Western countries. This alone will be sufficient to disprove the generally accepted theory that the slow process of industrialization in Asia is related to the increase in population. Therefore, we studied the quality of population capable of promoting the industrialization process, rather than the quantity of population in Asian countries.

What should be examined in connection with the process of industrialization is the population move to urban areas. The history of Western countries tells us that it was during the nineteenth century marked by the rapid progress of industrialization that this urban growth of population became particularly remarkable. (It was most pronounced in 1811-1851 in England, in 1870-1890 in Germany and in 1861-1891 in the United States.) This cityward tendency of population slackened its pace in this century as compared with that in the last century. In Asia today, however, this urban growth can be observed while a steady progress of industrialization is not being made. Moreover, in Asian countries, the population is moving to their "primate cities" and not to smaller or medium cities. This is in sharp contrast to the fact that the cityward tendency of population in Western countries resulted in the development of medium and small cities and towns. And it is none other than the impoverished masses in the rural districts in Asia that are pouring into larger cities and inflating them. Thus, B. E. Hoselitz is right when he says, "In many Asian countries the migrants exchanged a precarious existence in the country for an equally precarious one in the city."¹

The above is in no way a detailed resume of our joint work. Here I have put down rather freely my idea based on the impressions after reading through our work in book form again. Therefore, I find it necessary to make it clear that this survey is not primarily intended for outlining the details of our joint work.

Finally, I would like to add a few reflections on this subject. A fall in the death-rate, which was attained independently of an improvement in the living standard of the population, is mainly responsible for the present increase in Asian population. This is a new experience in the history of mankind. Scholars studying the questions of population have developed various theories of "stages" or "evolution." But any theory that states a low death-rate accompanying a low birth-rate, is not sufficient to explain the present situation in the newly developing countries of Asia. In these countries, the lowering death-rate, coupled with the rising birth-rate, is leading and will continue to lead the Asian population to further expansion. I am personally inclined to think that this situation is similar to the demographic progress in England two centuries ago, or to the combination of population factors in the early stage of the Industrial Revolution.²

¹ Hoselitz, B. F., *Sociological Aspects of Economic Growth*, Glencoe, Illinois, p. 228.

² Ryōzaburō Minami, *Jinkō Shisō Shi* (A History of Thought on Population) to be published shortly by Chikura Shobō, Chapter 4, Section 2 "The Demographic Situation during the

Next, I would like to call attention to the close relations between population factors and socio-economic ones in considering the future Asian population. The importance of these relations is not confined to Asian countries, but they are of special significance to these nations which, during their long history, have developed their own cultures in their densely populated lands. Consequently, a rapid economic transformation of Asia's less developed countries and their switch-over to modern industrial societies cannot be realized simply by putting a curb on the tempo of population increase. The improvement of the present situation in Asia may be possible only on the basis of a profound consideration of the social structures as a whole, which lie at the bottom of a peculiar population pattern—which I would like to call Asian "Bevölkerungsweise" after G. Mackenroth.¹

Further, I would like to stress here that this joint research work was conducted not by demographers alone but by a group of researchers, including economists, sociologists and economic geographers, and that this group, which is still continuing research on this subject, is inspired and guided by a common desire—an idea aptly expressed by H. Belshaw: that an Asian country is "a relatively poor country in terms of real income per head, but there are potentialities for improvement"² in it in spite of the seemingly hopeless pressure of increasing population.

Ryōzaburō Minami

Industrial Revolution.

- 1 Mackenroth, G., *Bevölkerungslehre. Theorie, Soziologie und Statistik der Bevölkerung*. Berlin—Göttingen—Heidelberg, 1953, S. 413 ff.
- 2 Belshaw, H., *Population Growth and Levels of Consumption*, London, 1956, P. xxiii.