Hitotsubashi Journal of Economics 33 (1992) 95-111. © The Hitotsubashi Academy

KUZNETS' CURVE AND ASIAN INCOME DISTRIBUTION TRENDS

HARRY T. OSHIMA

Abstract

Although Asian economists find that the inverted U curve of Simon Kuznets applies to Asian income distribution trends, the resemblance may be more apparent than real. It is true that there is an upward and then a downward trend in income inequality in most Asian countries, but the peak in the trend appears much earlier in the stage of development in Asia than in the West. In Asia, the peak is reached when the economy is still predominantly agricultural with per capita incomes much lower than in the West where the peak was reached when the economy was predominantly industrial. Hence, the forces and mechanisms underlying Asian trends are different from the West, although those underlying Japan's trends are similar to those of the West. The reason for the difference in the West and Asia is that Asia (with the exception of Japan) never went through the first industrial revolution of the 19th century.

I. *Introduction*

The distribution of personal income is strategically located between production and consumption and hence can play an important role in the growth of productivity. When more of the income paid out are received by the lower income groups, these groups which comprise most of the laboring class are motivated to work more diligently, and their purchasing power for food, clothing, shelter and other goods is increased. They can save for the future education of their children, thereby raising their future productivity. For the owners of small businesses and farms, (who have difficulties borrowing from banks), more income is available to purchase machines and expand operations.

Improved income distribution tends to reduce spending on luxuries and to increase the purchase of wage goods and other necessities, so that less is spent on imported goods, making available more foreign exchange for importing machinery and other foreign goods essential for economic development. More is available to expand mass purchasing power for domestically produced industrial goods, thereby raising scale economies and productivity. If too much income is paid to the upper income groups and too little to the middle and lower income groups, political stability is jeopardized and domestic and foreign investments may decline. But there is such a thing as distribution being too equal, as in the case

* I am grateful to Professor Toshiyuki Mizoguchi for detailed comments.

of China and other Communist countries. Economists in these countries complain that incomes are too equally distributed to serve as incentives for work effort.

There are various measures of income inequality, each with special features which make them appropriate for certain purposes. The Gini is used for the following discussion mainly because it has become customary for statistical offices to present it in their regular publications, accordingly it has become the most convenient measure for international comparisons. It is not necessarily the best measure since it does not give a convenient picture of the pattern of distribution at various points of the total distributions; various values of the Gini are published for the same distribution, depending on how detailed the curvature of the Lorenz curve is measured; its decomposition is difficult.

More troublesome in the study of income distribution are the statistics themselves—their limited availability (although in Asia the data are more plentiful than in other developing regions) and their questionable reliability. The data must be obtained from sample surveys of households which are expensive to conduct in developing countries because of the large number of illiterate persons without the ability to keep books, and because of large numbers of interviewers making frequent visits necessary. In Japan, Taiwan, S. Korea, Hong Kong and Singapore, respondents are literate and have been taught to keep daily accounts of spending. Thus, the East Asian data are much more reliable, and the data for other countries must be used with utmost caution and can be used only for testing broad and simple issues, not finely-turned hypotheses. Even for the East Asian surveys, incomes in the upper income groups (subject to income taxes) may be grossly understated.

Income distribution in Asia tends to be less unequal than in Latin American countires where huge haciendas support the very high incomes of the rural elites. In densely settled monsoon Asia, the farms are small and the variations in incomes generated by agriculture are limited. Similarly, the importance of small and medium industries and services keeps urban income inequalities lower than in Latin America with large urban enterprises. But compared to the developed countries of the West, Asian distributions tend to be more unequal because of: much less mechanized agriculture so that income per farm worker is much lower than in industry; greater prevalence of underemployment in monsoon agriculture; larger size of low-pay, unskilled workers and of low-income proprietors and the smaller share of transfer payments received by lower income families in Asia where welfare programs such as social security are not as extensive as in the West.[1] The focus of the following discussion is on trends and this is done in relation to Simon Kuznets' wellknown and much discussed hypothesis, which is simple enough to be tested by Asian income data.

II. *Kuznets' Long Swing in Income Distribution*

His hypothesis asserts that in the course of economic growth income inequalities rise in the early stages of development and then fall in the later stages. Kuznets' writings show that the upward movement was a gradual, long-run process, which in the West took place in the 19th century and the downward phase occurred in the 20th century with the peak

[1] Family income is personal income defined in the national accounts to include wages, salaries, net receipts of family enterprises, net interests, transfer receipts, commissions, tips, bonuses and honoraria.

sometime around the turn of the century or in the early decades of the new century.[2]

Kuznets had in mind long-term forces in accounting for the decline in the U.S. during the post-World War II period. He referred to the following factors: (1) the decline in disparity between output per worker between agriculture and non-agriculture mainly because of farm mechanization, (2) the decline in the size of entrepreneural or proprietor class because of the fall in handicraft production and farm mechanization, (3) the relative increase in the size of the white-collar group over the blue-collar group, especially the unskilled workers, (4) the fall in the share of property incomes at the top, and (5) the shift in government policies toward welfarism and egalitarianism.[3]

The fall in inequalities was clear-cut, occurring not only in the U.S. but also in Western European countries. Kuznets was puzzled by the clear-cut decline in so many countries since he thought that the distributive shares were subject to a wide variety of forces, some of them raising and others lowering them with the net balance uncertain.[4]

It may be that Kuznets was not aware of the unique character of the post-World War I period. He wrote before historical research had established the enormous impact on the economy of the shift from steam-operated technologies of the 19th century to the electric-gas operated technologies of the 20th century. This technological shift from the first industrial revolution to the second succeeded in the mechanization of agriculture with internal combustion engines such as tractors, electric-powered equipment and so on, reducing the farm workforce while raising output per worker closer to that of non-agriculture. Moreover, the cheaper and smaller electric machines were affordable for small firms unlike the costly steam-powered equipment and succeeded in replacing a large number of unskilled workers. And more housewives found employment in factories because electric power made possible small machines which women could handle, and this increased the number of earners in lower-income families.[5]

In other words, the decline in inequalities in the West in the 20th century was due to special circumstances related to the change-over of technologies from the first to the second industrial revolutions.[6] The West had already succeeded by the early decades of the 20th century in becoming industrialized economies utilizing the technologies of the second industrial revolution, and its per capita incomes were about $2,000 in 1972 prices.[7] In contrast, in the postwar decades Asian countries could move directly from agrarian economies based on traditional handicraft technologies into electric powered technologies, skipping the stage of steam-powered technologies. At the time when the Ginis in Asia were falling, per capita incomes in U.S. 1972 dollars were low, $100 or less in Bangladesh, Sri Lanka,

[2] It was not a sharp upward and downward movement suggested by what later writers called the Kuznets' U curve.

[3] See his *Modern Economic Growth*, pp. 206–217, Yale, 1966.

[4] See his presidential address in the *American Economic Review*, March 1955, as reported in his *Economic Growth and Structure*, pp. 257–287, N.Y., 1965.

[5] See Warren O. Divine, Jr., "From Shafts to Wires: Historical Perspectives in Electrification," *Journal of Economic History*, June 1983, also my note, "The Growth of Total Factor Productivity: The Significance of New Technologies in the Early Decades of the 20th Century," *ibid.*, March 1984.

[6] Now with the shifting of technologies to electronic technologies, inequalities may begin to rise as they did in the U.S. See T. Smeeding and G. Duncan, "Whither the Middle Class," Syracuse University, N.Y. 1990.

[7] In the 1920s, per capita income was about $700 and prices rose three times by the 1970s. See *Historical Statistics of the U.S.*, 1972.

India and Taiwan, $170 in the Philippines, $200 in Singapore, $400 in Hong Kong and $300 in Indonesia, $650 in Malaysia and $1,000 in Thailand, compared to $2,000 in the U.S.

Less known are Kuznets' views concerning the rise of inequality in the early stages of development. In 1975, he pointed out "that the transition from the pre-industrial to the modern industrial epoch was a relatively painful process. Groups of population were displaced off the land, a number of traditional crafts and trade groups were adversely affected by competitive pressures of new factories and there were marked effects on the relative distribution of income among groups attached to the several production sectors with technological unemployment marking several decades in the transition." He goes on to say that all this was accompanied by a rapid rise in population, as death rates fell and birth rates rose, with unfavorable impact on income distribution. When this situation continues for long, disruptions are likely to occur and with the danger of a breakdown in national concensus and unity.[8] As examples of breakdowns, he cites the U.S. Civil War, Europe in the 19 century, and in several of the less developed countries after World War II.

III. *The Distribution of Income in the Various Stages of Asian Development*

Even though the downward turning point in income distribution trends did not come in the latter stages of development, it is possible to detect a downward turning point in the early stages of Asian development (see Table 1). In Thailand, in 1962/63 the Gini was relatively low (0.41) at a time when its per capita in U.S.$ was $125. At this time Thailand was still very much a traditional Asian economy with very limited spread of industrialization and farm commercialization. Similarly in Bangladesh with per capita incomes of less than 100 U.S.$ with and the Gini rising, from around the 0.30 level. In India, the Gini rose from 0.34 in 1956/57 to 0.48 in 1967/68. Similarly in Malaysia in 1957/58 with a Gini of 0.45 and rising in subsequent years. In 1957, Hong Kong's Gini was 0.48 and rose in 1963/64 to 0.50. Indonesia's Gini rose to a peak of 0.51 in 1987 when per capita income was only $80.

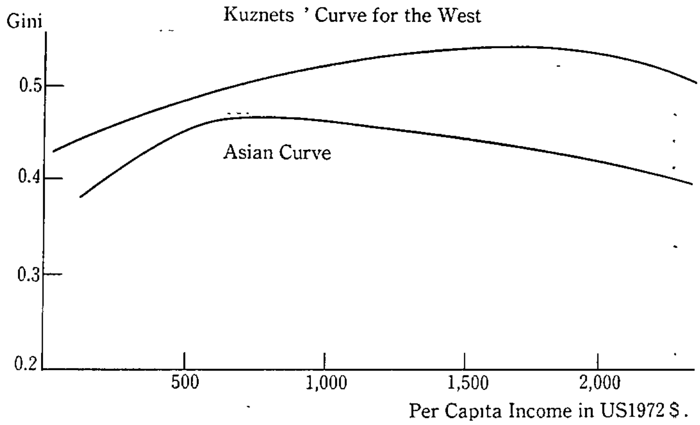
Also, the Ginis were highest in India at per capita income of $80, in Sri Lanka at $80, and in the Philippines at $140, and Taiwan at $145. These peak Ginis suggest that if there were surveys in the period before these peak years, the Ginis may have been rising as in the case of Thailand, Bangladesh, India, Malaysia and Hong Kong, with surveys before the peak.

The tendency for the Ginis to rise and then fall after the peaks may be indicative of a stylized, generalized curve for Asian countries showing a rise in the early period and then a fall much earlier in terms of per capita income levels than in the West. Figure 1 illustrates the curves for Asia in relation to the West.

Note that both of these curves are shaped like a small mountain with a long, falling slope to the right of the peak. Hence, Kuznets designated the Western curve as a long

[8] See his "Introduction" in *Income Distribution, Employment, and Economic Development in Southeast and East Asia*, published by the Japan Economic Research Center, Tokyo and the Council for Asian Manpower Studies, 1975, Vol. 1.

FIGURE 1. STYLIZED INCOME DISTRIBUTION TRENDS ASIA AND THE WEST



swing, and it was, not he, but others who labelled it an inverted U curve. The Asian curve reaches a peak at per capita dollar incomes (in 1972 prices) before $1,000, most of them before $500, in contrast to the Western curves' $2,000 or so. At such a level of per capita incomes, the Western economies had already become industrialized economies with the industrialized sector employing more than twice the workforce of the agricultural sector. In contrast, agricultural employment was about three times the industrial employment in Taiwan in 1950 and six or seven times in S. Korea.[9]

Kuznets noted that he did not have enough data to ascertain whether there was a rising trend in the U.S. or other Western countries before World War I. "No adequate empirical evidence is available for checking this conjecture of a long swing in income inequality; nor can the phases be dated precisely." But he noted that there was some evidence that in the U.S., England and Germany, the widening inequality seems to have started in the 19th century,[10] especially around the middle of the 19th century. He thought that the rise and then fall in income inequality was related to the long swing in the rate of growth of population; the upward swing in population growth due to reduction in the growth of the death rate and the downward swing to the reduction in the growth of birth rates; to the rapid growth of urbanization and migration and then a slowing down; and to the low rate of national savings in the 19th century, later increasing in the 20th century.[11] It was also due to the nature of steam-powered technologies prevailing in the 19th century which failed to mechanize agriculture and the services, and succeeded in mechanizing only a small portion of industries.

The beginning portion of the Asian curve is also somewhat speculative as data are not available for the prewar decades or for the decade after the end of World War II. The justification for assuming inequality to rise in the beginning is the assumption that the premodern, traditional distribution of income in Asia is likely to be fairly equal. It is the combined outcome of a rural distribution curve that has a very high, sharp made at the

[9] See my diagram in *Economic Growth in Monsoon Asia*, 1987, Tokyo University Press, pp. 58–59.
[10] See his Economic "Growth & Income Inequality," *American Economic Review*, March, 1955.
[11] *Ibid.*

TABLE 1. GINI TRENDS IN ASIAN COUNTRIES

EAST ASIA		SOUTHEAST ASIA		SOUTH ASIA	
Year	Gini	Year	Gini	Year	Gini
JAPAN		SINGAPORE		BANGLADESH	
1962	.37	1966	.50	1963/64	.36
1965	.34	1972	.44	1966/67	.34
1970	.41	1974	.43	1968/69	.29
1975	.36	1979	.42	1973/74	.36
1980	.33	1984	.47	1976/77	.45
1985	.35			1981/82	.39
				1983/84	.35
S. KOREA		THAILAND		SRI LANKA	
1966	.34	1962/63	.41	1953	.50
1971	.36	1968/69	.43	1963	.49
1976	.37	1975/76	.43	1970	.37
1980	.39	1980/81	.45	1973	.35
1982	.36	1985/86	.50	1981	.31
1985	.41	1988	.43	1985	.43
1987	.47				
TAIWAN		MALAYSIA		INDIA (Rural)	
1953	.56	1957/58	.45	1956/57	.34
1959/60	.44	1967/68	.48	1964/65	.42
1964	.36	1970	.51	1967/68	.48
1970	.32	1973	.52	1975/76	.41
1975	.31	1979	.49		
1980	.30	1984	.48		
1985	.32				
1987	.33				
HONG KONG		PHILIPPINES		PAKISTAN	
1957	.48	1956	.49	1963/64	.39
1963/64	.50	1961	.51	1966/67	.36
1966	.49	1965	.51	1970/71	.33
1971	.44	1971	.47		
1973/74	.42	1985	.45		
1976	.44	1988	.45		
1979/80	.40				
1981	.46				
		INDONESIA		NEPAL	
		1970	.45	1976/77	.50
		1976	.49		
		1978	.51		
		1982	.45		
		1987	.37		

Sources:

Japan "Economic, Sociological and Institutional Factors Related to Changes in the Size Distribution of Household Income: Japan's Experience in a Century," by Toshiyuki Mizoguchi (mimeographed).

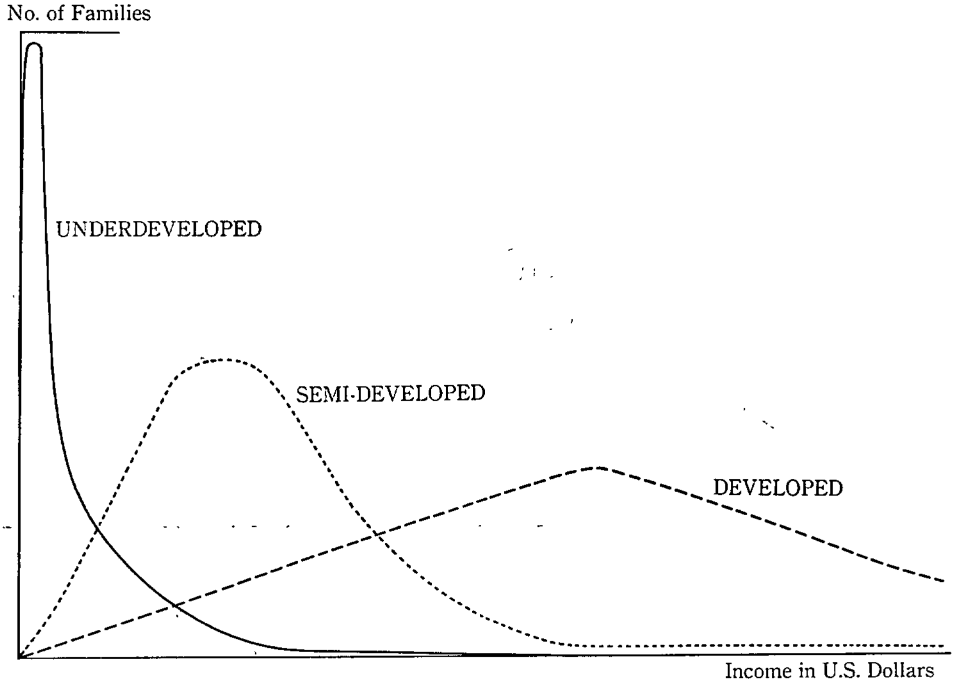
Taiwan "Income Distribution in Taiwan," by Shirley W.Y. Kuo and for 1986 & 1987 data from *Survey* extreme left, and a short tail to the right representing income of the upper income groups (See Fig. 2). This type of distribution signifies the prevalence of self-subsistent, small peasants farming less than two hectares of land (so typical in monsoon Asia), and a much smaller number of larger peasants (selling to the urban markets) in the middle income groups and even a smaller number of landlords with large farms and other businesses in the upper income groups. In contrast, the urban curve of income distribution is a flat one with a small mode slightly to the right of the rural mode, with a short tail to the right, close to the horizontal axis but above the rural distribution's tail. In and around the mode of this type of distribution are the proprietors of cottage and other small traditional industries and proprietors of small stores and stalls with their unpaid family helpers. The higher income groups represented in the long tail are the mercantile classes, merchants, wholesalers, moneylenders, urban landowners, professionals and public servants. (See Fig. 2).

To get a notion of the relative size of those groups, we can look at the Thai Census of Population in 1937 when the economy was basically pre-modern. Nearly 90% of the labor force was in agriculture, fishing, and forestry; 3% in manufacturing, mining, construction and transport; and 7% in commerce, personal and public services. And at the end of World War II, the number of textile spindles amounted to only 10,000 but at the end of 1968 there were 333,000.[12]

	of Personal Income Distribution in Taiwan 1986 & 1987.
Hong Kong	"Economic Growth and Income Distribution of Hong Kong Since Early 1950's," by Laurence Chau and for 1963/64, 1973/74 and 1979–80 from *Growth, Equity and Income Distribution in Hong Policies Kong* by Tzon-biau Lim, March 1985 (mimeographed).
Korea	*Korean Social Science Journal*, Vol. XII, 1985 paper by Hakchung Choo entitled "Estimation of Size Distribution of Income and Its Sources of Changes in Korea, 1982," page 95. Also T. Iwamoto "Distribution of Income and Wealth in Korea," *Asia Keizai*, Feb. 1991, Tokyo.
Singapore	Gini ratios from *Asian Pacific Economic Literature*, Vol. 2, No. 1, March 1988, paper by V.V. Bhanoji Rao of National University of Singapore entitled "Income Distribution in East Asian Developing Countires," page 29. 1973 Gini ratio from Income Distrinution in Singapore 1966–1973, by V.V. Bhanoji and M.K. Ramakrishnan, *Malayan Economic Review*, 1976.
Thailand	Yukio Ikemoto, *Income Distribution in Thailand*, Institute of Developing Economies, Tokyo, 1991.
Philippines	1985 Family Income and Expenditure Survey, NSO, 1986 (preliminary results) and 1988 Highlights of Family Income and Expenditure Survey.
Malaysia	Gini ratio from *Asian-Pacific Economic Literature*, Vol. 2, No. 1, March 1988, "Income Distribution in East Asian Developing Countries," by V.V. Bhanoji Rao, Dept. of Economics, National University of Singapore. 1984 data from *Fifth Malaysian Plan 1986–1990*, page 100.
Indonesia	Only 2 years Gini 1976 (0.492) & 1982 (0.454) from *Distributional Impacts of Economic Growth: The Case of Indonesia, 1969–70 to 1981* by Abuzar Asra, Ph.D. Dissertation, 1988, page 130. 1987 data from Central Bureau of Statistics.
Sri Lanka	1953 & 1963 Gini from *Long-Term Changes in Income Inequalities in Sri Lanka* by N. Karunatilake; 1970 Gini from *Journal of Developing Areas*, Vol. 14, No. 1, Oct. 1979 by Lee Shen-Yi published by Western Illinois Univ. 1973 Gini from Changes in Income Distribution in Sri Lanka by Karunatilake, CAMS-JERC, Vol. 2, 1985. 1981 & 1985 Gini from *Labor Force and Socio-Economic Survey 1985–86*, Department of Census & Statistics, 1987, p. 60.
Bangladesh	*Study of Income Distribution in Bangladesh* by S.R. Osmani and A. Rahman, Nov. 1986, BIDS Research Report No. 53 and *A Critical Review of the Poverty Situation in Bangladesh in the Eighties*, Vol. I by A. Rahman, S. Mahmud & T. Haque, May 1988, BIDS Research Report No. 66, page 7.
India	*Changes in Rural Income in India 1968/69 to 1970/71*, Dec. 1975, National Council of Applied Economic Research, (NCAER), New Delhi: *Household Income and Its Disposition* NCAER, New Delhi, January 1980 and *Changes in Household Income Inter-Class Mobility and Income Distribution in Rural India, 1970/71 to 1981/82*, NCAER, April 1986, p. 55.

[12] *Philippine Economic Journal*, no. 3, 1976.

FIGURE 2. ASIA: INCOME DISTRIBUTION IN DIFFERENT STAGES OF DEVELOPMENT (STYLIZED)



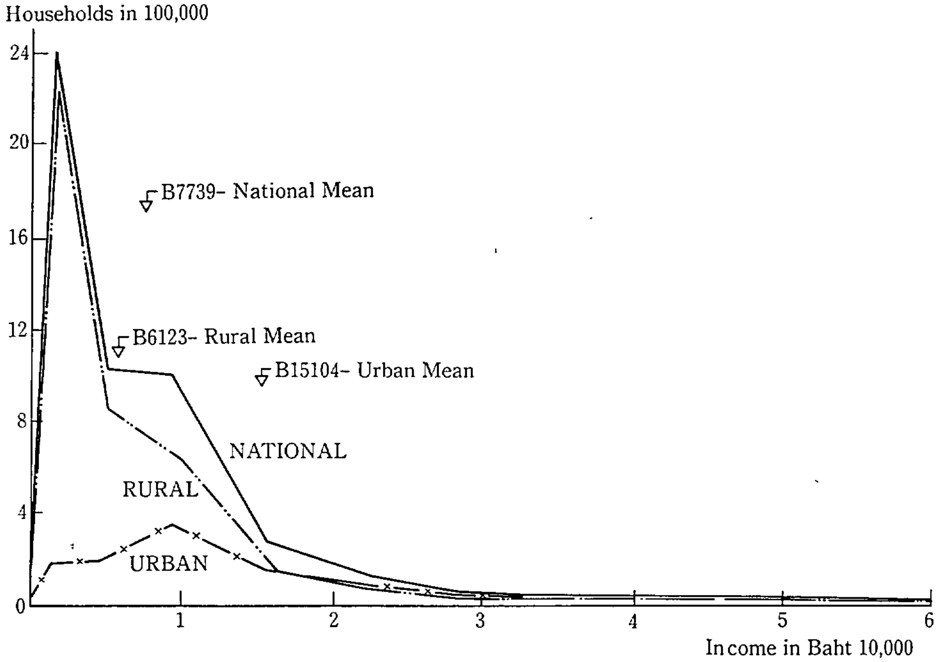
Source: Harry T. Oshima & Bruno Barros "Trends in Growth & Distribution of Income in Selected Asian Countries," *Philippine Economic Journal*, Vol. XV.

This pre-modern curve is not highly unequal because the higher income groups relative to the long, sharp peak of small peasants in the rural mode is small, so that the income share of the upper quintile families is low. The more unequal the distribution of land, the larger the shares (1) of the upper quintiles, (2) of the market for the products of urban industries, and (3) of the traditional mercantile and professional classes. The high population densities in Asia of monsoon paddy agriculture preclude the kind of external disparities in landownership prevailing in Latin America.

Figure 3, depicting income distribution of Thailand in the earliest stage, illustrates the undeveloped curve in stylized Figure 2. Figure 4 shows the shifts of Figure 3 curves toward the underdeveloped curve in Figure 2 as modernization takes place.

In a traditional economy, the introduction of modern economic growth is likely to widen the distribution of incomes. If modernization begins in the urban areas (especially the metropolitan areas) with the introduction of modern industries (not only processing and transporting traditional exports, but also, protected, import-substitutive industries such as textiles) inequalities may widen because the upper incomes of mercantile and import-substitution industrial groups may increase faster than the incomes of those in the small number of old industries, and incomes in the larger cities will grow faster than those in other urban areas where incomes may not grow at all. In the rural areas, the increase in the

FIGURE 3. THAILAND: SIZE DISTRIBIUTON OF HOUSEHOLD INCOME, 1962/1963



Source: See Figure 2.

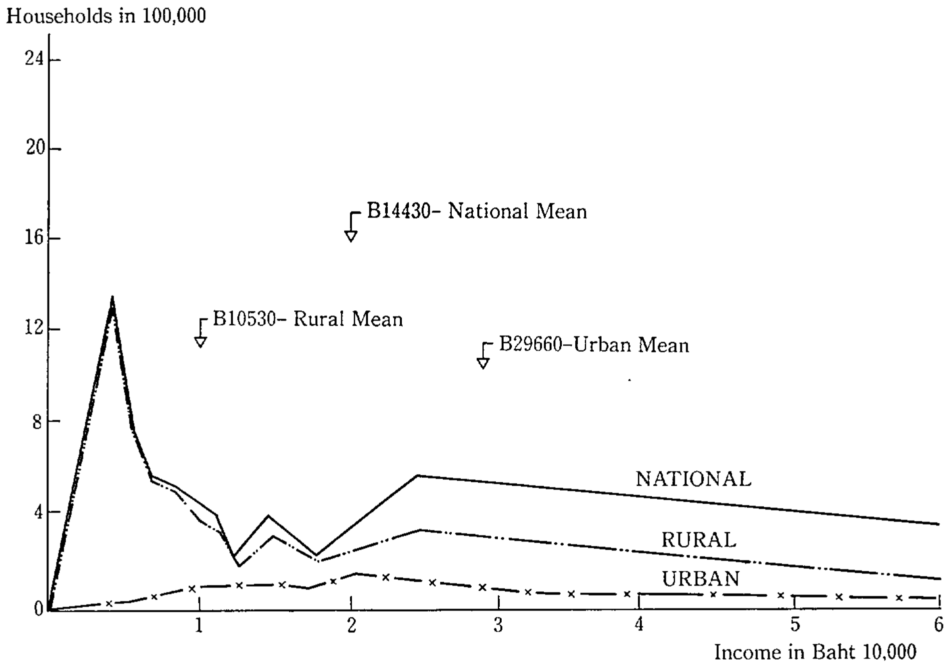
demand for agricultural products will benefit the farms near the large cities which are usually owned by the larger farmers in the upper income brackets. Thus, only the higher income groups in both the rural and urban areas would be favorably affected by modernization; their share of total incomes will rise while the share of the lower quintiles (whose incomes would remain unchanged) will fall.

Or the modernizing may begin in the rural areas. New agricultural technologies such as higher-yielding varieties of cereals and plantation and industrial crops may lead to higher incomes for those able and willing to adopt the new technologies. But at the outset, only a small group of farmers will be adopting the new varieties; those better situated toward the market and with the physical and financial resources required by the new technologies, as well as with the capability to take advantage of government services and inputs which are severely limited in quantity. These are likely to be farmers with larger incomes, not the small, subsistence peasants remotely located from the market and from government agencies. The upshot of this is that the share, if not the amount, of incomes of the small peasants would decline while that of the upper income brackets would rise, together with increases in regional income differentials.

In the next instance, as modernization proceeds, larger numbers of farmers begin to modernize, but the impact is still peripheral, perhaps reaching no further than the highest and part of the next highest quintile of farmers, as the data for the Philippines suggest.

Due to lack of roads, irrigation and other infrastructure, lack of sufficient credit and

FIGURE 4. THAILAND: SIZE DISTRIBUTION OF HOUSEHOLD INCOME, 1968/1969



Source: See Figure 2.

suitable land, insufficient knowledge and information and limited government service extension and other assistance, and difficulties of adapting or changing institutions, most of the peasants fail to take advantage of the improved varieties and technologies, their income position may even worsen when, with population rising, the size of their holdings declines. Accordingly, income inequality tends to worsen in the rural areas, as the experience of the Philippines in the 1960s indicates.

As to the urban areas, the spread of modern industries, many of them protected, import-substituting industries, is much more rapid, not constrained as much as in the rural areas by the lack of infrastructure, capital, knowledge, institutions, and government assistance. If the growth of modern industries is rapid, such that the service sector, especially the commerce sector, begins to decline relative to the modern industrial (construction, transportation, manufacturing) sector, urban inequalities may cease to rise and may even begin to fall. Average incomes and their dispersion are the highest in the traditional services with highest incomes in the commerce, public service and professional service sectors. Moreover, it is considerably larger than the industrial sector in terms of employment.

A major reason for the high average and dispersion of incomes in the traditional service sector is the low proportion of employees per proprietor or manager, as compared with modern industries in manufacturing. It is in the nature of factory industries that large work-forces of skilled and unskilled workmen are brought together in large establishments, supervised by a few proprietors or managers, unlike traditional services and traditional industries, which are conducted in small shops, stores, and offices, usually on a family basis.

Modern industry in the 20th century generates tendencies toward equalization in the urban sector because its electric-powdere machines tend to eliminate the simplest processes and skills which are usually the low-paying jobs. Because of the greater productivity of machine production, modern industry can pay higher wages to its employees than cottage and other nonmechanized industries. On the other hand, it replaces by its own handling of marketing and distributive functions the mercantile proprietors who dominate the marketing and financing for cottage and traditional industries.

Because of the faster spread of modern industries whose Western technologies are more easily adaptable than Western agricultural technologies (e.g., in textiles, shoes, food canning, wood products, household utensils, etc.) and the greater flexibility of urban institutions, the inequalities in the urban sector begin to diminish earlier than the inequalities in the rural areas, as shown in the case of Taiwan in the 1950s. In sum, it is the slow spread of modernization in the rural areas, together with the difficulties in changing institutions (such as tenancy, concentration of land ownership, especially under conditions of rapid population growth), which are responsible for the growing inequality in the nationwide distribution of income. Although the urban sector inequalities may tend to increase in the early stages of growth, the rapidity in the spread of modern industries would soon stabilize urban inequalities and, with the further spread, reduce inequalities. At some point in time, the falling inequalities in the urban sector would more than offset the rising inequalities in the rural sector, and then, overall, nationwide inequalities would begin to fall.

The higher level of Western Gini as shown in the stylized diagram is due to the nature of the first industrial revolution of the 19th century which produced tendencies toward income inequalities. Besides the displacement of rural population with the enclosure of farms and the rise of large farms, the destruction of handicrafts resulted in extensive unemployment in the urban areas, and the steam-powered technologies generated a proletariat doing menial, unskilled jobs in the factories, and property incomes rose. Asian countries with the exception of Japan came too late into industrialization to be affected by the first industrial revolution.

In the 20th century with the spread of the technologies of the second industrial revolution with its small and numerous machines, the fall in the Western Gini continued throughout the 20th century as the rapid mechanization of farms and industries proceeded. This eventually brought Western Ginis below Asian levels. Asia's industrialization was much slower, especially in the first half of the 20th century with the exception of Japan which eventually caught up with the West toward the end of the 20th century.

Income distribution data for 17 Western industrialized countries in the latter 1970s and early 1980s show that their average Gini to be about 20 to 25% lower than the average of Asian countries (made up of 12 countries). Nevertheless, Japan's Gini is among the lowest in the West, the exception being Belgium and the Netherlands which are very small countries with limited regional heterogeneities.[13] In contrast, Australia, a large country relative to the size of its population, has the highest Gini among industrialized countries.

In sum, although there is some resemblance to Kuznets' hypothesis of upward and

[13] Computation based on data from the *World Development Report*, 1989 and 1990, IBRD.

downward swings of inequality, the timing of the peak in terms of per capita dollar incomes in Asian countries is different. And because the peak occurred when the Asian economies were predominantly agricultural instead of industrial, the forces and mechanism by which inequalities fell in Asia differed from those of the West since the focus must be on the agricultural sector, as may be seen in a very brief review of country experiences below.

IV. *The Long Swings in Inequality in Specific Asian Countries*[14]

Starting with East Asia, we take up Taiwan with the lowest inequality in Asia and one of the lowest in the capitalist world. Inequality probably rose in the late 1940s with the entry of large numbers of refugees from China which increased population by 10% and raised unemployment. Unlike the Kuznets' hypothesis, the decline started in the early 1960s even though per capita incomes were very low, and with one of the most successful rural development programs which raised farm incomes with land reform, irrigation, multiple-cropping, mechanization, improved seeds, credit, farmers' associations, extension services and marketing institutions. Farm incomes rose to nearly the level of non farm incomes. Tenancy as a legacy from prewar colonial period was reduced from 44% in 1948 to 17% in 1960. As in Japan, off-farm employment for farm families began to rise in the 1970s and with the mechanization of farms, incomes rose to nearly the levels of nonfarm incomes. Rural unemployment and underemployment were wiped out and the farm Gini fell from a low of 0.32 in 1966 to 0.28 in 1970.

Nonfarm inequalities fell from 0.32 in 1966 to 0.20 in 1974 due to the growth of labor-intensive industries (especially in food, textile and garments) in the urban sector. These industries were protected in the 1950s but became efficient and were able to export in the latter 1960s. The mechanization of industries reduced the size of the low-paid unskilled workers and full employment wiped out marginal and menial service workers such as domestics. Sustained full employment from the late 1960s raised wages of unskilled workers in construction and services, and labor shortages enabled housewives to obtain employment, raising the number of earners in the lower-income households.[15] In the 1980s, inequality tended to rise with the establishment of capital-intensive industries (steel, cement, petrochemicals) and the expansion of the service sector where banks, real estate, and business services were established.

South Korea started with land reform and labor-intensive industrialization in the 1950s, both of which expanded employment opportunities and kept income inequalities low in the 1950s and into the 1960s. But it began to shift to capital-intensive industrialization in the 1970s and neglected rural development, small industries and services since it had to channel all of its resources to the costly heavy industry sector. Wages and salary differentials widened as the demand by the capital-intensive industries for skilled labor rose and the demand for unskilled workers by the smaller firms fell. This situation continued into

[14] For details of generalizations, see my "Trends in Growth and Distribution of Income in Selected Asian Countries," *Philippine Economic Journal*, *op. cit.*, from which most of the data in this section are taken and also the graphs and data for Thailand above.

[15] For a detailed discussion, see Shirley Kuo, *Income Distribution in Taiwan*, unpublished paper, January 1991; also her *Taiwan Economy in Transition*, Westview, 1983.

the 1980s and Korea was unable to wipe out unemployment until the latter 1980s. In addition, the severe shortage of capital kept interest rates high because the credit needs of the smaller enterprises could not be satisfied. The Korean and the Taiwan experience shows the early decline in the Gini is related to the development of the small farms in monsoon Asia together with industries that are labor-intensive. A contrary policy of heavy industtialization with neglect of the farm sector raises the Gini.[16]

Since agriculture was not important in the city states, Hong Kong and Singapore had to depend on full employment to reduce inequalities. This was accomplished readily by accelerating industrial exports which expanded job opportunities in the export sector, and workers from the traditional and marginal services such as domestic services, peddling, informal eating places and so on, and low-paying handicrafts were able to shift to the modern industrial sectors where wages were higher. With sustained full employment into the 1970s and 1980s, the demand for female workers rose, enabling housewives to find jobs in the factories. Female participation rates rose from 37% in 1961 to 44% in 1977 in Hong Kong, and from 30% in 1970 to 47% in 1980 in Singapore. Also wages of unskilled workers rose faster than those of skilled workers as labor shortages occurred and mechanization accelerated.

In Malaysia, the Gini rose in the 1960s as a result of policies to speed up the industrialization of the country after separation from Singapore. Modern infrastructures were built in the major cities to which factories, financial and trading firms and government offices moved. The populations of the ten largest cities increased from 1.3 million to 1.9 million between 1957 and 1970, and the urban Gini rose from 0.35 to 0.46. The largest enterprises were superimposed on the small, traditional enterprises, creating a dualistic structure. The fall in the share of the lowest quintile from 15.7% to 11.7% was due to the agricultural sector. Rural development policies promoted the development of rubber and palm oil plantations and other large farms producing sugar, cocoa, tapioca, maize and other commercial crops. Incomes generated in the large firms in the cities and the large farms in the riral areas rose faster than other incomes.[17] The main beneficiaries were the British plantations and urban Chinese, and not the Malay peasants.

In an effort to reverse these tendencies and bring down the Gini new policies were adopted in the early 1970s. New farm lands were hacked out of forests and distributed to the Malay peasants, and by 1983, 250,000 hectares were made available. A large number of industrial estates and export zones were established in an effort to disperse industries, thus creating jobs for rural families. Irrigation facilities were provided to farms in the north for multiple cropping. These were targetted for poor farmers and the unemployed to raise incomes of the lowest-income group, together with primary health care, universal primary education and low-cost housing. These contributed to the decline in the Gini in the latter 1970s and into the 1980s.

In Thailand, income disparities fell slightly in 1975/76 but rose in 1985/86 and then declined in 1988. The slight fall in 1975/76 may not be statistically significant as a trend,

[16] See Hak-chung Choo, *A Comparison of Income Distribution in Japan, Taiwan and Korea*, Korean Development Institute, 1989. And as suggested by Professor Mizoguchi, inflation in the 1970s was a major contribution to income inequality.

[17] See charts in Y. Ilemoto, "Income Distribution in Malaysia, 1957–1980," *The Developing Economies*, Dec. 1985.

considering the year to year fluctuations of the Gini (as may be seen in the Japanese experience) and the crudity of the data.[18] The Thai trend represents an economy which began to move into modern economic growth slowly in the 1950s and then more rapidly from the 1960s when modern physical infrastructure (such as modern roads, concrete buildings, public utilities, and so on) began to be more widely available. Into a predominantly traditional agricultural economy, modern industry and services began to be introduced in the Bangkok-Thonburi area, generating much higher incomes than in the traditional handicrafts and services in the other parts of Thailand. Regional disparities rose as incomes per capita in Bangkok rose over those in other rural and urban areas. Added to this was the rapid commercialization of agriculture, especially in sections not far from the Bangkok-Thonburi region. In the 1963 Census of Agriculture, it was reported that only 9% were using chemical fertilizers but this tripled by 1969 and exports of agricultural products rose 50% and maize and sugar tripled.[19] Also tenancy increased as the ratio of rented land to total holdings rose from 3.6% in 1963 to 11.9% in 1971.[20] But most parts of Thailand away from the cities and large rivers were unaffected by the commercialization of agriculture, and remained basically subsistence economies with low incomes. (See Figures 2 and 3 above). The Gini rose in the 1980s to a peak of 0.50 in 1985/86. Agricultural prices fell, affecting especially the Northeast while Bangkok incomes rose. Unemployment has been rising from 0.9% of the labor force in 1980 to 3.5% in 1986. With prices improving and unemployment falling in 1988, the Gini fell. With the further fall of unemployment and underemplovement after 1988, and with full employment approached in 1990, a further fall in Gini may be expected.

The exceptional feature underlying the Thai trend in disparities is the extreme concentration of industrial and service sectors in Bangkok, the only major city in Thailand. Bounded in the West, North and East by land, the only coastline is in the South near Bangkok. In contrast, incomes were lowest in the Northeast and North with poor soils and limited water resources. Thus, starting in the 1950s as the most traditional economy in Asia, regional development was uneven and Thai disparities were heavily affected by regional heterogeneities.[21]

The data on rising inequalities in Indonesua up to 1978 are based on household ex-

---

[18] See Y. Ikemoto, *Income Distribution in Thailand,* Institute of Developing Economies, Tokyo, 1991, pp. 14–19, where he argues that the rural development policies, the commodity boom, and the minimum wage laws were favorable to falling inequalitiee in the early 1970s.

[19] See *Agricultural Statistics of Thailand,* 1964 and later issues, Ministry of Agriculture, Bangkok. Also Piron Chantaworn, *Decomposition of Measures of Inequality of Income Distribution in Thailand,* M.A. Thesis, School of Economics, University of Philippines, shows that between 1963 and 1969, Ginis in the rural sectors of four regions were rising.

[20] See Medhi Krongkaew, "Agricultural Development, Rural Poverty and Income Distribution in Thailand," *The Developing Economies,* Institute of Developing Economies, Tokyo, Dec. 1985. He also notes that the rice tax system adversely affected income distribution.

[21] See data by Suganya Hutaserani and Somchai Jetsuchon in *Thailand Income Distribution and Poverty Profile and Their Current Situation,* Thailand Development Research Institute Foundation, 1988, p. 19, and decomposition analysis showing the importance of the differentials in per capita income in agricultural and nonagricultural, between rural and urban disparities. Also see *Philippine Economic Journal,* No. 3, 1976, *op. cit.*

[22] See Sam Poli, *Over Time Changes in Living Standards and Poverty in Indonesia with Special Reference to 1964/65, 1969/70 and 1976,* National Socio-Economic Survey, Hasanuddin University, 1978.

penditure surveys. These surveys show increasing inequality in the 1960s and 1970s.[22] The reason for this is the rapid rise of modern industries and services, most of which were highly protected.[23] Nonagriculture tripled between 1960–1975, compared to a 50% increase in agricultural production. Modern industries grew with the establishment of public utilities, transport and communication industries, mining, manufacturing, construction and the petroleum companies, together with a modern commercial, banking and government sectors. These were superimposed on handicraft industries of low productivity and most were located in Jakarta where average incomes rose two or three times more than in the rural areas, so that regional disparities increased.

Because of the severe shortage of land in densely populated Java, there was increased tenancy and landlessness in the 1960s and 1970s as population growth accelerated. (Tenants increased from 456,000 in the 1973 Census to 2,600,000 in the 1980 Census). Migration to the cities grew but jobs were scarce. And the inflation in the 1960s and 1970s may have hurt the lower income groups more than the upper groups.

The reduction in the Gini in the 1980s may be due to improved agricultural production with the use of high-yielding rice seeds, the extension of modern industries and commerce to other parts of Indonesia, the reduction in unemployment and underemployment, especially the latter which has dropped from 38% of the labor force in 1980 to 13% in 1986. From about the mid-1980s, efforts to reduce regulations and move to a more open economy were made.

The Philippine trend of Ginis is the most puzzling. No country in Asia has shown a trend as stable and unchanging, (almost a straight line), even though there are few countries in Asia with so much instability, economic and political. There may be problems in the data since the 1985 and 1988 surveys had to be conducted with a small budget permitting only two survey rounds, one in July (covering the first six months) and another in January (covering the last six months). The usual practice is to conduct four rounds, one for each quarter as it is difficult for the respondents to recall what their incomes and expenditures were for a six-month period. This may be the reason why in both surveys only about one-half of personal income as estimated from the national accounts are covered for 1985 and 1988, while in countries like Taiwan and S. Korea, their surveys cover 80% or so. Large surveys in the 1970s not comparable with the 1960s and 1980s surveys show higher Ginis.[24]

Leaving aside the data for the 1970s and 1980s, it may be speculated that there was a rise in inequality in the 1950s after independence in the mid-1940s. Land became increasingly concentrated in the hands of the landlord groups, accompanied by increasing tenancy and landlessness. Capital-intensive industries protected by import substitution policies were established by U.S. businesses and Filipino landlords who also moved into banks and other financial institutions.

---

[23] See on protection and income inequality, K. Yoneda, "A Note on Income Distribution in Indonesia," *The Developing Economies*, Dec. 1985.

[24] See my "Changes in Philippine Income Distribution in the 1970s," *Philippine Review of Economics and Business*, Sept./Dec. 1983. In talking to the heads of Philippine statistical surveys, I was told that very little from the surveys in the latter 1970s was published because President Marcos did not want to have data on greater inequalities to be publicized. It is difficult to suppress the suspicion that the 1970 surveys were devised to prevent comparisons with the 1960 surveys. See also Y. Terasaki, "Income Distribution and Development Policies in the Philippines," *The Developing Economies, op. cit.*

The fall in inequality in Bangladesh during the early years of separation from Pakistan probably reflects the greater stability after the disorganization caused by the war of independence. The rise from 1968/69 to the peak in 1976/77 is the result of unemployment and a fall in real wages in the rural sector due to the concentration of land ownership. Inequality was reduced after 1977 as employment increased with the growth of cottage industries, public works and higher cropping intensities and expanding farm acreage.

Income distribution became more equal in Sri Lanka in the 1960s and 1970s because of the adoption of extensive welfare policies which benefitted the idle workers, the sick and the old, while subsidies reduced the cost of education and housing. Also the rural development program was moderately successful in distributing land, credit and infrastructure building. But income inequalities rose in the 1980s with the reduction in the benefits of welfare, greater unemployment and civil strife.

In India, the heavy industrialization policies adopted by Nehru from the latter 1950s benefitted those employed in the big industries and their suppliers but not the others as the heavy industries failed to expand and create jobs while continuing to drain public resources away from agriculture and small industries. But in the latter 1970s and into the 1980s, the Gini fell as the small farmers were able to increase their share relative to the shares of large and medium farmers. Also several states enacted minimum wage laws for the agricultural sector and this raised the share of wages relative to that of salaries. Such laws benefitted the landless farm workers with the lowest incomes.

Unlike other Asian countries, Japan began to modernize and move into industrialization in the late 19th century. Accordingly, the Japanese Gini trends resemble that of the West with a long upward swing from the 1890s to the 1940s and a downward swing after World War II.

According to various estimates brought together by Professor Toshiyuki Mizoguchi of Hitotsubashi University, income inequality began to rise around the time when Japan began to industrialize in the late 19th century and into the 1940s.[25] He shows that inequality between the agricultural and non-agricultural sectors began to widen from the 1890s. After feudalism, Japan entered the modern era with land reform but the heavy land taxes levied on farm lands contributed to indebtedness and loss of land by farmers and together with low rice prices, income inequalities within the farm sector rose in the 1920s and 1930s.

Inequality increased among non-agricultural families because of widening wage differentials between skilled and unskilled workers. The establishment of heavy industries raised the demand for and wages of skilled workers who were in short supply. But due to the rise of population and migration of rural workers, there was a surplus of unskilled workers which prevented their wages from rising.

Probably income differentials among the various regions of Japan may have increased with the introduction of modern industry in the major cities and the inadequate network of roads and other infrastructure in the pre-World War II period.

In the postwar period, Japan started with low levels of income disparities because of a series of institutional changes (such as land reform, democratic industrial relations, union-

[25] See his unpublished paper, "Economic, Sociological and Institutional Factors Relating to Changes in the Size Distribution of Household Income: Japan Experience in a Century," Hitotsubashi Institute of Economic Research, 1989. This section is in large part a summary of Professor Mizoguchi's paper.

ization of labor, zaibatsu dissolution). There were tendencies toward rising inequalities in the 1940s but with the disappearance of labor surpluses in the 1960s, the Gini fell. Full employment contributed to equalization by reducing wage differentials as small firms had to raise wages to retain their workers. Labor shortages in the urban areas forced firms to move to the rural areas, creating employment opportunities for members of farm families. Mechanization of farming accelerated in order to free male workers to take on off-farm jobs. Except for a temporary rise in the Gini during the recession uears of 1970–1971, the Gini has been stable at levels lower than in the West during 1970s and 1980s.

The long swing in the Japanese Gini resembled the Western experience, even though the peak was reached at a level of income much lower than in the West. As in the West, the number of farmers and farm workers fell sharply from the 1960s, and income per farm worker rose faster than in industry with farm mechanization, multiple-crops, and off-farm employment. In industry, there was a reduction in the lowest-paid workers (day laborers and family workers) relative to total employees. And with technologies imported from the West, mechanized work rapidly replaced hand-work not only in small farms but also in small firms in industry and services, thus raising the productivity of the lowest-paid workers. Underlying the similarity with the Kuznets' process of Gini reduction was the gas and electric powered technologies. But the lower Gini in Japan than in the West was due to the prevalence of small farms and small firms in monsoon economies.

In sum, although not as clear-cut as the Kuznets swing for Western countries after World War I, it is possible to detect some tendencies for the Gini coefficient to rise to a peak and then fall in several of the countries. But this peak is reached much earlier in the development stage than in the West where the fall in the Gini began in the 1920s after per capita incomes surpassed $2,000. In Asia, the peak was reached well before $1,000 when the agriculture sector was predominant. Hence, the forces and mechanism of the fall in the Asian Ginis were different from the West where it was centered in the industrial sector. In Asia, it was agriculture which led the way.

It was fortunate that the decline in inequality started early in the postwar period. It enabled economic growth to proceed without too much political and social instability. Countries such as S. Korea in the 1980s have been the scene of much instability as inequality rose. Economically, it contributed to larger purchasing power, saving, and work incentives for small farmers and laborers, and to the finance of capital formation of small businesses.

INTERNATIONAL UNIVERSITY OF JAPAN