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URBANIZATION AND POPULATION CHANGE IN THE DEVELOPMENT OF MODERN JAPAN*

Irene B. Taeuber
Office of Population Research, Princeton University

Much of the fascination of the Japanese scene lies in the intricacy of the adjustments between old and new, the delicacy of patterns that were distinctively Japanese, and the clashes of disparate motivations and behavior. The specifically Japanese aspects of the modernization of economy and society permitted change to proceed with relative smoothness. From the demographic point of view, they were the means whereby Japan's society and economy moved in response to the stern requirements of her densely settled and continually increasing population.

The movements to industrialization and urbanization in a densely settled agrarian area required specific types of changes, and these changes had to proceed with reasonable rapidity. The growth of a commercial and industrial economy required an influx from the rural areas into the cities. The preservation of the rural way of life under conditions of population increase required continuing exodus. Increasing contacts and changing population distributions tied urban and rural areas together in ever closer relationships, for the urban dwellers of today were the peasants of yesterday. The process of redistribution was continuous and quickening, for environmental sanitation, public health, and the increasing productivity of the modernizing economy reduced the rates of dying and so increased rates of population growth. Age at marriage and the rates of childbearing among the married did not remain at peasant levels among the educated, the upwardly mobile, or the urban population as a whole. Both death and birth rates changed with economic and social modernization, and the direction of the changes in both the components of the vital balance was generally downward. The growth that began slowly and haltingly in the early nineteenth century may terminate in the late twentieth century.

The analysis here will concern the relations among population change, industrialization, and urbanization as these occurred within the Japanese cultural setting from the early seventeenth century to the middle of the twentieth

* Sections of this survey involve selections from or generalizations of analyses included in The population of Japan (Princeton, New Jersey, Princeton University Press, 1958), and "Continuities in internal migration in Japan," in: Milbank Memorial Fund, Selected studies of migration since World War II, Proceedings of the 1957 conference, New York, 1958. Tables 2 and 3 are reproduced with the permission of the Princeton University Press, Tables 4 to 7 with the permission of the Milbank Memorial Fund.

century. Perhaps something of the historically specific, the culturally unique, and the general can be distilled from an overview of the population transition in an urbanizing Japan over the last three and a half centuries.

Some problems of analysis

Empirical analysis of the urbanization of the population of Japan cannot be conceptually precise, nor can it be consistent from one time period to another. If urbanization is defined simply as the growth of cities, there are difficulties in the definition of the city and in the availability of data that conform to the definition. If urbanization is defined culturally, socially, or economically, then many people resident in shi were not urban and many people resident in gun were not rural. Definitions of urbanization as a psychological process are attractive theoretically, but analyses based on the usual geographic classifications of data would be crude in technique and approximate in verification or repudiation of hypotheses.

If urbanization is a process, there should be gradations among a continuum that would have some reflections in data for politically delineated areas. The resort to size of place in disregard of classifications as shi, machi, or mura is enticing, but increasing populations without urbanization may yield measures of a pseudo-urbanism that is simply increasing density.

These many complications of conception, definition, and measurement occur at given times and over brief periods of time when cultures and economies are changing in established ways. Over the centuries there are changes in the functions of cities and the characteristics of urban populations. There are also changes in the relations of rural and urban populations, however defined and whatever the measurement. The growth of the industrial economy alters residence patterns and social structures. Dichotomies of urban and rural yield to more complex classifications as the structural and functional interpenetrations proceed. Eventually, as in the New York-Northeastern New Jersey and the Tokyo-Yokohama metropolitan areas, simple concepts of the urban and the rural lose their usefulness.

Both the significance of urbanization in the total demographic process and the data available for its measurement altered in the movement from the slowly changing population of the late Tokugawa bakufu through the formative decades of the Meiji era to the culmination of the traditional Japan in the late 'twenties and the early 'thirties of this century. There were other and frequently divergent processes in the years of imperial expansion, war, defeat, and military occupation. There were again changes in the years when seeming restoration was occurring in a situation in which population facts barred restoration. Then in recent years there were extraordinary changes in rates of economic growth and urbanization, in rates of decline in mortality and fertility, and in the prospects for Japan's total population, its cities, and its urbanizing segments.

The immediate implication of the conceptual and analytical difficulties in the study of urbanization is that research must proceed in a historically fragmented manner. Hence the introduction to this study is a description of the heritage of urbanization and population growth from Tokugawa to modern Japan.

Heritage

It is somewhat artificial to begin a consideration of urbanization and population growth with the early seventeenth century. Even then, Japan had long had a relatively dense population, and the long-run trend in numbers had been upward.¹ There were cities and there was mobility, and those who lived in cities, towns, and villages were tied together in subsistence, disease, and death. Urban influences were limited, though, for most of the people lived in villages and labored in agriculture and related activities. The population probably numbered less than 10 million in the thirteenth century, and it may have been as much as 18 million in the late sixteenth century. The great cities had reached appreciable sizes. Kyoto's resident population numbered 350 to 400 thousand, while Osaka's numbered 275 thousand. The major population growth had occurred in the villages, for the productive activities outside agriculture were insufficient to absorb the major portion of a population increase of the order of that which occurred in Japan from the thirteenth to the seventeenth centuries.

The Tokugawa bakufu developed a peaceful and ordered society that was favorable to the further increase of the population. Internal order and consolidated power were conducive to a greater regularity in agricultural production, an accumulation of food reserves in good years, and a more efficient and more nearly adequate movement of supplies to distressed areas. Expansions in cultivated acreage, improved yields, and more diversified production yielded larger surpluses for the cities, but there seems also to have been an improvement in living conditions and a reduction of mortality among the peasants. The increase in the numbers of the villagers was not rapid, but it did occur, and it was cumulative, not alone in numbers but in its associated social and economic difficulties.

The evolution of a massive leisured class and the mobility implicit in alternate residence were alike factors in an increasing and generally non-productive urbanization. The great roads that went out from the Nihonbashi spread limited urbanization through the post stations and in the castle towns. As the numbers of the travellers and the quantities of commodities increased, so also did the concentrations of people and facilities along the roads. Moreover, the leisured classes in the cities required major increases in the numbers of people in the service, distributive, and transport occupations. Household industries and handicraft factories developed in each major area of concentrated settlement. And, with increasing mobility and improving transportation facilities, specialized industries developed in accessible centers.

The rulers of the cloistered and rigidly structured state could not control the increase of the rural population, nor could they eliminate migration from the rural areas to the towns and cities. But increase could not continue indefinitely in the villages, and an urbanization not based on industrialization was limited in its capacity to absorb manpower. Death alone seemed a feasible control of growth, and death did in fact prevent any substantial growth of the population from the early eighteenth century to the middle of the nineteenth century. This situation developed in a microcosm of islands in the eighteenth

1. Taeuber, Irene B. The population of Japan. Chapter II. "The changing population: Late twelfth to mid-nineteenth century," pp. 16-34.

century, but it is worthy of study as a prototype of problems that may confront many agrarian regions of Asia in the coming century.

There is little nationwide documentation for the century and a quarter of the Tokugawa period when population was increasing and cities growing. For the last century and a half of the period when population was changing irregularly if at all, there are the periodic reports of the daimyo on the commoner populations of their domains (Table 1). These reports are defective. There are inconsistencies in coverage, omissions of women and children, errors in registration, and some evidences of recurrent reporting without relation to events. However, searches for the impact of the great famines, tests for internal consistency, and comparisons with the 1872 registrations in the kuni indicate substantial correspondence between the records and the realities. The data do permit analysis, but it must be cautious.

Table 1. The numbers of commoners, Japan and the great cities, 1726 to 1852
(Population in '000)

<u>Year</u>	<u>All Japan</u>	<u>Edo</u>	<u>Osaka</u>	<u>Kyoto</u>
1726	26,549	472	369 ^{/c}	374 ^{/f}
1732	26,922	534	390 ^{/d}	526
1744	26,153	527	-	-
1750	25,918	510	404 ^{/e}	526
1756	26,062	506	410	-
1762	25,921	506	419	-
1768	26,252	508	411	-
1774	25,990	483	404	-
1780	26,011	490	405	-
1786	25,086	457	380	-
1792	24,891	483	376	-
1798	25,471	492	379	-
1804	25,622	492	375	-
1822	26,602	521	377	-
1828	27,201	527	376	-
1834	27,064	523 ^{/a}	359	-
1846	26,908	558 ^{/a}	338	-
1852	27,201	574 ^{/b}	317	-

Sources of data: All Japan: Honjo, Eijirō. Nihon jinkō shi. Tōkyō, 1941. P. 65. Sekiyama Naotoro, Kinsei Nihon jinkō no kenkyū. Tōkyō, 1948. Appendix. Yuzuki, Jūgo, and Horie, Yasuzo. "Hompō jinkō hyo." Keizai shi kenkyū, No. 7, p. 188-210. May, 1930.

a/ 1845. b/ 1854. c/ 1725. d/ 1736. e/ 1749. f/ 1729

If the years from 1600 to 1725 are viewed as a whole, there was an increase in numbers from about 18 million to about 26 million. If the years from 1726 to 1852 are viewed as a whole, there was little change in numbers. The reported commoner population was 26.5 million in 1726 and 27.2 million in 1852, an increase of two per cent in 125 years. Analysis of the reports for the kuni suggests that increase was more prevalent in the remote kuni beyond the mountains along the Sea of Japan, in southwestern Honshu, and in most of Shikoku and Kyushu. Decline was more characteristic of the regions around the great cities and in the kuni that furnished the rice for the urban concentrations. There were no firm trends of increase or of decrease in the registered populations of Edo, Osaka, and Kyoto. However, the registers included only the commoners with fixed residence in the local areas. Excluded were nobility, daimyo, samurai, and retainers; people without class; casual workers and short-time migrants; and the refugees and the vagrants. Only the relatively stable groups were included in the registers, and so the reported populations were relatively stable. The statistical apparatus of the Tokugawa was not adequate to yield any answer other than that the great cities at least maintained their numbers in a period when the frequency of death had reduced national growth to negligible proportions.

There were great cities in Tokugawa Japan, and there was substantial urban growth. The demographic correlates of urbanization were similar to those of modern Japan in some respects, different in others. The urban populations were weighted with men, and the cities were abodes for youth rather than the aging and the aged. Marriage was less frequent than in the rural areas, and it occurred at later ages. Birth rates were lower, and families were smaller. There are suggestions in the declining sex ratios that indigenous urban populations and more balanced migrant streams may have been developing in the Tokugawa period. All these are the familiar characteristics of urban populations as contrasted with rural ones. The great differences lay in the hazards of life in general and the special dangers inherent in urban life. Flights to and from the cities were episodic, for relief from famine or escape from epidemic might send the moving peasants into the cities or the new urban dwellers back to the villages. For the total population of an Edo or an Osaka, though, there could be no successful flight from death.

The cities were consumers of men. Continual replenishment from the countryside was essential to continued existence. Thus indigenous urban populations could build up only slowly. Thus the culture of the masses had to remain close to that of the areas from which the cities drew their migrants. The dominance of urban vital processes by migration and death may have reduced urban-rural differences, but it precluded urbanization in depth for most of those who were technically urban.

We have emphasized the great cities of premodern Japan. There were lesser cities and towns, and there were areas where urban and rural populations and occupations were intermingled. This dispersed urban life, as the concentrated urbanization of the great cities, spread the urban ideal among some of the rural youth.

The cities of the feudal period were the physical and demographic bases for the rapid industrialization and urbanization of the extraordinary century from 1858 to 1958. However, the national population of some 30 millions was predominantly agricultural in occupation and rural in residence. Here new life was

produced abundantly, and the average life was brief. Birth rates were 45 or more per 1,000 total population, death rates almost as high in normal times and far higher in bad times. The expectation of life at birth was probably 25 to 30 years. There was some limitation of child bearing and child rearing, but it could not have been both persistent and widespread. If 300 to 400 of each 1,000 babies born died within the first year, few families had the numbers of surviving children that required decisions as to infanticide. The real problem of Tokugawa Japan was the maintenance of a birth rate high enough to balance the death rate inherent in the conditions of the period. The Japanese maintained that adequate birth rate, for population did not decrease except in the regions and during the periods of severe and cumulative catastrophe, and then there was recovery of numbers in a few decades.

The abortion and infanticide of premodern Japan evidenced a rational approach to human reproduction, and they bequeathed a tradition of family limitation to modern Japan. In the Tokugawa period itself, they involved more a rearrangement of the age at death in childhood and a selective redistribution of the chances of survival than a powerful deterrent to population increase.

This statement on the levels of birth and death rates in the late Tokugawa period is a summary statement of a rather complex and diversified analysis of the interrelations that had to exist to produce the data of the Tokugawa counts, the Meiji registrations, and the modern censuses. It has been presented with reference to the demographic balance at the end of the Tokugawa period. If the focus is shifted to the heritage of a modernizing Japan, the economic difficulties inherent in the demographic situation emerge in clear focus. The population was already settled densely on that small portion of the land that was cultivable by the then current techniques. There was room for expanded cultivation in the areas already utilized, and Hokkaido was available as a frontier. Yields could be and were improved, remarkably so. But economic development that was to increase per capita product would be negated if the developmental impetus of increases in agricultural product meant only consumption by more people. Modern Japan inherited a difficult man-land relationship and a hazardous demographic balance.

Statistics and movement, 1872 to 1918²

The development of a statistical system for the collection and processing of information on the population is an aspect of general economic and social advance. Japan's modernization of her system involved a return to the principles of the registration laws of the Taika period. The *koseki* provided a contained, continuous, and therefore internally consistent record of numbers, births, deaths, and migrations. Unfortunately, the records were not complete and the internally consistent data did not always accord with reality. The vital records approached relative completeness about the time the registration compilations were abandoned in favor of the enumerative census as a source of data on the size, distribution, and composition of the population. This was the year 1920. Thus the first three-quarters of a century of halting and then quickening demographic transition is lost irrecoverably insofar as precise measurements are

2. Taeuber, op. cit. Part II. The transition, 1852-1918.

concerned. Intensive study is required before there can be even approximate measurement of the course, the distribution, and the characteristics of the population in the period between the opening to the West in the middle of the nineteenth century and the taking of the first enumerative census at the end of the second decade of the twentieth century. And measurement is essential to the analysis of the demographic aspects of this first instance of the industrialization in a densely settled Asian country.

It would be unwise to rush rapidly through a task that needs prolonged research. Hence no reconstruction of the "true" course of events from the opening to the West or the Meiji Restoration to 1920 is attempted. Instead, there is discussion of the nature of the population statistics derived from the registration system, with emphasis on the biases in the measurement of the urban population and its characteristics. There is then cautious use of the defective data to summarize the advancing urbanization of the period.

The establishment of a continuous registration system was a heroic undertaking. Most people were included in the earliest registers, and gradually procedures were improved, personnel trained, and people educated so that more of the names of the newly born were added to the registers and more of the names of the dead were removed from them. The compilations of the records for 1872 suggest that the earliest procedures were rough indeed.³ Only a little more than one-fourth of those whose names were included in the registers were below age 15, while one in each ten men was aged 60 or over. The numbers of men and women aged 40 to 79 were identical--5,091,071. Interestingly enough, the ratios of men to women were those that would be expected if there had been little sex-selective infanticide throughout the period covered by the lives of all those registered in 1872.

In each year after 1872 some portion of the births and deaths that occurred were registered, and some that had previously escaped registration were entered in the registers. Initially the additions to the registers were more numerous than the current balances of births and deaths, but gradually the situation was reversed. By the late nineteenth and early twentieth centuries most of the individuals then alive had had their names added to the registers. The removal of the names of the dead was a more difficult problem, for the fact of death could not be assumed in the absence of direct information until the individual would have had to join the advanced centenarians had he been alive. Thus the young were too few, while the aging and the aged included many of the non-existent.

Revised annual estimates of the de facto population within Japan for the years from 1872 to 1925 were made by allocating delayed registrations of births and deaths back to the year of occurrence.⁴ This procedure smoothed the annual

3. Nihon. Naikaku tōkei-kyoku. Bureau de la statistique générale. Nihon teikoku jinkō seitai tōkei. Etat de la population de l'Empire du Japon au decembre 1908. Annex, Chapter II, pp. 2-5.

4. Nihon. Naikaku tōkei-kyoku. Bureau de la statistique générale. Population du Japon depuis 1872. Tokyo, 1930.

changes, and it lifted the earlier segment of the growth curve. The initial registration population of 1872 had been 33.1 million; the revised estimate was 34.8 million. It should be noted, though, that those who had lived and died without benefit of inclusion in koseki were excluded from revisions based on koseki records.

The severe limitations and the serious errors of the registration system as a source of statistical data did not lie in the total numbers of the people but in their distribution and their characteristics as between rural and urban areas. When the koseki records were used directly for statistical purposes, they yielded populations distributed according to place of honseki. Since changes of honseki involved the relations of individual to family or of branch to main family, decisions to transfer honseki from areas of ancestral origin to areas of present residence were not made casually or quickly. A description of the population by place of honseki included in the rural areas practically all the recent migrants to urban areas, together with some major fraction of the migrants of the current generation and some minor fraction of the migrants of the preceding generation. The city populations included only those whose long domicile or loose integration in a family had led to the transfer of honseki. The urban population as thus defined was socially meaningful, but its size, its composition, and its changes had only indirect relevance to the measurement of the changing populations living in urban areas and industrializing regions.

The statisticians who struggled with data from the registration system were aware of the problems of honseki allocations of the population, and so there were provisions for adding to the koseki information on movements that involved changes of de facto residence.⁵ These modifications of honseki populations to take account of the numbers and occasionally the characteristics of the migrants were presented as present resident populations. The concept was appropriate, but there was only limited consistency between requirements and actions. The honseki populations of the rural areas minus the registered out-migrants would yield de facto rural populations--provided return migrants reported their arrivals. The honseki populations of urban areas plus the registered in-migrants would yield de facto urban populations--provided departing residents reported their departures. In fact, individuals and household heads were more likely to report arrival in a new area than departure from an old one. By definition, though, those who had moved into one area had departed from another area. Thus there was a necessary balance for Japan as a whole. No such balancing of in- and out-migrants need occur for an area within the country.

There was another possibility in addition to the compilation of the legally resident or honseki populations and the de facto current resident populations as derived from the registration system, and that was enumeration of the population. Initially the police were instructed to count the population at the same time that the quinquennial registration compilations were made. The count was incomplete, and the errors were selective with reference to area, sex, and age. The police missed children, and men in the mobile ages missed the police.

5. See especially: Nihon. Naikaku tōkei-kyoku. Bureau de la statistique générale. Taishō ni'nen matsu jinkō seitai chōsa no kekka ni yoru teikoku jinkō gaisetsu. [Outline of the Japanese population based on the results of the static survey of population as of the end of 1913.] Tokyo, 1916.

Some illustrations of the problems of the data on urban populations in the late nineteenth and early twentieth centuries may reenforce the verbal cautions on the casual use of the figures and strengthen the plea for careful analytical study of local and national records in Japan. The "size" and "increase" of the six great cities in the period from 1903 to 1908 are given here for the legally domiciled and the present resident populations, numbers being in thousands:⁶

City	Honseki		Present resident	
	1903	1908	1903	1908
Tokyo	1, 008	1, 139	1, 819	2, 186
Yokohama	168	198	326	394
Nagoya	187	248	289	378
Osaka	591	668	996	1, 227
Kobe	174	219	285	378
Kyoto	308	329	381	442

Comparisons of the populations of the great cities as enumerated in 1920 with the honseki and present resident populations in the last registration compilations indicate that the de facto populations of the cities were intermediate between the honseki and the present resident ones. The following comparisons of honseki, present resident, and police count figures for 1908 suggest that the same relationship existed at this earlier period. Again, numbers are in thousands:⁷

City	Honseki	Police count	Present resident
Tokyo	1, 139	1, 488	2, 186
Yokohama	198	245	394
Nagoya	248	296	378
Osaka	668	993	1, 227
Kobe	219	328	378
Kyoto	329	379	442

The analytical difficulties are even more serious than indicated by these figures on total populations, for the omissions and inclusions in the various types of residence allocations were selective by sex and age. The illustration given here is a comparison of the age structure of Tokyo-fu in the honseki population and the police count of 1908. Numbers are in thousands:⁸

6. Nihon. Naikaku tōkei-kyoku. Bureau de la statistique générale. Nihon teikoku jinkō seitai tōkei. État de la population de l'Empire du Japon au 31 décembre 1903. Table III, p. 15. Ibid., 1908. Table III, p. 15.

7. Op. cit., 1908. Table III, p. 15; Annex I, Table III, p. 9.

8. Ibid., 1908. Table XIII, pp. 270-282; Annex I, Table IV, pp. 10-45.

<u>Age</u>	<u>Police count</u>	<u>Honseki</u>	<u>Difference</u>
All ages	2, 329	1, 874	455
0-4	255	232	23
5-9	229	200	29
10-14	232	174	58
15-19	258	158	101
20-34	665	468	197
35-44	285	229	56
45-64	324	320	4
65 and over	81	93	-12

A rapid growth of cities and a widespread urbanization of the population structure were occurring throughout the period from 1872 to 1920. This is true whatever the criterion of urban and whatever the type of residence allocation. The broad picture is given in Tables 2 and 3, first for the prefectures in the years from 1903 to 1918, next for the nation by numbers and sizes of communes in the years from 1888 to 1918. Since questions of definition and the evidences of urbanization have been discussed in some detail elsewhere, there need not be repetition here.

The major process involved in the growth of cities and urban areas in the formative decades of the late nineteenth and early twentieth centuries was migration. Birth rates were lower in the cities, and death rates were higher. Migration that was selective of the young and the single among men contributed little immediately to the natural increase of the urban population. Thus the cities and the industrial regions became and continued places of destination for migrants. In 1913, about one-seventh of those with honseki in the prefectures surrounding or accessible to the great cities had moved away from the place of honseki, while one-fourth to two-fifths of the residents of the metropolitan prefectures were not living in their place of honseki. Agricultural prefectures lost by the interprefectural exchanges, while industrial prefectures gained. Most of the movements of people with honseki in agricultural prefectures were local, i. e., to another village in the same gun or another gun in the same prefecture. Most of the movements in the metropolitan prefectures were interprefectural.

Out-movement was associated with rurality, in-movement with urbanization. The correlation between the proportion of in-migrants in the present resident population and the proportion of the population living in communes below 10,000 was -.74. The ratio of children to women was associated positively with the proportion of the population in communes below 10,000 (.43) and negatively with the proportion of in-migrants (-.37).

The migrations and their associated population redistributions in the early decades of the twentieth century were reflected in the information on place of births in 1920. The relations of internal migration to urbanization are apparent in a comparison of the migrant status of the populations of Tokyo prefecture,

the other five prefectures containing the very large cities, and the other 41 prefectures of Japan.⁹

<u>Migrant status ratios</u>	<u>All Japan</u>	<u>Tokyo prefecture</u>	<u>The other five urban prefectures</u>	<u>The other forty-one prefectures</u>
Out-migrants per 100 born in prefecture	14.9	13.6	12.8	15.3
In-migrants per 100 resident in prefecture	14.9	47.0	25.2	9.8
Net migration per 100 resident in prefecture	0.0	38.6	14.3	-6.5
In-migrants per 100 out-migrants	100.0	564.0	230.0	60.0

The great divide in the statistics available for the analysis of the urbanization of the population of Japan is the year 1920. Prior to that, there are the prolific but biased products of a registration system adapted to an agrarian society but functioning in an increasingly mobile and industrial one. After 1920, there are the prolific and precise though occasionally limited products of quinquennial enumerations. Fortunately for population research, the year 1920 was not a great divide in the demographic behavior of the Japanese people. Trends in numbers, distribution, characteristics, and vital rates proceeded somewhat erratically from the late Tokugawa period through the Restoration and the period when the registration system was being established. There was acceleration in rates of change and increasing regularity in its occurrence as industrialization advanced and cities became increasingly ways of life for families as well as abodes for single men. There was a spurt in industrial growth and urbanization in the years of World War I, and there were many deaths in the influenza pandemic. On the whole, though, there were ordered changes throughout the first three decades of the twentieth century. Hence the further discussions of rural-urban differences and trends in urbanization will be based on the data of the enumerative censuses that were taken in the years from 1920 to 1955.

9. Nihon. Naikaku tōkei-kyoku. Taishō ku'nen kokusei chōsa hōkoku. IV. A. 1. Zenkoku no bu. Jinkō, taisei, shussei chi, nenrei, haigū kankei, kokuseki, minseki, shotai. Table 6.

Table 2. The increase and redistribution of the present resident population, 1903 to 1918

<u>Prefecture</u>	<u>Population (in '000)</u>				<u>Percent in communes of less than 10,000</u>			
	<u>1903</u>	<u>1908</u>	<u>1913</u>	<u>1918</u>	<u>1903</u>	<u>1908</u>	<u>1913</u>	<u>1918</u>
Japan	48,543	51,742	55,131	58,087	79.3	75.1	72.4	68.1
Hokkaido	1,090	1,459	1,818	2,178	67.7	57.4	50.4	42.3
Aomori	666	721	764	798	87.0	86.0	86.4	83.5
Iwate	749	777	835	870	95.7	95.4	92.1	90.6
Miyagi	906	893	927	955	86.8	86.9	85.7	82.8
Akita	838	893	944	977	88.2	86.5	83.8	85.1
Yamagata	880	913	965	987	84.2	83.9	82.7	81.9
Fukushima	1,175	1,234	1,304	1,390	90.2	89.0	88.0	86.4
Ibaraki	1,200	1,260	1,328	1,408	91.0	90.7	90.6	88.4
Tochigi	912	977	1,044	1,103	80.7	79.6	79.1	75.0
Gumma	904	961	1,021	1,082	88.2	85.6	83.1	80.4
Saitama	1,240	1,285	1,344	1,392	96.7	94.8	92.3	89.7
Chiba	1,317	1,358	1,402	1,396	94.4	94.0	92.6	91.9
Tokyo	2,533	3,054	3,145	3,719	23.2	20.0	18.5	14.5
Kanagawa	1,051	1,178	1,228	1,323	60.4	51.6	48.8	43.7
Niigata	1,780	1,822	1,911	1,916	86.7	84.3	82.5	81.7
Toyama	777	771	806	803	81.5	81.2	80.0	78.4
Ishikawa	768	780	805	803	82.4	81.0	79.0	75.2
Fukui	636	630	652	637	85.3	84.8	82.7	83.1
Yamanashi	541	573	609	633	91.8	91.3	91.2	89.2
Nagano	1,349	1,402	1,484	1,564	89.4	89.2	88.3	85.1
Gifu	1,021	1,031	1,095	1,120	92.6	92.2	89.5	87.2

Shizuoka	1, 293	1, 376	1, 484	1, 592	88. 0	86. 7	83. 2	79. 6
Aichi	1, 752	1, 887	2, 073	2, 140	77. 0	58. 7	53. 6	52. 9
Mie	1, 044	1, 077	1, 102	1, 115	85. 6	82. 9	81. 8	81. 0
Shiga	717	694	697	704	90. 0	89. 2	88. 9	88. 5
Kyoto	1, 055	1, 156	1, 288	1, 384	62. 0	57. 3	52. 6	43. 4
Osaka	1, 823	2, 144	2, 461	2, 888	42. 4	38. 8	33. 0	29. 2
Hyogo	1, 834	1, 983	2, 144	2, 321	79. 4	75. 1	70. 9	63. 2
Nara	558	570	601	594	89. 3	89. 9	85. 3	83. 9
Wakayama	698	723	770	795	87. 8	83. 8	84. 0	82. 0
Tottori	436	441	471	465	89. 2	88. 2	87. 3	85. 4
Shimane	731	738	759	718	93. 5	93. 4	93. 2	93. 3
Okayama	1, 188	1, 223	1, 261	1, 286	88. 1	87. 5	86. 3	84. 3
Hiroshima	1, 509	1, 599	1, 692	1, 688	78. 7	75. 3	72. 8	68. 3
Yamaguchi	1, 015	1, 045	1, 090	1, 099	86. 1	82. 7	78. 2	74. 9
Tokushima	708	721	742	744	86. 7	84. 6	84. 3	83. 9
Kagawa	712	730	760	714	85. 1	84. 0	84. 3	82. 8
Ehime	1, 035	1, 058	1, 098	1, 128	92. 6	92. 1	92. 1	89. 1
Kochi	646	671	694	709	94. 5	94. 3	94. 4	92. 8
Fukuoka	1, 571	1, 721	1, 926	2, 113	84. 0	73. 3	67. 1	53. 0
Saga	655	672	694	679	92. 8	91. 3	91. 0	83. 4
Nagasaki	1, 015	1, 104	1, 135	1, 230	73. 9	68. 4	71. 4	66. 4
Kumamoto	1, 198	1, 236	1, 303	1, 311	92. 7	92. 7	90. 7	90. 0
Oita	855	880	927	921	94. 3	87. 0	84. 7	84. 1
Miyazaki	502	542	597	651	92. 0	89. 3	86. 9	80. 8
Kagoshima	1, 184	1, 275	1, 397	1, 462	51. 9	43. 0	37. 8	39. 1
Oknawa	476	502	534	581	38. 5	38. 8	34. 0	34. 6

Sources of data: Nihon. Naikaku tōkei-kyoku. Bureau de la statistique générale. Nihon teikoku jinkō seitai tōkei. Etat de la population de l'Empire du Japon. . . 1903, 1908, 1913, and 1918. Reproduced from: Taeuber, *op. cit.*, Table 12, p. 48.

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Table 3. The present resident population by size of commune, 1888 to 1918

<u>Size of commune</u>	<u>1888</u>	<u>1893</u>	<u>1898</u>	<u>1903</u>	<u>1908</u>	<u>1913</u>	<u>1918</u>
<u>Number of communes</u>							
Total	-	15, 160	14, 778	13, 532	12, 453	12, 356	12, 261
Under 10, 000	-	14, 946	14, 545	13, 262	12, 080	11, 887	11, 705
10, 000-49, 999	110	196	212	245	344	432	510
50, 000-99, 999	8	12	13	16	19	26	32
100, 000 and over	6	6	8	9	10	11	14
<u>Population (in '000)</u>							
Total	40, 106	42, 060	45, 403	48, 543	51, 742	55, 132	58, 087
Under 10, 000	34, 936	35, 344	37, 302	38, 550	38, 843	39, 907	39, 545
10, 000-49, 999	2, 214	3, 412	3, 774	4, 446	6, 009	7, 431	8, 968
50, 000-99, 999	534	789	829	1, 077	1, 353	1, 856	2, 282
100, 000 and over	2, 422	2, 515	3, 498	4, 470	5, 537	5, 938	7, 292
<u>Percent distribution</u>							
Total	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0	100. 0
Under 10, 000	87. 1	84. 0	82. 2	79. 4	75. 1	72. 4	68. 1
10, 000-49, 999	5. 5	8. 1	8. 3	9. 2	11. 6	13. 5	15. 4
50, 000-99, 999	1. 3	1. 9	1. 8	2. 2	2. 6	3. 4	3. 9
100, 000 and over	6. 0	6. 0	7. 7	9. 2	10. 7	10. 8	12. 6
<u>Percent change</u>							
Total	-	4. 9	7. 9	6. 9	6. 6	6. 6	5. 4
Under 10, 000	-	1. 2	5. 5	3. 3	0. 8	2. 7	-0. 9
10, 000-49, 999	-	54. 1	10. 6	17. 8	35. 2	23. 7	20. 8
50, 000-99, 999	-	47. 8	5. 1	29. 9	25. 6	37. 2	23. 0
100, 000 and over	-	3. 8	39. 1	27. 8	23. 9	7. 2	22. 8

Sources of data: Reference, Table 2. Reproduced from: Taeuber, op. cit., Table 13, p. 49.

Increase and urbanization, 1920 to 1955

In 1872, Japan had a total population of about 35 million. In 1920, 55 million people lived in the area that now constitutes Japan. There were 378 people per square mile of total land area. There were 2,800 people for each square mile of cultivable land. The population remained predominantly rural and agricultural. One-fifth of the people lived in shi, while two-thirds lived in machi or mura with populations of less than 10 thousand.

In the 35 years from 1920 to 1955 there was continuing population increase--from 55 million in 1920 to 64 million in 1930, 73 million in 1940, 83 million in 1950, and 89 million in 1955. The increase between 1920 and 1955 was as great as the entire population of Japan at the time of the Meiji Restoration. The increase alone would have peopled an empty Japan with almost 225 persons per square mile of total land area. Evenly distributed, it would have provided 1,700 persons for each square mile of cultivable land.

These striking figures on population growth are not the preface to a sad tale of pressure on the land but a measure of the contributions that industrialization and urbanization had to make--and did make--to the preservation of the levels of living and the traditional ways of life in Japan's villages. The density of agricultural population on cultivated land did not increase except temporarily during the period of defeat. Neither did it decline appreciably except with mobilization for total war. Practically all the increase in the population was absorbed in non-agricultural industries and in urban or urbanizing areas. The following figures on the economically active male population need no verbal amplification:¹⁰

Year	Numbers in '000		Percent in agriculture
	All industries	Agriculture	
1920	16,820	7,469	44.4
1930	18,878	7,465	39.5
1940	19,599	6,271	32.0
1947	20,622	8,013	38.9
1950	21,811	7,819	35.8
1955	23,848	7,088	29.7

In occupational terms, the fundamental process was the growth of employment outside agriculture. In demographic terms, the fundamental process was the growth of cities and urbanized areas. The population in shi increased from 10.0 million in 1920 to 15.4 million in 1930, 27.5 million in 1940, and 50.0 million in 1955. There were slowly changing numbers of people in the gun and rapidly changing numbers in the shi, particularly the six great cities. In percentage terms, there were declining proportions of the people in the gun and increasing proportions in the shi:¹¹

10. Taeuber, op. cit., p. 87.

11. Taeuber, op. cit., p. 78.

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<u>Area</u>	<u>1920</u>	<u>1930</u>	<u>1955</u>
All Japan	100.0	100.0	100.0
Six cities	9.8	11.8	15.9
Other <u>shi</u>	8.2	12.2	40.4
<u>Gun</u>	82.0	76.0	43.7

Measurements of change as industrialization and as urbanization have been presented as separate sets of figures. In the dual economy of Japan, those who lived in great cities seldom tilled the fields, but the major portion of the families who did till the fields had to have income from sources other than agriculture. Household industries, small factories, services, and the distributive trades provided non-agricultural employment in rural areas. In rurality and in occupational structures there were gradations rather than separate compartments. The situation is pictured here in terms of the percentage industrial composition of the gainfully occupied population by size of commune in 1930.¹²

<u>Industry</u>	<u>All Japan</u>	<u>Below 10,000</u>	<u>10,000-49,999</u>	<u>50,000-99,999</u>	<u>100,000 and over</u>
All gainfully occupied	100.0	100.0	100.0	100.0	100.0
Agriculture and forestry	47.7	68.1	29.9	5.6	2.5
Fishing	1.9	2.3	2.2	1.2	0.5
Mining	1.1	0.7	3.4	1.9	0.2
Manufacturing	19.8	12.3	26.5	36.7	35.8
Trade and commerce	16.6	8.7	21.8	31.1	35.9
Transportation and communication	3.2	1.8	4.0	6.3	6.3
Public service and professional	6.8	4.4	8.2	12.2	12.4
Domestic	2.7	1.5	3.6	4.6	5.7
Other	0.2	0.1	0.2	0.4	0.7

Thus the shi were distinctively urban in the structure of the labor force, and most of the mura were distinctively rural. In absolute figures, however, three-fourths of all those engaged in manufacturing industry in 1930 lived in gun, one-fourth in shi.

12. Tachi, Minoru, and Ueda, Masao. "Demographic research on the differences of the fundamental population phenomena by the size of community." The First General Meeting of the Population Association of Japan, Data Paper, March 19, 1949.

The critical demographic distinction between the urban and rural populations was that between agriculture combined with the handicraft and small scale production of the traditional society on the one hand and the cluster of activities associated with modern factory production and wage labor on the other. The critical movement was neither technically defined industrialization nor administratively defined urbanization but the departure from agriculture. This departure has been the pervasive process of normal development in Japan. It has involved residential and occupational shifts within each of the prefectures, and it has meant the differential growth of the prefectures according to the extent of the achieved industrialization. So close were the associations and so continuous the migrant flows that there were direct associations between the characteristics of rural and urban populations within prefectures, and there were measurable associations between the characteristics of urban areas and those of the regions from which most of the migrants came. Urbanization was city growth, but it was much more. It was the total transformation of regions as they moved from the ancient agrarian to the modern industrial base. There was industrialization and urbanization within each prefecture, and there were continuing migrant flows from the less industrial and urban to the more industrial and urban prefectures.

The joint goals of statistically feasible and analytically meaningful classifications are reached by tracing Japan's transformation for industrial groupings of the prefectures rather than for the changing and often artificial areas of the shi and the gun. The division into groups was made on the basis of the percentage of the employed labor force in primary industry in 1955. 13

In the years from 1920 to 1955, population increased slowly in the agricultural prefectures (Groups IV, V, and VI), rapidly in the industrial prefectures (Groups I and II). Numbers and intercensal changes are given in Table 4. The relative increases in the populations of the seven industrial prefectures on the one hand and the 32 agricultural prefectures on the other not only measure the growth of the major metropolitan and industrial regions but suggest the services of such regions to the absorption of the continuing population increase from the rural and agricultural regions. The percentages of the total national increase absorbed in the two contrasting types of prefectures are given here for selected intercensal periods:

-
13. The groupings were as follows: I. Less than 10 percent in primary industry: Tokyo, Osaka. II. 10 to 29 percent: Kanagawa, Aichi, Kyoto, Hyogo, Fukuoka. III. 30 to 44 percent. Gifu, Shizuoka, Nara, Wakayama, Hiroshima, Yamaguchi. IV. 45 to 54 percent. Tochigi, Gumma, Saitama, Toyama, Ishikawa, Fukui, Yamanashi, Mie, Shiga, Okayama, Tokushima, Kagawa, Ehime, Saga, and Nagasaki. V. 55 to 59 percent. Miyagi, Yamagata, Fukushima, Chiba, Niigata, Nagano, Tottori, Shimane, Kochi, Kumamoto, Oita, Miyazaki. VI. 60 percent and over. Aomori, Iwate, Akita, Ibaraki, Kagoshima. (Hokkaido, 42 percent.)

In earlier analyses, groupings were based on the percentages for 1930 rather than for 1955. Differences in the listings of the prefectures were slight. Analysis of the rankings in 1920, 1930, 1940, and 1955 indicate remarkable similarities. None of the conclusions derived from the data presented here would be altered if the analyses had been made for groupings of prefectures based on the data of earlier censuses.

<u>Years</u>	<u>The 7 industrial prefectures</u>	<u>The 32 agricultural prefectures</u>
1920-1925	52	35
1935-1940	72	15
1945-1947	57	31
1950-1955	70	16

Migration and industrialization

The migrations that accomplished the redistribution of the maturing youth of the rural areas had been in process long before 1920, and they continued at generally increasing rates except for the interruptions of the late years of the war and the early years of the peace. The following comparisons of the place of birth and the place of residence of the Japan-born population of Japan in 1920 are expressed in terms of migrants per 1,000 Japan-born resident population: ¹⁴

<u>Prefectures in industrial groups</u>	<u>In- migrants</u>	<u>Out- migrants</u>	<u>Net migrants</u>	<u>Total migrants</u>
All Japan	149.8	149.8	0.0	299.7
I	440.9	81.5	359.4	522.4
II	204.8	108.0	96.8	312.8
III	76.4	171.8	-95.4	248.2
IV	75.6	207.5	-131.9	283.1
V	62.5	163.8	-101.2	226.3
VI	49.3	151.9	-102.7	201.2
Hokkaido	470.9	31.2	439.7	502.0

In the period after 1920, when measurement is possible, rates of natural increase were lowest in the industrial prefectures, highest in the agricultural prefectures and Hokkaido. If there had been no migration, increasing proportions of the total population would have lived in the agricultural areas, declining proportions in the industrial areas. The actual pattern of population increase was the reverse. Rates of increase were highest in the industrial prefectures, lowest in the agricultural prefectures. Year by year and decade by decade, major and generally increasing proportions of the natural increase of the agricultural areas were transferred to the industrial areas. The following summary

14. Reference to source, Footnote 9.

Table 4. Population changes, 1920 to 1955, prefectures in industrial groups based on percent of employed labor force in primary industry, 1955

Years	All Japan	Prefectures in industrial groups						Hokkaido
		I	II	III	IV	V	VI	
<u>Population (in '000)</u>								
1920	55,391	6,287	9,190	6,518	13,216	12,554	5,267	2,359
1925	59,179	7,545	9,899	6,887	13,646	13,172	5,532	2,499
1930	63,872	8,949	10,913	7,231	14,221	13,859	5,887	2,812
1935	68,662	10,667	12,084	7,646	14,671	14,334	6,191	3,068
1940	72,540	12,148	13,401	7,932	14,932	14,496	6,358	3,273
1945 ^{1/}	71,998	6,289	11,896	8,697	17,575	17,017	7,006	3,518
1947 ^{2/}	78,101	8,335	13,316	9,077	18,218	17,841	7,460	3,853
1950 ^{2/}	83,413	10,135	14,551	9,385	18,749	18,303	7,996	4,296
1955	89,276	12,655	16,105	9,777	19,085	18,614	8,267	4,773
<u>Percent change</u>								
1920-1925	6.8	20.0	7.7	5.6	3.3	4.9	5.0	5.9
1925-1930	7.9	18.6	10.2	5.0	4.2	5.2	6.4	12.6
1930-1935	7.5	19.2	10.7	5.7	3.2	3.4	5.2	9.1
1935-1940	5.6	13.9	10.9	3.8	1.8	1.1	2.7	6.7
1940-1945	-0.8	-48.2	-11.2	9.6	17.7	17.4	10.2	7.5
1945-1950	15.8	61.1	22.3	7.9	6.9	7.6	14.1	22.1
1945-1947	8.5	32.5	11.9	4.4	3.7	4.8	6.5	9.5
1947-1950	6.8	21.6	9.3	3.4	2.9	2.6	7.2	11.5
1950-1955	7.0	24.9	10.7	4.2	1.8	1.7	3.4	11.1

Source of data: Nihon. Sōri-fu, tōkei-kyoku. Office of the Prime Minister, Bureau of Statistics, Nihon tōkei nenkan. [Japan statistical yearbook, 1955-56.] Table 7, pp. 12-15. Ibid. Shōwa 30-nen kokusei chōsa hōkoku. Dai-ikkan. Jinkō sōsū. Table 5, pp. 28-31.

1/ Population as of November 1, 1945, with additions for an estimated 1,000,000 soldiers and civilians in overseas military service.

2/ Population in 1950 within the approximate areas of the country in 1955.

Reproduced from: Taeuber, Irene B. "Continuities in internal migration in Japan." Selected studies of migration since World War II. Proceedings of the 1957 Conference, Milbank Memorial Fund. New York, 1958. P. 44.

figures give the net migration per 1,000 midperiod population in the intercensal periods.¹⁵

<u>Prefectures in industrial groups</u>	<u>1920 to 1925</u>	<u>1925 to 1930</u>	<u>1930 to 1935</u>	<u>1935 to 1940</u>	<u>1950 to 1955</u>
I	117.7	91.4	98.2	62.4	163.9
II	7.6	26.2	32.0	43.2	38.8
III	-15.0	-22.3	-9.5	-12.2	-21.5
IV	-35.1	-27.1	-32.3	-32.7	-48.6
V	-23.8	-24.9	-39.0	-48.3	-54.3
VI	-37.7	-29.5	-39.5	-45.0	-50.0
Hokkaido	-62.4	7.7	-16.4	-20.8	10.9

Both the figures on historic migration in 1920 and those on migrations in the intercensal periods from 1920 to 1955 are net figures. The 1920 figures picture the net result of all movements that had occurred between the date of birth of the oldest living inhabitant and October 1, 1920. The rates of intercensal migration are the difference between numbers of out-migrations and numbers of in-migrations over five year periods. Neither yields specific evidence on the types of interchanges occurring among the agricultural and industrial prefectures.

If migration is a function of the location of people in relation to the location of employment opportunities, then a given area should lose migrants to areas more industrial than itself and gain migrants from areas more agricultural than itself. This ideal type of relationship between migration and industrialization has characterized the migrations of the Japanese. Tables 5 and 6 picture the migrant interchanges of each group of prefectures with each of the other groups. Table 5 gives the migrant interchanges from birth to 1950, based on the data of the 1950 census. Table 6 gives the current migrations in the years 1954 and 1955, based on the registered migrations related to the 1955 census populations.

In both the historic and the contemporary movements, out-migrants moved predominantly to areas less agricultural than those of origin. The out-migrants from the metropolitan prefectures of Tokyo and Osaka went predominantly to other industrial prefectures. In-migrants came predominantly from areas more agricultural than those of residence. The regularities in these relationships are one of the most extraordinary manifestations of the uniformities in the cultural patterning of the modern transformation of Japan. In the net interchanges, the industrial prefectures gained, all the others lost. The metropolitan prefectures of Tokyo and Osaka gained from all other groups of prefectures, with but one exception, a slight loss to the other industrial prefectures in the lifetime migrations as measured in 1950. Each of the other groups of prefectures contributed migrants to each group of prefectures more industrial than itself, gained migrants from each group of prefectures more agricultural than itself.

15. Net migration as a residual. Taeuber, "Continuities..." *op. cit.*, p. 48.

Table 5. Migrant interchanges, birth to 1950, prefectures in industrial groups based on percent of employed labor force in primary industry in 1955

<u>Groups of reference</u>	<u>All Japan</u>	<u>Prefectures in industrial groups</u>						<u>Hokkaido</u>
		<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	
<u>Out-migrants per 1,000 born in region</u>								
All Japan	142.6	27.3	20.5	15.9	33.1	29.8	12.7	3.1
I (Below 10)	257.1	-	74.9	29.6	71.6	57.1	17.6	6.3
II (10-29)	127.8	46.0	-	21.2	30.2	22.3	5.1	3.0
III (30-44)	135.9	48.0	51.4	-	18.7	11.2	2.0	4.7
IV (45-54)	138.3	57.1	42.9	11.2	-	13.6	4.3	9.4
V (55-59)	127.9	47.6	33.0	7.6	17.7	-	8.7	13.3
VI (60 & over)	127.4	38.1	20.5	4.2	13.2	23.6	-	27.8
Hokkaido (42)	7.1	2.2	1.1	0.4	1.0	1.3	1.1	-
<u>In-migrants per 1,000 resident in region</u>								
All Japan	142.6	42.5	34.5	11.6	20.5	17.2	6.4	9.8
I (Below 10)	350.2	-	60.7	46.2	112.5	91.5	31.3	8.0
II (10-29)	197.6	45.6	-	34.5	58.8	44.1	11.8	2.8
III (30-44)	102.7	27.9	30.2	-	23.7	15.7	3.7	1.6
IV (45-54)	90.6	33.6	21.4	9.7	-	18.3	5.8	1.9
V (55-59)	77.8	27.5	16.2	5.9	14.8	-	10.7	2.6
VI (60 & over)	68.8	20.0	8.7	2.5	10.9	21.6	-	5.1
Hokkaido (42)	194.9	13.2	9.7	10.8	44.7	61.4	55.1	-
<u>Net migrants per 1,000 resident in region</u>								
All Japan	-	15.2	14.0	-4.3	-12.6	-12.7	-6.3	6.7
I (Below 10)	143.3	-	-5.5	23.2	57.0	47.5	18.2	2.9
II (10-29)	86.9	3.6	-	16.2	33.8	25.6	7.7	-0.1
III (30-44)	-37.0	-21.1	-22.3	-	4.1	3.9	1.6	-3.2
IV (45-54)	-52.7	-25.3	-22.6	-2.0	-	3.7	1.3	-7.6
V (55-59)	-54.4	-21.6	-17.6	-2.0	-3.8	-	1.5	-10.8
VI (60 & over)	-63.0	-19.3	-12.4	-1.8	-3.0	-3.4	-	-23.0
Hokkaido (42)	154.0	-7.0	0.2	8.4	41.9	57.8	52.6	-

Source of data: Nihon. Sōri-fu, tōkei-kyoku. Office of the Prime Minister. Bureau of Statistics. Shōwa 25-nen kokusei chōsa hōkoku. [1950 Census of population.] IV. Zenkoku hen. I. Danjo betsu, nenrei, haigū kankei, kokuseki mata wa shusshin-chi, shusseki-chi, kyōiku, shotai, jutaka. [All Japan. 1. Sex, age, marital status, citizenship, birthplace, education, household, housing.] Table 10, pp. 142-188.

Reproduced from: Taeuber, "Continuities..." op. cit., p. 54.

Table 6. Migrant interchanges, 1954 and 1955, prefectures in industrial groups based on percent of employed labor force in primary industry in 1955

Groups of reference	All Japan	Prefectures in industrial groups						Hokkaido
		I	II	III	IV	V	VI	
<u>In-migrants</u>								
All Japan	25.7	8.4	5.8	2.1	3.9	3.6	1.3	0.5
I (Below 10)	59.4	1.6	12.5	6.4	15.9	15.6	5.8	1.5
II (10-29)	32.1	8.2	2.7	4.5	7.5	6.4	2.3	0.4
III (30-44)	19.5	4.6	5.3	2.2	3.5	2.9	0.8	0.2
IV (45-54)	18.2	5.5	3.9	1.5	3.9	2.4	0.7	0.2
V (55-59)	17.2	5.3	3.6	1.2	2.4	2.6	1.5	0.5
VI (60 & over)	14.2	4.0	2.7	0.7	1.6	3.2	1.1	1.0
Hokkaido (42)	9.9	2.1	1.1	0.5	1.2	2.4	2.6	-
<u>Out-migrants</u>								
All Japan	25.7	5.0	4.7	2.6	5.5	5.2	2.0	0.6
I (Below 10)	35.0	1.6	10.5	3.6	8.2	7.7	2.6	0.8
II (10-29)	26.3	9.8	2.7	3.2	4.7	4.2	1.4	0.3
III (30-44)	24.0	8.3	7.3	2.2	3.0	2.4	0.6	0.3
IV (45-54)	26.0	10.6	6.3	1.8	3.9	2.3	0.7	0.3
V (55-59)	24.8	10.6	5.6	1.5	2.5	2.6	1.4	0.6
VI (60 & over)	22.0	8.9	4.5	0.9	1.7	3.5	1.1	1.5
Hokkaido (42)	10.4	3.9	1.4	0.5	0.9	1.9	1.8	-
<u>Net migrants</u>								
All Japan	-	3.5	1.0	-0.5	-1.7	-1.6	-0.7	-0.0
I (Below 10)	24.3	-	2.0	2.8	7.7	7.9	3.2	0.7
II (10-29)	5.8	-1.6	-	1.3	2.9	2.2	0.9	0.1
III (30-44)	-4.4	-3.7	-2.1	-	0.6	0.5	0.2	-0.0
IV (45-54)	-7.8	-5.1	-2.4	-0.3	-	0.1	0.0	-0.1
V (55-59)	-7.7	-5.4	-1.9	-0.3	-0.1	-	0.1	-0.1
VI (60 & over)	-7.8	-4.9	-1.8	-0.3	-0.1	-0.3	-	-0.4
Hokkaido (42)	-0.5	-1.8	-0.3	0.1	0.3	0.5	0.8	-

Source of data: Nihon. Sōri-fu, tōkei-kyoku. Jūmin tōroku jinkō idō hōkoku nempō. Shōwa 29-nen. [Annual report on the inter-prefectural population migration based on registration. 1954.] Ibid., Shōwa 30-nen. [1955].

Reproduced from: Taeuber, "Continuities...", op. cit., p. 56.

The continuing increase

In the first century of modernization, Japan maintained a relatively unchanging population in agriculture while the total population increased two and one-half fold. Practically all the increase in the labor force was absorbed in non-agricultural activities. There was little change in the size of rural population. Almost all the natural increase of the national population was absorbed in urban areas.

There were occasional periods when a few prefectures lost population by migration, but in no intercensal period apart from the war years did any agricultural group of prefectures lose its entire natural increase by migration. The problems of the agricultural population remained. So also did the need to absorb increasing numbers of migrants in more numerous and larger cities. A process such as this could not continue indefinitely, but it could be terminated only if the rural population ceased to produce the youth who had to find jobs outside agriculture. Easing and eventual solutions to the problems of the rural population, as to the problems of urban growth, required a decline in the rate at which the rural areas produced their exportable surpluses of youth.

There are many complexities in the processes whereby mortality and fertility declined among the Japanese, and there are many difficulties in measurement. In general, though, birth and death rates alike were declining throughout most of the first century of modernization. In the earlier decades, death rates declined somewhat more rapidly than birth rates so that there was an increasing rate of natural increase. In the years from 1920 to 1940, declines in birth and death rates were roughly compensatory so that there was a relatively unchanging rate of natural increase. Those who studied the trends believed that growth would continue until well into the twenty-first century, and that the population would be very large at that remote date when births and deaths came into balance.

The rural-urban and the social-economic differentials in the fertility of the Japanese were similar to those in the United States and Western Europe in general. In the 'twenties and the 'thirties, early marriages and frequent child-bearing were associated with agricultural occupations and rural residence.¹⁶ Birth rates were lowest in the great cities, with successively higher rates in lesser cities, machi, and mura. The birth rates were higher for the less educated than for the more educated. The associations between occupation and educational status existed within the rural and urban populations, and they existed within each region of Japan. Part of the differences in fertility was a product of the direct associations among earlier marriage, residence in rural areas, employment in agriculture, and low educational status. When analyses were made for marriages of specified durations, however, the relationships remained.

16. Nihon. Sōri-fu, tōkei-kyoku. Nihon fujin no shussan ryoku. Shōwa 25-nen kokusei chōsa tokubetsu shūkei. Fertility of Japanese women. Special report. Population census of 1950. Tokyo, 1957.

There is a major significance to these trends and relationships in the transition from the feudal to the modern state. Birth rates were higher in those residential areas, occupational groups, and social classes that represented the old order, lower in those that represented the new order. Age at marriage was advancing in all groups, and birth rates to women in each age group were declining. This was occurring in all areas of the country and in all segments of the population, though rates of decline in fertility were somewhat more rapid in the urban than in the rural areas. Continuation of a process such as this would lead eventually to birth rates so low that the population would cease to grow.

As a practical outlook in a situation where continuing population increase was a problem, there were three difficulties with this presumably automatic solution. First, all differences existed within a generally high level of fertility. Even in the great cities, childbearing was more than adequate to replace the population in the long run at the moderately high death rates of the period. The women in the rural areas were bearing almost twice the children necessary to replace their numbers. Second, the pattern of urbanization was not leading to a reduction in the size of the agricultural population. Thus the modernization that was occurring preserved the population groups with the highest fertility. And, third, the major reductions in fertility occurred with social and economic transformations that were not likely to characterize the total population for a long, long time. The lowest fertility existed among women living in cities of 100 thousand and over, with husbands who had 12 years or more of formal education and who were engaged in professional activities. The types of economic development and social change most conducive to rapid declines in birth rates had not occurred in Japan in the past, and it did not seem likely that they would occur in the future.

This slowly declining fertility was characteristic of the decades prior to imperial expansion, war, and defeat. In the late years of the war there were reductions in fertility and increases in mortality. Soon, however, birth rates and death rates resumed the patterns of the prewar years. War seemed to have been an interlude, with deviations from trends but not shifts in direction or in the magnitude of change.

Then, in swift succession, there were revolutionary changes in the levels of birth and death rates, and hence in the rate of natural increase. In 1948 and the immediately following years there were sharp reductions in death rates; in 1950 and later years, there were sharp reductions in birth rates. In 1947, there were 34.3 births and 14.6 deaths for each 1,000 population. In 1955, there were 19.3 births and 7.8 deaths for each 1,000 population. The natural increase per 1,000 population was 19.7 in 1947 and 11.6 in 1955. These rates are not accurate measures of the long-run implications of what had occurred, for the population structure was weighted with young people. Such a structure inflates birth rates and deflates death rates at given levels of age-specific fertility and mortality. If the age-specific birth and death rates of 1955-1956 had remained in force until the age structure became stable, the birth rate would have been 16.0, the death rate 14.7. The intrinsic rate of natural increase inherent in the continuation of the age-specific birth and death rates of the years 1955 and 1956 was 1.4 per 1,000 total population.

Some questions on present and future

Today birth and death rates are alike low, but natural increase continues. Official projections indicate that population may increase to some 105 million about the year 1990, after which, if the projected trends are realized, there will be decline.¹⁷ At present, though, the annual growth is substantial, and it is concentrated among young people in migrant ages and those for whom marriage and childbearing remain the appropriate roles. Further urbanization is required, and it is occurring. The dynamism and the problems alike are portrayed in Table 7 for the years from 1950 to 1955. In these five years, the population increased 7.0 percent, the employed labor force, 9.7 percent. There was decline in the number of persons employed in primary industry, but the major increases came in the tertiary industries and, within these, in those activities and in those employment relationships that suggest a pressure of persons seeking employment on the employment opportunities available to them. There was urbanization, but the population in the gun increased almost as rapidly as the total population.

The industrial and residential redistributions of the 30 years from 1920 to 1950 were major achievements. Equally great redistributions are required in the period from 1950 to 1980, though the changing age structure of the population will alter many of the requirements for the maintenance of the population. The numbers given here serve to suggest the many problems of the coming decades:

<u>Age</u>	<u>Population (in '000)</u>			<u>Percent change</u>	
	<u>1920</u>	<u>1950</u>	<u>1980</u>	<u>1920-1950</u>	<u>1950-1980</u>
All ages	55,391	83,413	105,572	50.6	26.6
0-4	7,377	11,235	7,187	52.3	-36.0
5-14	12,825	18,270	14,568	42.4	-20.3
15-19	5,362	8,590	6,506	60.2	-24.3
20-34	12,022	19,157	26,777	59.3	39.8
35-44	6,590	9,553	17,499	45.0	83.2
45-64	8,299	12,480	24,266	50.4	94.4
65 & over	2,917	4,123	8,768	41.3	112.7

If the declines in fertility continue as estimated, the burdens of child and youth dependency will decrease greatly, and there will be increases in the numbers and the proportions of the aged. The critical changes, though, will be the increases in manpower in the productive ages. Men between the ages of 20 and 64 numbered 13.6 million in 1920 and 19.9 million in 1950. This was an increase of 6.3 million, or 47 percent, in thirty years. Unless death rates increase, there will be almost 34 million men aged 20 to 64 in 1980. This will be an increase of 14 million, or 70 percent, in thirty years.

17. Takagi, Naobumi. "Suikei shorai jinkō. Shōwa 25-nen - Shōwa 40-nen." Jinkō mondai kenkyū, No. 62, pp. 80-90. Dec., 1955.

Table 7. Changes in the distribution of the population and the industrial structure of the employed labor force, 1950 to 1955, prefectures in industrial groups based on percent of the employed labor force in primary industry, 1955

Variable	All Japan	Prefectures in industrial groups						Hokkaido
		I	II	III	IV	V	VI	
<u>Population of shi and gun</u>								
Percent composition, 1955 ^{1/}	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Shi</u>								
<u>50,000 & over</u>	45.4	88.3	63.6	38.5	33.4	28.4	22.8	38.0
Below 50,000	10.9	3.1	8.5	11.5	14.0	14.1	15.9	4.9
<u>Gun</u>	43.7	8.6	27.9	50.0	52.6	57.5	61.3	57.1
Percent change, 1950-1955 ^{2/}	7.0	24.9	10.7	4.2	1.8	1.7	3.4	11.1
<u>Shi</u>								
<u>50,000 & over</u>	19.1	30.0	18.8	19.5	8.7	12.1	10.9	30.2
Below 50,000	-8.2	32.0	8.6	-15.1	-2.7	-5.6	2.2	-40.4
<u>Gun</u>	6.0	13.4	1.4	-0.5	-1.0	-1.0	1.1	8.6
<u>Industry of employment</u>								
Percent composition, 1955	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Primary	41.1	5.3	24.9	41.0	49.4	56.9	64.1	42.4
Secondary	23.8	39.7	32.7	25.2	21.1	15.0	11.4	22.1
Tertiary	35.1	55.0	42.4	33.7	29.6	28.1	24.5	35.5
Percent change, 1950-1955 ^{3/}	9.7 ^{4/}	37.7	14.7	7.2	4.2	2.5	3.1	14.3
Primary	-6.7	-12.2	-8.1	-10.6	-6.9	-6.7	-4.7	2.0
Secondary	18.9	41.2	19.2	21.4	10.5	8.9	8.0	9.2
Tertiary	29.5	42.8	29.9	26.8	23.5	23.7	27.6	38.3

Notes on following page.

In numerical terms, the increments to the non-agricultural labor force and the urban population in the three decades from 1950 to 1980 need to be about twice as great as the increments in the three decades from 1920 to 1950.

After 1980, if the projected declines in fertility occur, there will be further slowing in the increase of an aging labor force. Society, economy, and state will be increasingly influenced by the activities and the requirements of persons who are approaching old age or have already achieved it.

Urbanization remains a basic process in human adjustment and economic advance. Presumably it will continue in that period not so remote from now when, if projections should be realized, children will be a rare commodity in villages and cities alike and gerontology will have replaced obstetrics, gynecology, and pediatrics as fields of medical specialization. A slowing in the transformations in marriage and family relations is already apparent, though, and there are suggestions of declining age at marriage and less rigidly controlled fertility in some segments of the urban population. Again this first industrialized and urbanized people in Asia is manifesting behavior that is neither distinctively Asian nor specifically Japanese. Projections that involve indefinitely downward movements of the birth rate may be as unrealistic for Japan in the future as they have proved to be for the Western industrial nations in the past.

Notes to Table 7.

Sources of data: Industrial composition of the labor force: Nihon. Sōri-fu, tōkei-kyoku. Shōwa 30-nen kokūsei chōsa hōkoku. [1955 population census of Japan.] Dai-nikan. 1% chūshutsu shūkei kekka. Vol. II. [One percent sample tabulation.] Sono ni. Rōdōryoku iōtai, sangyō, jūgyōjō no chii, jūgyō chi, shitsūgyō. Part 2. [Labor force, status, industry, class of worker, place of work, and unemployment.] Summary Table 6, pp. 42-43. Population of shi and gun: Ibid. Shōwa 30-nen kokūsei chōsa kōkoku. [1955 population census of Japan.] Dai-ikkan. Vol. I. Junkō sōsū. [Total population.] Table 8, pp. 38-51.

1/ Areas as of October 1, 1955.

2/ The northern Ryukyu Islands reverted to Japan on December 31, 1953. Estimates of the population of the reverted area by residence and industry as of 1950 were added to the enumerated totals of Kagoshima Prefecture (Group VI) and all Japan.

3/ For 1955, employed persons aged 15 and above, but for 1950, employed persons aged 14 and above. Using age 14 and above in both years, the percentage changes for all Japan were 10.3 for total, -6.2 for primary industry, 22.6 for secondary industry, and 28.9 for tertiary industry.

4/ Including, in 1950, some employed persons not classified by industry.

The traditional country-city migrations continue in Japan, for the basic population situation and the nature of the economic development have precluded major extensions of the industrial revolution into the countryside and the depopulation of the villages. Alongside these continuing migrations of the ancient order, though, there are all the types of movements that characterize maturing economies and metropolitan cultures. There is mobility within urbanized areas, and there are increasing interpenetrations of city and country as the residences of urban workers spread outside into areas once rural and the hours of work of villagers are spent in adjacent cities rather than in the surrounding fields. Migration itself involves interchanges among urbanized areas as well as extensions of the urbanized sector.

When the information from the 1955 census on the characteristics of the population and labor force of the cities and the minor civil divisions becomes available, analysis of demographic relationships and changes can replace broad description and speculation concerning the extent, the patterns, and the selectivities in migration and urbanization in contemporary Japan. When the detailed tabulations of the data for 1955 on place of residence and place of work are available, the frequency, the distances, and the patterns of daily movements can be studied as aspects of contemporary industrialization and urbanization. The relationships between migration and mobility will then be subject to non-speculative evaluation. Finally, the comparison of interprefectural migrations, rural to urban flows, and daily movements in 1930 and in 1955 will permit empirical measures of processes and attained levels in the traditional Japan whose culmination was measured in the census of 1930 and the new Japan whose normal course and characteristics were first measured in the census of 1955.