

English Pamphlet Series No. 71  
Institute of Population Problems  
February 5, 1970

CONTINUITY AND TRANSFORMATION OF MIGRATION BEHAVIOR  
IN JAPAN

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## FOREWORD

This paper attempts to make inquiries into changing pattern of migratory behavior of Japanese population, in particular by focussing on incipient characteristics of migration pattern. For that purpose the author made a retrospective study of migration behavior back to 1920. His final objective is suggest basic ideas necessary for formulating public policy in overall and regional development planning.

Migration is a really multi-disciplinary study area which is now badly needed domestically and internationally. It seems to me that Japan's experience in the field of migration is exceptionally severe. From this standpoint, migration studies in Japan should be encouraged. I do hope that the author's pioneering study could be incentive to stimulating inter-disciplinary researches among social scientists and demographers.

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## Introduction

This paper aims to present just newly emerging aspects of migratory behavior of Japanese population which does not seem to have been experienced by any countries before. In order to identify the incipient nature of transformation of migration pattern, some retrospective examination and analysis of changing factors basically influencing migration have been made. At the beginning, major points of the subject, which might be useful, are summarized as follows.

1. Internal migration in Japan has been characterized over a long time by the continuity of classic pattern of rural to urban, or centripetal movement of population in particular to two large cities, Tokyo and Osaka.

2. Regional differentials of economic development and of population reproduction, which are basic factors causing migratory movement, have been considerably reduced in most recent years. It suggests that the migration behavior of Japanese population is in a situation to be susceptible to any change different from the classical pattern.

3. Tremendous migration which occurred in the recent decade, has brought about extraordinary change of population accumulation components in both urban and rural areas. Natural increase rate rose considerably in urban, and decreased remarkably

in rural areas. Excess of in-migration over out-migration in large cities has become less and less, even revealing net out-migration. In addition, increasing trend of return migration from large cities and metropolitan areas to local areas is recognized. These changes in regional growth of population imply that redistributive movement of population may have started in Japan.

4. It may be hypothesized from Japan's experience that regional distribution of population on the land would continue to make movement toward eventual equalization of distribution. It may not be rational to assume that rural to urban migration would continue infinitely. My assertion is that extremely accelerated migratory movement in the period, 1960-65, may be close to the last stage of traditional pattern of migration, and incipient of transforming to a new dimension of migration.

5. These findings and recognition should be seriously taken into account in formulating regional development policy. However, it should be reminded that any public policy designed to influence the location of population, cannot be effective, if it is against attitude, aspiration, and expectation of people, which may be changeable according to economic growth and social change, and not easy to detect them at the incipient stage.

## Several Stages of Demographic Change in Japan

Demographically, Japan is typically characterized by successive stages of drastic change of population in the short period of twenty years after the world war II. First stage which started immediately after the war was that of explosive increase of population. Total population increased from 72 million to 83 million in the five year period, 1945-50. The increase rate of population per year for this period was more than 3 per cent. Major components of the increment were more than six million repatriates from abroad due to the termination of the war, and baby-boom population which added more than eight million to the total population in only three years, 1947-49.

Second stage is characterized by the vital revolution which started in around 1950, just following after the first stage. Birth rate continued to decline quickly from as high as 34 per thousand population to the level of 17-18 in 1956, then stabilizing at this low level.

Third stage started in around 1955, nearly overlapping with the second stage. Third one is characterized by heavy and accelerated process of internal migration. According to the Resident Registration System, which has been established in 1951 by the Resident Registration Law\*.

\* This law was superseded by the new Basic Resident Register Law enacted on November 1967, to simplify registration procedure and consequently to improve under- and delayed registration.

migration volume increased rapidly from 5.2 million persons per year in the latter half of the 1950's to 6.5 million per year in the former half of the 1960's, exceeding 7 million since 1964.

Overlapping consequences and impacts of each stage of demographic change are so severe and complicate. In particular, demographic and socioeconomic products of the third stage are apparently creating another new stage of change, which is not yet exactly discerned, but needs to be carefully examined.

#### Continuity in the Pattern of Internal Migration

Internal migration pattern in Japan is historically characterized by continuous flow of population from rural, local to urban areas, mostly two large cities, Tokyo and Osaka. Migration volume, of course, varied greatly from time to time. However, migratory movement has been dominantly directed to this simplex process. Another great urban center, Nagoya, has barely come to be a core of a metropolitan area absorbing significant population only after 1955.

Table 1. Net Migration in Thirteen Regions in Japan,  
1920-25 to 1960-65, (in thousand)

Region	1920-25	1925-30	1930-35	1935-40	1947-50	1950-55	1955-60	1960-65
1. Hokkaido	-110	+49	-24	-56	+116	+44	-50	-177
2. Tohoku	-145	-190	-238	-404	-167	-474	-584	-677
3. Kanto	+512	+510	+482	+609	+656	+1,136	+1,235	+1,739
4. Minami-Kanto	+605	+619	+619	+751	+902	+1,472	+1,580	+1,917
5. Hokuriku and Tosan	-192	-182	-300	-281	-317	-496	-421	-397
6. Tokai	+31	-28	+8	-17	-54	+36	+109	+252
7. Keihanshin	+456	+434	+778	+453	+395	+618	+732	+950
8. Others (Kinki)	-45	-41	-35	-94	-121	-107	-109	-21
9. Sanin	-32	-26	-55	-61	-54	-62	-117	-128
10. Sanyo	-47	-68	-18	-0	-106	-136	-212	-184
11. Shikoku	-91	-92	-177	-197	-111	-237	-297	-278
12. Kita Kyushu	-89	+0	-35	+104	+30	-130	-347	-642
13. Minami Kyushu	-76	-59	-150	-249	-129	-254	-431	-460

Remarks: Computation based on prefectural population enumerated in census and vital statistics.

Historical trend of migration based on the estimated net volume of migration between prefectures clearly indicates such a continuous pattern of migration flow. Table I shows net migration in 13 regions in which all prefectures are grouped by geographical and socio-economic standpoints since 1920 when the first modern census started in Japan.

Minami-Kanto region including Tokyo and three adjoining prefectures which is now called Tokyo Metropolitan area has been conspicuous in net influx for the whole period. Keihanshin including three prefectures, Osaka, Kyoto and Hyogo, which is now called Hanshin Metropolitan area has been another great agglomeration of population in which Osaka city has continued to be another central place to absorb large population.

Nearly all other regions have continued to lose population. It means that they have continuously been great reservoir of excess population from where labor force has been siphoned out particularly for Tokyo and Osaka region. It should be pointed out that migration flow has been accelerated to a great degree in the post-war years. The excess of in-migration in the period, 1950-65, was nearly two million and one million in the Tokyo and Osaka Metropolitan regions respectively.

Great urban concentration of population proceeded rapidly in the three large metropolitan areas, Tokyo, Keihanshin and



Tokai in which Nagoya city is central place, which are located in contiguity along the Tokaido Railway Line running from Tokyo to Kobe. These three areas combined together is often termed Tokaido Megalopolis, or Pacific Seaboard Industrial Zone. The population in the Tokaido Megalopolis increased from 36.6 million in 1960 to 42.1 million in 1965. The increase in the population of the Tokaido Megalopolis absorbed more than 100 per cent of total national growth between 1960 and 1965; that is, all other remaining local areas lost population for the first time. The population in the Tokaido Megalopolis occupies 43 per cent of the national population against as low as 13 per cent of the total land area.

Actually, the populations in 25 out of total 46 prefectures and in 2574 out of total 3376 minor administrative units as of 1965 (76.2 per cent) diminished in the quinquennial period, 1960-65.

Heavily accelerated but still traditionally-oriented migration particularly since 1960 has created polarized and remarkably uneven distribution of population on the land, extremely crowded on the one hand, and thinly inhabited on the other.

#### Demographic Effect of Migration

Unprecedented effect of migratory behavior on vital rates in regions has come to emerge. Needless to say that any signifi-

cant effect of migration regional vital rates is mostly due to change in age composition in regional population caused by migration, since regional levels in fertility and mortality have remarkably converged in Japan. It is also noted that majority of migrants area concentrated in young age group, say 15-29, who are most fertile or marriageable.

Early effect of migration on vital rate has begun to manifest in the category of prefecture which is the largest unit of local administration. Agricultural prefecture with higher birth rate than urban-industrial prefectures started to increase year to year. Finally, nearly all agricultural prefectures have come to show higher birth rates than those in Tokyo and Osaka prefectures. This suggests that traditional pattern of rural-urban reproduction is disappearing. It should be noted, however, that as far as fertility is concerned in terms of age specific birth rate or total fertility rate, it is still slightly higher in rural areas than in urban areas.

At later stage, declining birth rate might be exceeded by rising death rate, as cumulative effect of continued migration advances. This kind of reversal in vital rates is conceivable theoretically, but very unusual. However, actually this unprecedented cases began to appear for the first time in 1962, and quickly spread in minor administrative units, in

particular in towns and villages having small population, although still higher level of birth rate than death rate is maintained in all prefectures.

In 1965, 196 minor administrative units, about six per cent of all minor administrative units in Japan, have indicated reversal of vital rates. As far as I know, such drastic change in vital rates has never experienced before in any countries.

It may be worthy of mentioning here that 1020 minor administrative units, 30 per cent of total units, show very low level of natural increase rate, namely less than 5.0 per mille, which is much lower than the national level of 10.0 per mille. It suggests that they are in the declining process of natural increase rate, and might be expected to turn into negative rate soon.

Natural disaster can give occasion to the reversal of vital rate by suddenly increased number of deaths, but only temporarily. However, Japan's experience of drastic change in vital rates is based on structural change in age composition of regional population primarily caused by cumulative effect of heavy migration. Exhaustive migration of population who are mostly in the fertile or marriageable age group tends to lower birth rate and raise death rate in sending areas, and vice versa in receiving areas.

Distribution of minor administrative units classified by

four levels of natural increase rate in 1965 is as follows.

<u>Level of</u> <u>Natural Increase rate</u>	<u>Number of</u> <u>Minor Administrative Unit</u>	<u>Per cent</u> <u>Distribution</u>
Minus	196	5.8%
0.0 - 5.0 per mille	1,020	30.2
5.0 -10.0	1,354	40.1
16.0 and over	806	23.9
Total	3,376	100.0

Regional distribution of each pattern of natural increase rate is very uneven. Minor administrative units indicating minus rate of natural increase are concentrated in the Chugoku region closely connected with Osaka Metropolitan region. Clusters of minor administrative units with reversed vital rates are found in Shikoku and Kyushu islands which are major parts of the South-western Japan.

However, majority of minor administrative units in the Metropolitan areas and North-eastern prefectures are character characterized by higher rate of natural increase. It is natural that the natural increase rate in the former is influx of young population. It needs to explain why the natural increase rate in the latter where which is much less developed and used to send population out is still high. Major reason is that out-migration has been less intense than in the South-eastern Japan, and there cumulative effect of out-migration on

vital rate is not yet manifested to produce lower or minus rate of natural increase.

In short, the intensity and specific nature of migratory movement taken by Japanese population is fully demonstrated by two kinds of reversal in regional vital rates never experienced by any nations.

#### New Dimension in Internal Migration

There are some evidences that a century long pattern of migratory flow of population is approaching to the end, and entering into transition stage of a new pattern of migration. In the first place, it should be mentioned about some change of migration trend between metropolitan and local areas. Out-migration to metropolitan from local areas seems to have reached saturation in about 1964, and thereafter began to decrease. On the other hand, return migration going back to original local areas from metropolitan areas is supposed to have begun as early as 1960. Consequently, net migration or excess of out-migration over in-migration in local areas has been shrinking remarkably, though it is still negative.

Secondly, population increase in local large and middle size cities with populations of 100,000 to 300,000, indicated highest rates of 17 per cent in the latest intercensal period, 1960-65, as compared with largest and small cities. It suggests some

localizing trend of migration.

Thirdly, intra-metropolitan and inter-metropolitan migration also show steadily increasing trend since about 1960. They are mostly urban to urban migrants.

Migration pattern seems to be changing from dominant, traditional rural-urban type to diversified, multi-dimensional types. Modernization process in Japan had been closely associated with rural-urban migration which was mainly motivated by the existence of surplus, under-employment in rural sector. Newly emerging dimension of migratory behavior should be carefully examined from the standpoints of socio-economic and population policy making, particularly because any change in migration behavior is a sensitive indicator of population adjustment to changing social and economic environment.

#### Factors of Historical Transformation in Migratory Movement

Factors influencing internal migration are so complex, greatly varying from place to place and from time to time. However, it may be hypothesized here that regional disparities in economic activity and population reproduction are basic factors initiating migration. Uneven distribution of economic activity level among regions and regional reproductive differentials of population tend to reinforce each other to accelerating migratory movements.

However, basis factors motivating migratory movement in prewar period greatly changed in postwar period. Universal difference in regional reproductive performance and accelerated differentiation in regional economic development resulting from remarkable fluctuations of economic activities in industrialization process in prewar period determined direction and volume of migratory flow. It is characterized by classic pattern of rural-urban migration pushing out to urban, industrial places surplus population produced by remarkably high fertility level in poor, rural areas.

However, postwar economic growth was remarkably accelerating, and exerted strong pulling power of labor force, and finally succeeded to absorb accumulated surplus population in rural areas, who are composed of chronic unemployment and under-employment, and tremendous repatriates, amounting to more than six million. At present time even shortage of labor force is voiced in rural areas.

On the one hand, vital revolution achieved in very short time of period contributed so much to reducing regional differentials of fertility and mortality. In other words, reproductive differentials have come to converge very much. Even a little higher rate of natural increase, for example, is found in urban area than in rural area most recently. Natural increase rate

per year in the first half of the 1930's in the North-eastern region dominantly agricultural was as high as 1.9 per cent as against 0.9 per cent in Tokyo Metropolitan area. However, very recently natural increase rate in the former declined to 1.06 per year during the five year period, 1960-65, lower than that of Tokyo Metropolitan area, that is 1.27 per year in the same period. It suggests that high reproductive behavior which has characterized for a long time rural areas, has come not to be influential in pushing population out from rural.

On the other hand, regional disparity of economic activities has also begun to reduce quickly, but only in most recent years. Of course, we can recognize that still remarkable differentials exist among small regions like minor administrative units. However, overall situation on regional differentials of economic activities indicates quickly shrinking tendency in relative terms. Some evidences are mentioned. Average annual income per farmer's household reached US\$3,000 in 1967, slightly exceeding for the first time that of urban non-agricultural worker's household, even though per capita income is still higher in urban households due to smaller size of family. Some studies show that regional differentials based on per capita distribution by prefecture have been reduced very much particularly in the former half of the 1960's.



The fact that two factors, regional disparity of economic activities and reproductive behavior, have been greatly attenuated, seems to suggest that they are losing generating power of traditional pattern of migration, and are fomenting elements of a new dimension of migratory behavior. It does not necessarily mean that migration volume start to decrease.

#### Various Elements in Relation to A. New Dimension

Sharp decreasing trend of young age population, say 15-29 years old, who are usually most mobile in any countries in the world, should be mentioned in considering prospects of migration. The population aged 15-29 is surely expected to decrease from about 28 million in 1965 to about 24 million in 1985. If the age specific migration rates observed do not change, remarkable reduction of the most mobile young population must diminish migration volume in near future.

Second, rural population which has been major source of supplying labor force to urban, industrial sectors, is now approaching to the limit, losing the margin for pushing out population.

Third, in large cities like Tokyo, Osaka and Nagoya which have absorbed tremendous population, suburbanization of population has been rapidly proceeding and forming larger and larger metropolitan areas. However, on the other, increasing outer

difficulty of recruiting labor force in large cities are inducing industries to go out from central part to locate in fringe or remote local places, and in particular, to establish new factories in some local place where land value is reasonable and necessary labor force is available. In brief, such population agglomerations are gradually losing original advantages of excitement and lure which added to the forces making for larger aggregations. It is simply exemplified by recent trend of more out-migration than in-migration in Tokyo and other large cities.

Fourth, urban problems in large cities have been aggravated recently. Traffic congestion, housing supply and quality problem, circulation of persons and goods, solid and human waste removal, air and water pollution, and so on. Social and organizational problems are indicated by the incidence of delinquency and crime, drug addiction, and mental disorder in large cities in particular.

Fifth, as environmental situation in large cities and metropolitan areas becomes socially, personally and physically worse, local places gain advantages relatively. Particularly, middle and small sized local cities having population of 100,000 to 300,000, are coming more attractive than before. Expanding opportunities of employment in local places can

provide a practical condition making some metropolitan people who are recognizing urban problems to decide return migration. Level of living and life environment in local cities is now nearly comparable to or more comfortable and attractive than that in large cities and metropolitan areas.

They are some background conditions under which a new dimension of migratory behavior of Japanese population may be developed.

Lastly, social-psychological element, though not major, may be added here. In general, social-economic status of migrants into large cities tends to be lower than those of natives born in urban. Migrants may expect psychologically that they can enjoy upward mobility in their home towns as compared with non-migrants, because they believe they are superior in experience of living in large cities to non-migrants. This may be also an element motivating return migration.

#### Self-Adjustment Movement in Regional Distribution of Population:

##### A Hypothesis

Originally, migratory movement of population is a mechanism of personal adjustment, and consequently also for the population as a whole. In other words, it is adjustment movement of population responding to levels and changes in economic, social and demographic variables.

Economic progress and social-demographic change in the process of a century long modernization of Japan necessitated historic continuity of migration pattern of rural-urban. A decade of the period, 1955-65, witnessed dramatic wave of migratory movements from rural to urban, really great concentration of population particularly in three metropolitan areas. This has created serious economic and social problems never experienced before both in metropolitan and rural areas, and also has produced regional reversal of reproductive performance, namely more reproduction of population in metropolitan and less in rural areas, due to heavy concentration of young reproductive population in metropolitan areas and exodus of those population from rural areas. Such reversal of reproductive behavior may be expected to restrain rural areas from out-migration. On the other hand, large cities and metropolitan areas are accumulating forces of pushing back in-migrants to their home towns.

A hypothesis is presented here. That is, regional distribution of population is self-regulating movement which incessantly tends to take proper balance of distribution commensurate with economic and social environment. This does not mean to deny public policy on migration. On the contrary, it is really desirable to formulate proper redistributive policy and stimulate specific movement of population which can meet the people's

expectation, because self-adjustment process of population is not easy one to achieve original goal.

This hypothesis is proposed on the basis of Japanese experience. Past trend of migration behavior in Japan is considered to be fairly explained by this hypothesis. So, it is intended to apply this hypothesis to the present situation.

It is theoretically clear that rural-urban migration is not infinite movement, but necessarily finite. If so, a question is raised about when rural-urban migration ceases, and begins to take any other pattern of migration, for example return migration, urban-urban migration and so on.

Nearly all professional people who are concerned with this subject, did not question the nature of rural-urban migration which was much more accelerated in volume and scope in the period, 1960-65, than that of the previous five year period, 1955-60. All of them consciously or unconsciously assumed again more acceleration of rural-urban migration observed in the latest five year period in the near future. However, my contention is that migratory behavior of Japanese population is now moving toward a new dimension. In other words, redistributive migratory movement to recover imbalanced distribution of population has started. The following facts may be indicative of redistributing movement of population.

First, increasing trend of return migration to local areas from metropolitan areas.

Second, decreasing trend of out-migration to metropolitan areas

Third, remarkable growth of local middle and small sized cities by absorbing people from surrounding rural areas.

All of them may be predictable of incipient stage of decentralization of population, namely redistributive function of migratory behavior.

#### Some Remarks on Sudden Increase of Migration Volume

Near the end of 1969, newly entitled "Annual Report of the Internal Migration in Japan Derived from the Basic Resident Registers 1868" was made public. According to this report internal migration in 1968 sharply increased as compared with immediately previous years. The 1968 figure stood at nearly 7.8 million and indicated migration rate of 7.7 % which are both highest since the end of the World War II. If they are true, it may suggest that recent stationary trend of migration since 1964 may have started shifting to something new different direction. It requires detailed analysis to make clear the reasons why they were so.

Some comments are given very briefly here. First point is related to reality of sudden increase of migration in 1968.

There is some probability that this is not true, but only artifact of procedural change due to the new Basic Resident Register Law enacted on November 1967, which superseded the old Resident Registration Law.

Second point is relevance with the discussions developed in this paper. A brief examination of the report shows that both streams of in- and out-migration between prefectures increased. Consequently, overall expansion of migration in 1968 seems to reflect development of the same dimension in migratory behavior discussed earlier in this paper. For example, migration pattern between Tohoku and metropolitan areas maintains the recent new trend and also out-migration from metropolitan areas to local areas continues. Only Kyushu may be exceptional in this context.

Broadly speaking, it still may be maintained that a sharp increase of migration in 1968, even though it is true, does not seriously impair the substantiality of major arguments in this paper.

