

THE RURAL EXODUS IN JAPAN (1)

—BASIC CONSIDERATION FOR INTERNATIONAL COMPARISON—

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I

Considered at macro level, migration from rural districts is a natural consequence of changes in the industrial structure of a national economy, i.e., the increase of the proportion of the secondary and tertiary industries in the process of industrialization. This can be explained in economic terms by the relatively limited possibility of the increment of productivity in the primary industries as compared with secondary and tertiary industries, and by the low income elasticity of demand of primary industry products. In most cases, the limited development of agricultural productivity is conditioned by the limited extension of arable land, and, hence, by overpopulation in rural districts. This kind of interpretation of the phenomenon of rural depopulation may seem a tautological explanation of the industrialization of a national economy. Its merit is, however, that it affords an insight into the factors involved in the causes of rural exodus, factors which develop in the relations between different areas, at the same time inciting the movement of a population from one to another of these areas. In other words, because a rural exodus is generally the result of a population movement from a rural district to an urban district, it is necessary to find its causes not only in the "pull factors" or the "push factors", but also in the relations between rural society and urban society.¹

In this paper we consider, mainly, the so-called push and pull factors at micro or monographic level, but always with due consideration for the national structure of population mobility in Japan. In considering the causes of migration in general, it is reasonable to attach importance to economic factors. The poverty of the inhabitants in rural areas is often said to be one of the causes of rural exodus, which must be considered, on the other hand, in relation to the general level of urban life. Alfred Sauvy's² theoretical model explains the mechanism of rural exodus by citing the relations between the living standard inside an almost isolated rural area, where the resources are supposed to be constant, and that outside this area. The fundamental and at the same time problematic assumption of his model is that the average living standard, or per capita production, is a function of the population. According to him, the average living standard increases with the increase

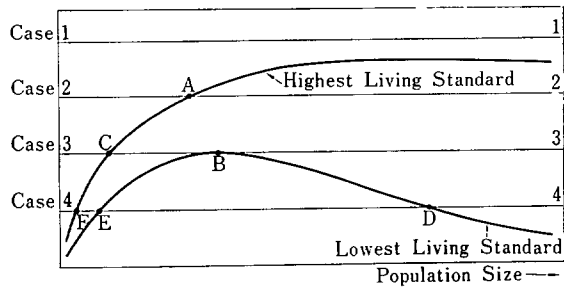
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¹ This idea is clearly expressed in: P. Clément et P. Vieille, *L'exode rural. Historique, Causes et Evolution, Sélectivité, Perspective*. Etudes de Comptabilité Nationale. N° 1, (1960).

² A. Sauvy, *Dépeuplement rural et peuplement rationnel. Six enquêtes locales, précédées d'une étude théorique*. Paris, 1949.

of the population but, after a certain level (the population optimum), it decreases. From the viewpoint of rural exodus, the most important factor to be considered is that of the lowest living standard because migrants mostly consist of the poorest people. The curve for the lowest living level in relation to the population follows the same path as that for the average living level; while there is a maximum living standard at the point where the population is rather small (see Fig. 1). On the other hand, as for the curve for the highest living level, the existence of a maximum point has not actually been determined though hypothetically, here, we suppose a limit. Migration will result from the comparison made by the potential emigrants of their living standards with the lowest living standard level conceivable to them, outside their own living areas. For, if this latter level is higher than the maximum of their highest living standards (Case 1, Fig. 1), the inhabitants of isolated

FIG. 1. LIVING STANDARDS AND MIGRATION
(from A. Sauvy)

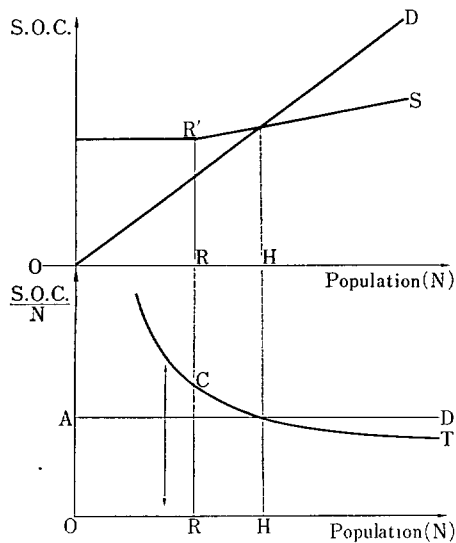


rural areas are all potential migrants, whatever the population size may be. In Case 2 (see Fig. 1), the poorer people are interested in leaving, but the richest people are interested in doing so only if the population drops below a certain level (Point A in Fig. 1); here we can see the possibility of rural exodus beginning, in turn, with the lowest social strata followed successively by the upper ones. Case 3 (see Fig. 1) corresponds to the equilibrium, if the population is at the size corresponding to the maximum point of the curve for the lowest living standard. In Case 4 (Fig. 1), the existence level outside the rural area in question is low, but an exodus can occur if the population is too small (see Point F to the left of Point E in Fig. 1). On the contrary, when the population size is between D and E we can see an inflow of population. Point D, only, represents a steady equilibrium. Around Point E, depopulation can hasten of itself up to the point of total desertion. Theoretically, a steady equilibrium at point D indicates a situation of relative overpopulation in relation to the population optimum. However, practically, the position of most rural areas is that of Point E, which represents an unsteady equilibrium caused by relative under-population or under-agglomeration.

The living standard is generally expressed by the income standard and, in this sense, we can say that the migration model of A. Sauvy is based only on the difference of income

standards or foreseeable income standards of two areas. However, as economic factors which may result in migration, we should also mention the benefits of the so-called external economy, the supply of social overhead capital and the public services of which the inhabitants of an area can avail themselves. The demand-and-supply relationship regarding social overhead capital for an area with the population (N) is shown in Fig. 2.³ Here the

FIG. 2. SOCIAL OVERHEAD CAPITAL AND POPULATION
(from T. Fukuchi)



(K. Miyazawa, T. Fukuchi, et al.: *Chiiki-keizai no Kisokozo* [The Basic Structure of Regional Economy] Tokyo, 1967)

demand for social overhead capital is proportional to the population, that is, OD , while the supply of social overhead capital is shown by $ORR'S$, indicating that, due to its indivisibility, it becomes feasible only when the demand reaches a certain level, (RR') . Regarding per capita social overhead capital, the demand must be constant (AD) and the supply must be $ORCT$. In this scheme, in the cases of population scales less than R and more than H , the social overhead capital of an area is insufficient. In the case of a population scale more than H , unless a new kind of social overhead capital is created, it is clear that the condition is one of population congestion. Regarding the case of population scale lower than R , if the population of an area is too small to realize a certain supply of social overhead capital, the lack of this supply can result in the exodus of the population. This gives rise to a vicious circle involving exodus and insufficiency of social overhead capital and, furthermore, causes the increase of idle capital in an area.

³ This consideration is based on M. Fukuji, et al., *Chiiki Mondai no Bijon to Keiryō* (A Perspective and an Account of Regional Problems) in *Chiiki-Keizai no Kisokozo*. (Tokyo, 1967) pp. 95-97.

In the foregoing, we presumed that population decrease was expressed by emigration. In a close examination of population mobility, we have also to take into account the birth rate and the death rate; but where there is a population change of more than 10 per cent within a short period of time, we confirm that our assumption is realistic in the light of the analysis of the excessive depopulation process made from the viewpoint of the relation between the population size and the public services of an area. Generally, up to a certain size of population, the total cost of public services (C) increases only a little in relation to the population size (N), so we can find the minimum point for C/N (that is $N=N_0$, where $d(C/N) / dN=0$). When the population is inferior to N_0 , while against the decrease of population C decreases only a little, the per capita cost of public services (C/N) must increase notably. In this case, either the rise of charges for public services or the due worsening of public services can cause the exodus of the inhabitants of an area; that is, a further decrease in population.

There are many reasons for the fact that the emigrating population consists mainly of the younger generation: labor market conditions, psychological resistance against moving on the part of the older generation, and so on. Suppose that the largest part of the productive labor of a depopulated area consisted of physical labor; the exodus of the male younger generation, and the ensuing increase of the proportion of female and older elements, would result in the deterioration of the quality of the labor force. Consequently, the production function of the depopulated area would show a decrease in labor productivity as a result of the population decrease. To maintain the same standard of per capita income in the area, it would be necessary to invest more capital; however, this is difficult to realize in practice, and so cessation of production is the usual outcome.

On the basis of the preceding arguments, we can explain under-agglomeration, or under-population, or so-called excessive depopulation in three ways. First, there is the biological aspect when reproduction of the population becomes impossible in an area (in a settlement or in a determined district). In this case we disregard the possibility of the return of emigrants, a factor which, however, must be taken into consideration when we analyse the depopulation phenomena in a concrete rural area. Second, there is the aspect of the decline of the supply of social overhead capital or public services in an area having a population below a certain limit; this brings about a vicious circle of depopulation and declining supplies of overhead capital and declining public services. Under these circumstances, we have excessive depopulation in the social sense, because what is concerned is the impossibility of maintaining the minimum requirements of a local society. Third, there is the economic aspect, when the productive activities of an area become impossible as a result of the exodus of the productive population and of the consequent decline of marginal productivity. In this case, economically, it is possible for the remaining population to exist, in parasitic conditions; that is, they are able to fall back on external resources (remittances from emigrant family members, the selling of lands and forests to persons outside the area, etc.). These conditions prevent the further depopulation of the area.

Since the start of the development of urban life in Japan, the phenomena of the rural exodus or relative decreases in rural populations has always continued to occur. This has been especially so since the beginning of industrialization around the end of the last century. We should also point out that a factor stimulating this tendency is the general ecological process of the shift of populations from mountainous areas to lowlands, a shift brought

about with technical progress. But it is only since the year 1960 that the rural exodus has given rise to the socio-economic problems of under-population in the sense of the above-mentioned aspects. During the last decade, for the first time in the settlement history of Japan, we have seen the massive exodus of agricultural families resulting in the decrease of the number of farm-households of a village and, sometimes, also in the entire desertion of the village itself. Among the official documents we saw, for the first time, the term "under-population" (*kasō*) in the report of the Regional Sections of the Economic Inquiry Commission (*Keizai-shingikai Chiiki-bukai*) of October 1967: "The rapid population inflow into urban areas raises various problems, on the other hand, also in the depopulated areas. We can call the problems in the depopulated area, under-population or under-agglomeration problems which are the reversed phenomena of population congestion. We can define under-population, or under-agglomeration, as a situation in which, for a community, it has become difficult to maintain a certain living standard because of the population decrease. Such phenomena can be seen, for instance, in an excessively depopulated area where the productive functions are reduced because of the difficulties in rationally utilizing its economic resources and in maintaining the basic conditions of the community, such as sanitary services, education and countermeasures against calamities. In this sense, we can ascertain that in the areas where the population density has fallen off and the average age of the population has risen as a result of the population decrease, the problems of under-population (*kasō*) have occurred and are occurring".

The essentials of this definition of under-population or under-agglomeration clarify the fact of "the impossibility of maintaining the basic condition for the life of a hitherto existing local community because of depopulation". We should also remark that the term "under-population" or "under-agglomeration" is a general appellation referring to the whole process of depopulation.

The conditions of the deterioration of the basis of a community life differ according to area, so it is difficult to define the phenomenon of under-agglomeration with quantitative indices. But, on the other hand, to take measures to combat under-population problems in the sphere of social and economic policies, it is necessary to define conventionally, in some way, what excessive depopulation consists of. In fact, in Article 2 of the "Law of Urgent Measures for Under-populated Districts" (*Kasō-chiiki Taisaku Tokubetsu Sochi-ho*) promulgated in 1970, two conditions are elucidated the existence of which, in an area, calls for that area to be designated an "excessively depopulated district": 1) a municipality whose population decrease rate was more than 10 per cent during the years 1960-65; 2) a municipality whose fiscal revenue is less than 40 per cent of the basic financial demand.⁴ Also, the legal definition of the term "under-populated district" is, due to its nature, a response to the necessity for taking preventive measures or countermeasures. Finally, though the figures 10 per cent and 40 per cent are conventional and arbitrary, we are able to discover in them two main expressions of the under-population phenomenon of present Japan.

⁴ These two figures are calculated according to Articles 14 and 11, respectively, of the Financial Law Regarding Grants to Local Governments.

II

In examining the actual situation of rural depopulation we can begin with the statistical data concerning the definition of the Law of Urgent Measures for Under-populated Districts. According to the census data for 1965, while the total population of Japan increased by 4.9 per cent in the years 1960-65, 2,574 out of 3,375 municipalities registered population decreases during those five years. Of those 2,574 municipalities, 897 showed population decrease rates of over 10 per cent in five years (see Table 1).

If we observe the distribution of these depopulated municipalities in various parts of Japan and in economic regions classified by the Ministry of Agriculture and Forestry as shown in Table 1, we see that the phenomenon of under-population was more widespread in the southwestern part of Japan (especially in the prefectures of Shimane, Oita, Kochi, Miyazaki, Ehime and Kagoshima) and that mountain villages were much more subjected to excessive depopulation in comparison with the hill and plain villages.

According to the White Paper on Under-population,⁵ in these 897 municipalities which, in 1965, showed a population decrease rate of more than 10 per cent for the five years after 1960, only 121 municipalities did not satisfy the fiscal criterium under the terms of which, they would be designated as "excessively depopulated districts"; in other words their average fiscal index was over 40 per cent in the years 1966-68. From Table 2, we can see that decrease of the fiscal index has been the general tendency in Japan since 1963, and that this index is correlated rather with the degree of the dependence upon the primary industries than with the population scale of the municipality. From this observation we can say that the problems of excessive depopulation in Japan are, first of all, the problems of the mountainous areas where the primary industries predominate and opportunities of finding jobs other than in agriculture and forestry are scarce.

Much has been discussed by many authors about the causes of the regional differences in the percentage of the municipalities designated as excessively depopulated districts between the Northeastern and the Southwestern areas⁶ of Japan. We can enumerate the possible causes due to which excessively depopulated municipalities are found proportionally more in the Southwestern part of Japan than in the Northeastern part as follows:

1) The two crops-a-year system was practiced only in the Southwestern part for climatic reasons. Wheat cultivation which provided the main second crop in the rice field has received a setback due to the increased importation of wheat from abroad during the past 15 years. On the contrary, in the Northeastern part, where the farmers practiced seasonal migrations in the winter time to supplement the low income from agriculture, the

⁵ Jichishō (Ministry for Local Government): *Chiho-Kokyodantai no Kasochiki-taisaku Gaiyo*. (General Situation of the Measures for the under-populated Municipalities). 1971.
Ibid.: *Kaso-hakusho. Kasotaisaku no Genkyo* (White Paper on the Measures for Under-population). 1973.

⁶ The terms "Northeastern" and "Southwestern", as used here, are derived directly from Tohoku Nihon (East-north Japan) and Seinan Nihon (West-south Japan). Tohoku Nihon denotes approximately the whole area north of an imaginary dividing line between Kanagawa and Shizuoka Prefectures to the east and Niigata and Toyama to the west. Seinan Nihon or Southeastern Japan denotes the whole area south of the imaginary line. In this paper, henceforth, the capitalized terms Northeastern and Southwestern denote or apply to these large areas.

TABLE 1. DECREASE RATE OF POPULATION (1960—1965) CLASSIFIED BY ECONOMIC REGIONS

	Number of Municipalities (A)					Number of Municipalities with Population Decrease Rate of over 10% (B)					B / A (in %)				
	Total	Metro-politan District	Plain District	Hilly District	Moun-tain District	Total	Metro-politan District	Plain District	Hilly District	Moun-tain District	Total	Metro-politan District	Plain District	Hilly District	Moun-tain District
	Total Japan	3,375	479	1,172	1,108	616	898	18	125	378	377	26.6	3.8	10.5	34.1
Hokkaido	220	25	80	73	42	79	7	28	23	21	35.9	28.0	35.0	31.5	50.0
Tohoku	430	21	187	130	92	89	1	23	27	38	20.7	4.8	12.3	20.3	41.3
Hokuriku	235	23	112	67	33	44	0	7	19	18	18.7	0	6.3	28.4	54.5
Kanto & Tozan	677	140	254	177	106	85	0	2	39	44	12.6	0	0.8	22.0	41.5
Tokai	349	47	139	84	79	53	0	0	2	51	15.2	0	0	2.4	64.6
Kinki	338	109	84	95	50	47	0	1	16	30	13.9	0	1.2	16.8	60.6
Chugoku	364	58	60	139	105	164	1	7	68	88	45.1	1.7	11.3	48.9	83.8
Shikoku	225	20	64	95	46	99	1	4	51	43	44.0	5.0	6.3	53.7	93.5
Kyushu	537	36	190	248	63	238	8	53	133	44	44.3	22.2	27.9	53.6	69.8

Sources: Ministry of Agriculture and Forestry: *Nihon Nogyo no Chiiki-kozo* (Regional Structure of Japanese Agriculture), 1969.

H. Niida: *Kaso-mondai no Keizai-gakuteki Kosatsu* (Economic Considerations on Under-population Problems) *Gendai-Keizai* No 3, Dec. 1971.

TABLE 2. FISCAL INDICES (PERCENTAGE OF BASIC FISCAL REVENUES IN THE MUNICIPAL BUDGET

Scale of Population	Economic Character	1963				1965				1970			
		Number of Municipalities	Percentage of Primary Industries in the Active Population	Fiscal Index	Number of Municipalities	Percentage of Primary Industries in the Active Population	Fiscal Index	Number of Municipalities	Percentage of Primary Industries in the Active Population	Fiscal Index	Number of Municipalities	Percentage of Primary Industries in the Active Population	Fiscal Index
I	1	139	76.0	23.4	164	77.0	23.7	85	74.8	22			
	2	96	60.9	34.1	124	62.3	29.7	168	61.0	22			
	3	34	42.4	70.1	37	43.3	47.8	50	40.2	33			
	4	12	16.3	64.1	16	23.5	35.8	25	19.0	47			
II	1	229	77.1	23.0	248	77.3	22.8	115	74.8	20			
	2	184	62.2	28.5	208	61.7	28.9	267	60.6	25			
	3	75	42.1	40.1	81	43.4	39.5	113	41.3	32			
	4	20	18.4	51.7	19	21.5	44.9	35	22.3	44			
III	1	362	76.9	27.8	309	75.8	26.3	136	75.7	19			
	2	432	60.6	23.6	419	59.9	32.8	437	59.4	25			
	3	171	39.9	42.7	158	42.1	39.2	238	42.0	33			
	4	70	21.9	55.1	69	22.6	54.7	99	20.4	48			
IV	1	124	75.2	27.0	95	75.5	26.9	40	73.1	22			
	2	208	60.3	35.7	204	61.9	33.9	169	60.2	26			
	3	96	38.9	46.8	97	41.1	43.3	144	40.9	38			
	4	67	21.0	65.2	42	19.5	60.5	74	20.1	59			
V	1	40	75.7	28.7	32	74.9	28.1	12	72.2	23			
	2	116	59.0	39.0	95	60.5	36.5	85	58.7	33			
	3	60	40.7	42.7	58	41.0	43.4	67	41.6	35			
	4	35	18.0	66.0	32	22.4	65.9	48	20.3	54			
VI	1	17	75.3	24.0	10	75.7	27.6	7	71.7	21			
	2	54	60.6	36.7	39	58.5	39.0	35	57.0	32			
	3	39	41.2	47.9	40	43.6	48.0	37	39.6	42			
	4	13	19.1	54.8	18	19.8	92.5	28	23.3	58			
VII	1	7	78.5	29.7	—	—	—	—	—	—			
	2	11	52.7	50.2	9	57.1	52.9	—	—	—			
	3	14	43.1	51.9	14	39.8	59.9	5	37.2	41			
	4	7	10.4	77.8	11	16.2	70.1	12	17.5	68			
		2,732			2,655			1,531					

Scale of Municipalities		Percentage of Primary Industry in the Active Population	
0	below 3,000	0	over 90%
I	3,000~ 5,000	1	70 ~ 90%
II	5,500~ 8,000	2	50 ~ 70%
III	8,000~13,000	3	30 ~ 50%
IV	13,000~18,000	4	below 30%
V	18,000~23,000		
VI	23,000~28,000		
VII	28,000~33,000		
VIII	over 33,000		

Sources: Ministry for Local Government (*Jichisho*)

influence of the agricultural setback in those years has been relatively attenuated.

2) The increase of agricultural productivity, especially in rice-cultivation, after World War II has been much more remarkable in Northeastern Japan, an area that had been considered a relatively backward part of Japan in the prewar period.

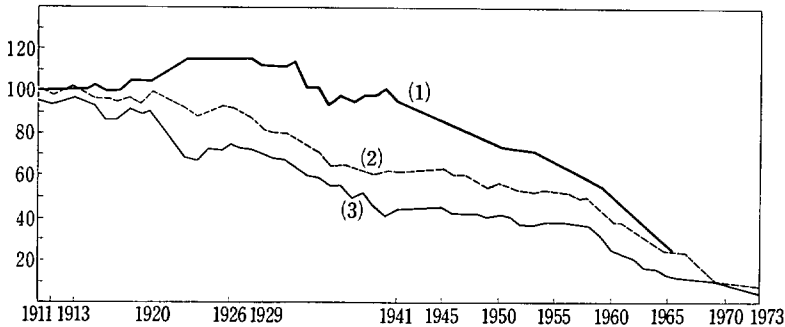
3) The third cause lies in the difference in the agrarian system. From prewar times, agriculture in Southwestern Japan was considered generally more commercialized and more fragmented into very small farm-households. A further cause might also lie in the difference in mentality of the farmers of the two areas; those with farms in Northeastern Japan are more attached to their native homestead.

We believe that these considerations are rather hasty and one-sided; it is necessary to examine the nature of under-population defined statistically and also the trends of the rural exodus over a longer period of time. Here we have to remember, above all, that a legal designation of an excessively depopulated district is made for each municipality which, in Japan, is an administrative unit containing many historical settlements.⁷ According to the theoretical considerations outlined in Section I, the definition of under-population in either social or economic sense should be made for the smaller original settlement unit rather than for the administrative municipal unit. For instance, the acceleration of the rural exodus from areas where the population has dropped below a certain limit should be observed at the level of the settlement, which is a historical and morphological unit; also demographical under-population and the deserting of villages must be defined at this same level. From this viewpoint, not all the settlement units of a municipality designated as an excessively depopulated district are really under-populated in the sociological or economic sense; and there are many under-populated settlements in a municipality boasting a population decrease rate of below 10 per cent. For instance, Komatsu-shi, one of the active industrial cities of the Hokuriku area has, in its administrative territory, a settlement called

⁷ The local administrative system of modern Japan was reorganized in 1889. On that occasion the city (*shi*), town (*cho*) and village (*son*) as administrative units each under a local government, were established with the amalgamation of several former historical villages and towns. Also after this, in the course of time up to the present, the amalgamation of municipalities took place for reasons of the convenience of the prefectural authorities or for the resolution of the fiscal difficulties of small municipalities. Consequently, as a local administrative unit, the Japanese municipality is a very artificial and large area, containing many heterogeneous historical settlement units.

Shinmaru which is almost deserted as a consequence of a massive depopulation since the year 1960 (See Fig 3).

FIG. 3. THE CASE OF SHINMARU, KOMATSU-SHI, ISHIKAWA PREFECTURE
(1909=100)



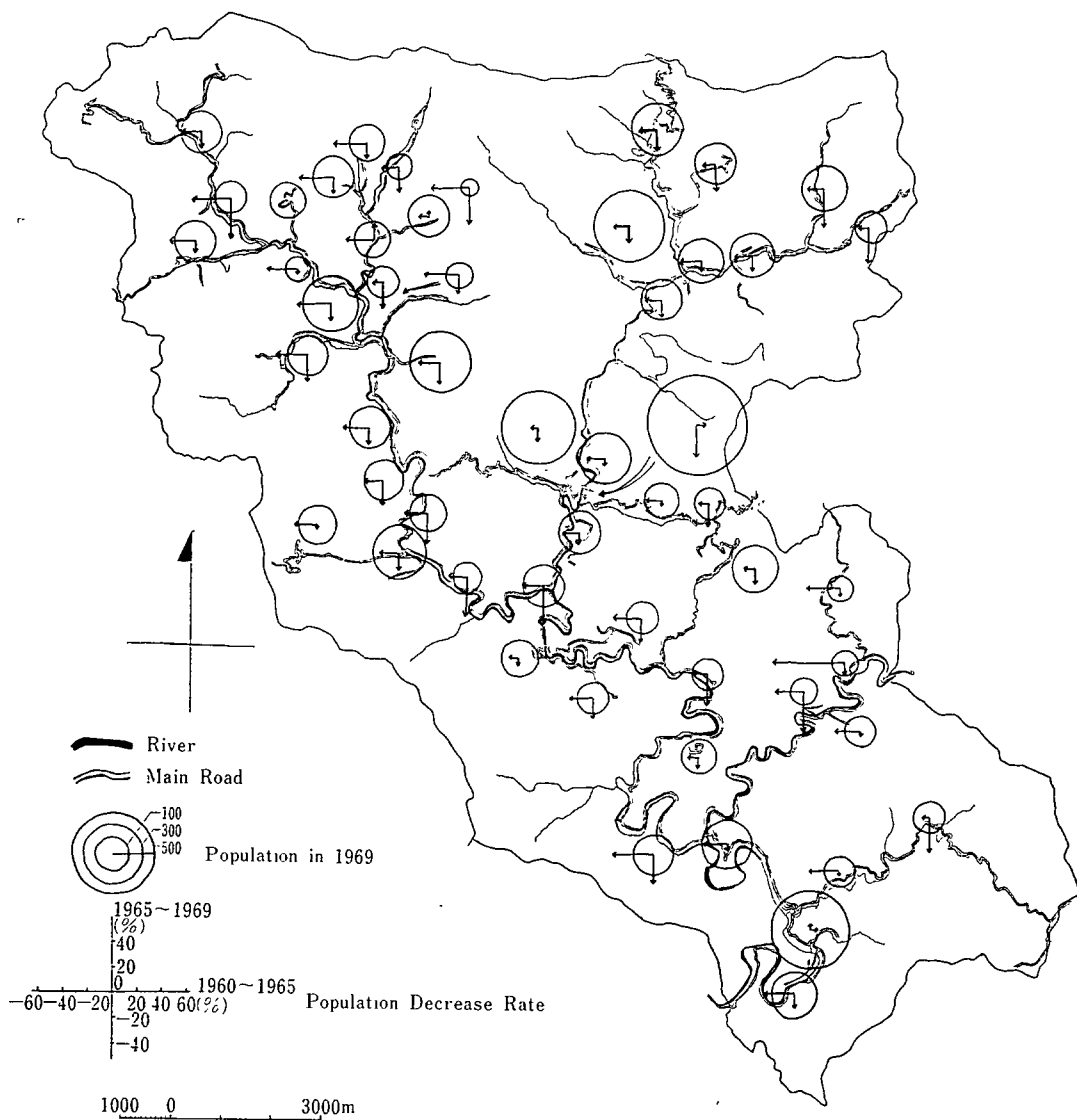
- (1) Acreage of Paddy Field (53.8 Ha in 1909)
- (2) Number of Households (352 in 1909)
- (3) Population (2094 in 1909)

We can give an example of the diversity of the population decrease rate according to settlement in one municipality alone, that of Yusuhara-cho, Shikoku, of which we made a field survey. There are 53 settlements (see Fig. 4) in this municipality of about 7000 inhabitants. The population increase rate of Yusuhara during the years 1960-65 was -13.9 per cent; but the population increase rate for each settlement ranged from $+6.9$ per cent to -57.5 per cent in the same period. Even in this case, on the spot as we were it was very difficult to generalize which factors affected the emigration. In no part of Yusuhara was there any particular factor which could cause a sudden depopulation, for example, the departure of construction workers following the accomplishment of a big project, such as the construction of a dam or railroad. As physical factors, generally, one can point out that, in Japan, where there is no tradition of grazing on mountainous lands, the extension of paddy fields and availability of forestry resources are the most important factors inducing the people to remain in the village. But one must take into account, in every specific case, the possibility of development in, for example, new types of agriculture and forestry activity, such as mushroom cultivation, chestnut or other tree culture, etc. The availability of forestry resources is conditioned by the landownership system⁸ rather than by physical factor.

In cases where a considerable acreage of well-forested land is owned rather evenly by most of the villagers, or the village community owns the forest as common land and uses

⁸ But forest land was excluded from the land reform and big landownership has therefore continued to exist into the present time.

FIG. 4. POPULATION AND POPULATION DECREASE OF EACH SETTLEMENT
(YUSUHARA-CHO, KOCHI PREFECTURE)



it profitably, the existence of a good forest has an economic significance for the inhabitants of the village. As a sociological factor promoting emigration, one might imagine the area in question to be a geographically isolated one; but, in reality, we observed many settlements, depopulated or deserted in consequence of the increase of communication facilities, such as the opening of roads passable for motorcars. As for the factors of the social overhead capital, we have to consider it also at settlement level and to examine what it consists

TABLE 3. NUMBER OF KASO MUNICIPALITIES CLASSIFIED BY

Prefectures	Number of municipalities designated as under-populated classified by the population decrease rates(%) in the years 1960-65 and in the years 1965-70 (the latter in parentheses)									
	10 ~15	15 ~20	20 ~25	25 ~30	30 ~35	35 ~40	40 ~45	45 ~50	50 ~	
1 Hokkaido	48 (33)	16 (23)	3 (4)	2 (4)	(1)	(1)			1	
2 Aomori	4 (7)	2								
3 Iwate	7 (9)	1		1				(1)		
4 Miyagi	17 (2)	2	1 (1)							
5 Akita	13 (6)		1 (1)							
6 Yamagata	9 (5)	1								
7 Fukushima	17 (12)	1 (1)								
8 Ibaraki	4 (5)									
9 Tochigi	3	1 (1)								
10 Gunma	6 (5)	2								
11 Saitama	1	1 (1)		1 (1)						
12 Chiba	5									
13 Tokyo	2	4								
14 Kanagawa										
15 Niigata	17 (14)	1 (1)								
16 Toyama	1	1	1 (1)							
17 Ishikawa	4	1 (1)	1 (1)		1					
18 Fukui	4 (2)	1 (1)								
19 Yamanashi	7	5 (1)	1							
20 Nagano	18	10	2							
21 Gifu	7	5	1							
22 Shizuoka	3		1							
23 Aichi	6 (1)	2 (1)	1							
24 Mie	2 (2)	1 (1)								
25 Shiga	2					(1)				
26 Kyoto	6 (2)	2								
27 Osaka										
28 Hyogo	10 (3)	1								
29 Nara	5 (1)	3		1 (1)						
30 Wakayama	5 (1)	6 (1)			1	1				
31 Tottori	6 (2)	1 (1)								
32 Shimane	18 (2)	14 (1)	2	1	1					
33 Okayama	21 (1)	12 (2)	1 (1)							
34 Hiroshima	22 (1)	19 (1)	5		1					
35 Yamaguchi	9 (2)	12	3	1 (1)						
36 Tokushima	12 (8)	6 (1)		1 (1)						
37 Kagawa	4									
38 Ehime	22 (2)	11	4	1						
39 Kochi	21 (2)	9	3							
40 Fukuoka	7 (5)	6	4	3 (1)	4 (1)		1 (1)		1	
41 Saga	7 (1)		3	1			1	1		
42 Nagasaki	11 (9)	6 (1)	2	2	1	1		2	2 (1)	
43 Kumamoto	41 (8)	3 (2)	1							
44 Oita	25 (4)	9 (1)	1 (1)	1 (1)						
45 Miyazaki	11 (2)	12 (1)		1						
46 Kagoshima	32 (15)	12 (7)	2	1 (1)	1	1				
Total	502(192)	198 (50)	40 (11)	13 (11)	9 (2)	3 (2)	2 (1)	3 (1)	4 (3)	

Sources: Ministry for Local Government, *Kaso Hakusho* (White Paper on the Under-populated Districts) 1973.

POPULATION DECREASE RATE BY FISCAL INDEX OF EACH PREFECTURE

Number of municipalities designated as under-populated classified by the fiscal indices
(Figures in parentheses correspond to the municipalities designated based on the
population decrease rates in the years 1965-70)

0.00 ~0.05	0.05 ~0.10	0.10 ~0.15	0.15 ~0.20	0.20 ~0.25	0.25 ~0.30	0.30 ~0.35	0.35 ~0.40	Total
	2 (4) 1 (1) 1 (3) 1	10 (13) 5 (1) 1 (1)	19 (9) 3 (3) 3 (1) 3 (3)	24 (18) 1 (1) 2 (3) 11 (1) 5 (1)	8 (9) 1 3 3 (3)	6 (8) 1 (1) 2 (1) 1 1	1 (7) 1 (1)	70 (68) 6 (7) 9 (10) 19 (3) 14 (7)
		1 (4) 1 (1)	1 (1) 7 (3) 4 (2)	4 (1) 5 (3) 1 (1)	1 (2) 2 (1) 1 2	4 (1) 2 1 (1) 1 (1)	 1 2 (2)	10 (5) 17 (13) 4 (5) 3 (1) 8 (5)
	1	2	1 (1)	2	4	1	1 (1)	1 (2) 5 6
	(1)	4 (1)	5 (4)	5 (2)	3 (3)	1 (3)	(1)	18 (15)
	1	1 1 1 (1) 2 2	1 2 2 (1) 3 (1) 7 (1)	1 (1) 1 (1) 7 (2) 5 (3)	1 4 (2)	1 (1) 2	1 (1) 2 (1)	2 (1) 6 (2) 5 (3) 13 (5) 30 (9)
		2 (1)	4 (1)	4 (1)	1	2 (2) 2 3 (1) 1 (1)	2 1 2 (2)	13 (5) 4 9 (1) 3 (4) 2
			2		3 (2)	2	1	8 (2)
		1 1 4	1 (1) 2 4 (1)	4 (1) 2 1 (1)	3 (1) 3 (2) 2	2	1	11 (3) 9 (2) 12 (2)
	(1)	1 (1)	(1) (1) (1)	(1) (1)	2 (1) 3 9 (1) 9 3	2 (1) 4 (1) 3 11 6 (2)	1 1 (1) 4 (1) 2	6 (3) 36 (3) 33 (4) 47 (2) 24 (3)
	(3) (2)	7	(2) (1) (1) 5 (1)	(4) 7 5 (1)	1 (1) 4 (1) 6 (1) 8 (1)	3 (1) 3 2 6 (1)	(2) 1 2 2 (4)	18 (10) 4 38 (2) 33 (2) 26 (8)
	2 1	4 (1) 7 (6) 3 (3)	12 (2) 12 (2) 6 (1) 2	6 3 (2) 14 12 (2) 8	1 2 4 (1) 8 (2) 8	3 (1) 4 (1) 5 (2) 6 2	3 2 1 (1) 4 (1)	13 (2) 27 (11) 45 (10) 35 (7) 24 (3)
2	6 (1)	9 (5)	13 (9)	12 (7)	4 (1)	2		48 (23)
2	19 (14)	103 (42)	184 (61)	216 (60)	119 (37)	97 (31)	34 (28)	774 (273)

of for each settlement; in many cases the existence of a primary school in their own settlement is considered by villagers the most important social condition for the continuation of village life, and the closure of the primary school for technical or financial reasons constitutes the beginning of population hemorrhage. In snowy areas, the lack of bulldozers for snow-removal is also an important reason for leaving the village.

In the agrarian history of Japan, the Northeastern area very often showed backwardness in many aspects. The development of agricultural productivity showed a time lag compared with the development in the Southwestern area. Also, big absentee landlordism had already declined in the Southwestern area by the year 1920, while it remained rather unchanged up to the period of the land reform. If the general tendency of the lower population decrease rate of Northeastern Japan during the years 1960-65 was due mainly to the social backwardness of these districts, the problem might well be defined as one involving the question of a time lag. Thus, one could expect that sooner or later, in the Northeastern rural districts as well, a massive rural exodus would take place as a consequence of the relative deterioration of the rural economy.

The above-mentioned "Law of Urgent Measures" foresees the designation of further *kaso* municipalities; and 273 municipalities were thus qualified on the basis of their population decrease rates during the five years from 1965-70 (Table 3). Upon examination of the regional distribution of additionally designated municipalities in Table 4, we can note a remarkable increase of *kaso* municipalities in Hokkaido and few increases in the Kanto and Kinki districts. The number of *kaso* municipalities in the Tohoku district has increased from 75 to 120, but this augmentation is not so remarkable compared with that in some prefectures of Shikoku and Kyushu. For the Kanto and Kinki districts we see the strong influence of the urbanization of the Tokyo and Osaka metropolitan areas. Actually, in Japan, the percentage of *kaso* municipalities to the total number of municipalities is 32.4 per cent, representing 8.6 per cent of the total population and 41.7 per cent of the total acreage. In the Tokai, Kanto, Kinki and Hokuriku areas the percentage of *kaso* municipalities are, respectively, 11.7 per cent, 14.9 per cent, 15.5 per cent and 47.8 per cent. The percentage in the Tohoku area has remained rather low (29.5 per cent). From these figures we cannot assert that Northeastern Japan is following the same path as that of the Southwestern Japan with a lag of decades where the excessive depopulation phenomenon is concerned. From our field inquiry in Fukushima Prefecture we can only say, generally, that in the Tohoku district, the seasonal migration still constitutes an important factor in the detaining of the farmers' families in rural district. In this respect, it is difficult to obtain precise statistical data regarding the number of seasonal emigrants because most of the seasonal emigrants do not go to the Tokyo district through official employment bureaus and do not participate in any census registration.⁹ But from our field survey in the mountainous area of Fukushima Prefecture (Ina-mura), we can affirm that from 50 to 70 per cent of the farm-households send out seasonal emigrants, the number of which corresponds

⁹ In the Agricultural Census of 1970, a detailed inquiry was conducted on the characteristics of settlements and in this inquiry there are also items concerning emigration. This inquiry on the settlement (*Shurakuchosa*) opens up a big possibility for researchers for investigating various problems concerning emigration in Japan. We can analyze the rural exodus in relation to many items of this inquiry such as the trends in agricultural production, the scale of management, etc., at settlement level. The main data have been programmed to SPSS by Kyoto University. The present article is in the nature of an introduction to our further studies of these already computerized inquiry data.

TABLE 4. NUMBER OF FARM-HOUSEHOLDS CLASSIFIED BY ENGAGEMENT TYPE AND FARMING SCALE

	Year	Classified by Engagement Type			Classified by Farming Scale (In Percentage)								
		Number of Farm-households	in Percentage		Specific Type	Below 0.3 ha	0.3~0.5 ha	0.5~0.7 ha	0.7~1.0 ha	1.0~1.5 ha	1.5~2.0 ha	Over 2.0 ha	
			Farm-households Engaged Exclusively in Agriculture	Farm-households Engaged Mainly in Agriculture									Farm-households Engaged Mainly in Non-Agricultural Activities
Ina-mura (Fukushima Pref.)	1960	447	6.1	60.6	33.3	0	15.2	14.9	18.1	26.0	23.0	2.0	0.6
	65	435	9.6	48.1	42.3	0	14.3	16.8	19.5	26.2	19.3	2.9	1.0
	70	425	7.3	36.9	55.8	0	14.4	18.6	19.3	26.4	18.4	2.4	0.7
Tohoku	1960	785,900	37.4	36.6	26.0	0.3	12.3	12.0	11.2	15.4	21.1	13.6	13.9
	65	771,181	21.3	44.9	33.8	0.2	11.9	12.5	11.3	15.4	20.9	13.4	14.4
	70	743,128	12.7	46.2	41.1	0.2	12.1	12.6	11.2	14.6	19.9	13.2	16.2
Mountain District of Northeastern Japan	1960	259,200	18.9	43.8	37.3	0.2	16.2	14.0	13.0	17.7	20.8	10.4	7.7
	65	245,900	13.0	38.6	48.4	0.3	15.8	14.4	13.2	18.0	20.8	10.3	7.4
	70	243,151	8.4	36.2	55.4								
Mountain District of Southwestern Japan	1960	439,500	16.4	44.2	39.4	0.1	19.6	19.0	19.4	22.8	15.7	2.9	0.5
	65	393,300	11.0	32.2	56.8	0.1	17.9	18.9	18.3	22.4	17.4	4.1	0.9
	70	491,658	10.1	27.5	62.4								
Yusuhara-cho (Kochi Pref.)	1960	1,338	16.8	56.1	27.1	0	30.8	23.9	23.1	16.5	4.9	0.5	0.3
	65	1,205	12.8	44.7	42.5	0.3	30.5	30.0	21.9	12.7	3.9	0.5	0.2
	70	1,144	15.1	31.3	53.6	0	24.6	28.1	22.4	14.9	7.8	1.6	0.8
Japan	1960	6,056,600	34.3	33.6	32.1	0.3	21.4	16.6	31.8	31.8	16.7	6.9	6.3
	65	5,664,763	21.5	36.8	41.7	0.2	20.3	17.0	31.1	31.1	16.9	7.4	7.1
	70	5,228,696	15.7	34.1	50.2								

Sources: Agricultural Census.

TABLE 5. POPULATION TREND OF UNDER-POPULATED

	Classification of Population Decrease Rate in the Years 1960—1965	Classification of Population Decrease Rate in the Years 1965—1970	Number of Municipalities		
			Yamaguchi	Hiroshima	Shimane
Accelerated Decrease Rate	A	B	2	2	2
		C	0	0	0
		D	0	0	0
		Total	2 (6.7)	2 (3.6)	2 (5.3)
	B	B	1	1	1
		C	2	2	5
		D	0	0	2
		Total	3 (10.0)	3 (5.5)	8 (21.0)
	C	C	1	4	4
		D	2	0	1
	Total	3 (10.0)	4 (7.3)	5 (13.2)	
D	D	0	0	0	
	Total	0 (0.0)	0 (0.0)	0 (0.0)	
	Total	8 (26.7)	9 (16.4)	15 (39.5)	
Attenuated Decrease Rate	B	A	3	15	4
		B	4	6	4
		Total	7 (23.3)	21 (38.2)	8 (21.0)
	C	A	1	5	0
		B	9	7	3
		C	0	5	6
		Total	10 (33.3)	17 (30.9)	9 (23.7)
	D	A	1	0	0
		B	0	2	0
		C	3	4	3
	D	1	2	1	
	Total	5 (16.7)	8 (14.5)	4 (10.5)	
	Total	22 (73.3)	46 (83.6)	21 (55.2)	
Unchanged Decrease Rate	B		0	0	1
	C		0	0	1
	D		0	0	0
	Total		0 (0.0)	0 (0.0)	2 (5.3)
	Total		30 (100.0)	55 (100.0)	38 (100.0)

Classification of Population Decrease Rate in 5 Years.

MUNICIPALITIES IN CHUGOKU DISTRICT

(Percentage in parentheses)

Okayama	Tottori	Mountain District				
		Yamaguchi	Hiroshima	Shimane	Okayama	Tottori
1 2 1	2 1 0	0 0 0	0 0 0	1 0 0	0 2 1	0 1 0
4 (9.5)	3 (33.3)	0 (0.0)	0 (0.0)	1 (4.0)	3 (16.7)	1 (25.0)
1 4 2	0 1 0	0 0 0	0 1 0	1 4 2	0 3 1	0 1 0
7 (16.7)	1 (11.1)	0 (0.0)	1 (2.9)	7 (28.0)	4 (22.2)	1 (25.0)
3 0	0 0	0 2	4 0	1 0	2 0	0 0
3 (7.1)	0 (0.0)	2 (18.2)	4 (11.4)	1 (4.0)	2 (11.1)	0 (0.0)
0	0	0	0	0	0	0
0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14 (33.3)	4 (44.4)	2 (18.2)	5 (14.3)	9 (36.0)	9 (50.0)	2 (50.0)
9 8	3 2	0 0	6 3	1 3	0 2	1 1
17 (40.5)	5 (55.6)	0 (0.0)	9 (25.7)	4 (16.0)	2 (11.1)	2 (50.0)
1 3 5	0 0 0	1 4 0	3 5 5	0 1 6	1 1 4	0 0 0
9 (21.4)	0 (0.0)	5 (45.4)	13 (37.1)	7 (28.0)	6 (33.3)	0 (0.0)
0 1 0 0	0 0 0 0	0 0 3 1	0 2 4 2	0 0 2 1	0 0 0 0	0 0 0 0
1 (2.4)	0 (0.0)	4 (36.4)	8 (22.9)	3 (12.0)	0 (0.0)	0 (0.0)
27 (64.3)	5 (55.6)	9 (81.8)	30 (85.7)	14 (59.0)	8 (44.4)	2 (50.0)
1 0 0	0 0 0	0 0 0	0 0 0	1 1 0	1 0 0	0 0 0
0 (2.4)	0 (0.0)	0 (0.0)	0 (0.0)	2 (8.0)	1 (5.6)	0 (0.0)
42 (100.0)	9 (100.0)	11 (100.0)	35 (100.0)	25 (100.0)	18 (100.0)	4 (100.0)

 $A \leq 9.9\%$ $10.0 \leq B \leq 14.9\%$ $15.0 \leq C \leq 19.9\%$ $20\% \leq D$

to from 10 to 25 per cent of the total population of each settlement. If we consider the changes in the agricultural population and the number of farm-households engaged mainly in agriculture (*sengyo-noka*) as shown in table 4, we find an advancement in the agricultural exodus (which does not necessarily result in the rural exodus) and the part-timerization of farm-households in the Tohoku district.

As for the aggravation of the so-called *kasō* problem in Hokkaido in the period 1965-70, we observe, as shown in Table 4, the worsening of the fiscal conditions of municipalities rather than the acceleration of population decrease. This situation has been caused mainly by the poor development of non-agricultural activities in the rural district of Hokkaido and by the general economic deterioration of dry field cultivation in Japan in this period.¹⁰

To examine more in detail the regional differences for rural exodus it is insufficient to take into consideration only the trend of the number of the municipalities designated as under-populated districts. The age composition of the settlement and also the remaining families play a cardinal role in the analysis of the *kasō* phenomenon in the demographic and economic sense. For Japanese farm-households where the primogeniture system prevails, whether the heir remains in the village as a farmer engaged exclusively in agriculture and forestry or emigrates to engage in non-agricultural activities or becomes a part-time farmer, and, in the case of emigration, whether he returns to the village to succeed the farm-household upon the retirement or death of his parents, are crucial factors in judging the demographic meaning of rural exodus. In the case of the Tohoku area, except in some areas of specialized farming such as fruit production or dairy farming, we can observe the gradually spreading phenomenon of the emigration or diverting to non-agricultural part-time activities on the part of farms in which the primogeniture system once prevailed. So, in spite of the apparent low rate of population decrease, we can point out also here a possible excessive depopulation in the biological and economic sense. There is a shade of difference in settlement morphology between Northeastern and Southwestern Japan; generally speaking, the settlement scale is slightly bigger in the Tohoku area and more concentrated in the valleys. If the population decrease becomes accelerated after reaching a certain level, the differences in the population scales of various settlements can constitute the cause of time lags in the advancement of the *kasō* phenomenon. In the case of Southwestern Japan, we have to examine, in more detail, the trend of the population decrease rate. Though in Chugoku, Shikoku and Kyushu the number of municipalities which registered a more than 10 per cent decrease in population during the years 1965-70 increased, we can on the other hand observe a general tendency towards the dropping of the population decrease rate in municipalities which had registered a very high population decrease rate (more than 15 per cent) during the years 1960-65. This factor is demonstrated in the Chugoku area as shown in Table 5, where we can see that this tendency is especially remarkable in the mountainous districts. We can more clearly define the limits of the

¹⁰ The remunerative character of each sector of Japanese agriculture changed during the 1960s, especially after the promulgation of the so-called "Fundamental Law for Agriculture" (*Nogyo Kihonho*) (Laws N° 553, 661, 734 and 756) in 1961, which aimed at promoting some specialized sectors such as stock-raising, fruit production, etc., and also the enlargement of the scale of management. Mandarin orange production, truck farming and rice cultivation, which remained advantageous though it was not encouraged by the "Fundamental Law", became remunerative compared with other forms of farming. These remunerative sectors of Japanese agriculture have hardly been developed in Hokkaido, due to climatic conditions.

population decrease rate by examining the situation for each settlement.¹¹

The natural increase rate of population dropped in depopulated villages, so the weakening of the population decrease has to be due to a setback in emigration or to the return of emigrants. It is difficult to clarify the role of these two factors from the census data but from our limited field observation we can ascertain the existence of these two new tendencies. The weakening of the drive towards emigration is, at least partly, the result of the governmental measures to combat the *kasō* phenomenon, and also partly because of the fact that, in some villages, the remaining farm-households belong to relatively upper social strata and have succeeded in attaining to a fairly stable economic condition in the agricultural management. Nevertheless, we cannot generalize these problems which must be further inquired into. Recently, much has been discussed by sociologists and geographers about the existence or non-existence of the so called "u-turn movement" and, should it exist, about its importance. The "u-turn movement" is the migration from metropolitan to non-metropolitan regions, which is considered to be the return of emigrants.¹² Discussions have been held on the adequacy of statistical treatment to provide a conclusion regarding the existence of this phenomenon and on the interpretation of recent population movements from urban to rural districts. But here, for our argument, we have to remark that most of the populations, should they exist, migrating to non-metropolitan districts, go to reside in the local urban centers; and that, furthermore, there are very few occupational changes from secondary and tertiary activities to primary activities. Generally speaking, only those who have, waiting for them, occupation based on a solid economic foundation of a certain scale of agriculture or forestry, come back to villages to succeed to their fathers' positions; in the districts where excessive depopulation has taken place, this can occur only for upper-class farmers who are limited in number.

III

The development policy, based on Art. 5 of the "Law of Urgent Measures for Underpopulated Districts" and put into effect for five years from 1970, aims mainly at the repletion of social overhead capital with subsidies granted by governmental and prefectural authorities. Direct financing for the promotion of economic activities is not a part of the governmental and prefectural undertakings based on and stabilized by the above law; in this respect, therefore, the measure for contending against the *kasō* phenomenon are often considered as having a social character rather than an economic one. But, at the same time, here we examine the development policy for under-populated areas in connection with other measures: the so-called "structural improvement measures of agriculture" based on the "Fundamental Law for Agriculture" and in existence since 1962, and various social and economic measures based on the "Law for the Development of Mountain

¹¹ We owe this observation to M. Soma, "*Shikoku Sangaku-chiho ni okeru Tochiriyo to Sanson no Henbo*" (The Evolution of Land Utilization in the Villages of the Shikoku Mountains), *Chirigaku Hyoron* Vol. 44 (Tokyo, 1971.)

Ibid., "*Nishi-Nihon no Sanson no Henka*" (Transformation of Mountain Villages in Western Japan), *Chiri*, N° 8 (Tokyo, 1973).

¹² We can find a review of this discussion in M. Okada, "*Jinko-U-turn no Jitsuzai o Meguru Ronso*" (Arguments on Japanese Population Movement from 1960 to 1970), *Chirigaku Hyoron* Vol. 46 (Tokyo, 1973).

Villages" (*Sanson Shinkoho*) of 1965. We cannot overlook the fact that some measures to combat under-population, such as resettlement plans for isolated out-of-the-way villages, are carried out in connection with the "New National Multi-lateral Development Plan" (*Shin-zenkoku Sogo Kaihatsu Keikaku*) established by the government in 1969.

In the sphere of operation, in each municipality, the "Law of Urgent Measures" gives prominence to the consolidation of the living condition of the inhabitants. But other measures, already in effect, to develop the economic resources of depopulated villages, have a certain selective character, financing mainly those farm-households which have a solid basis on which to realize a stable remunerative management.

As we have seen, designations of the *kaso* municipalities are made on the basis of the low self-sufficiency grade of municipal finances. In this respect, the *kaso* phenomenon in Japan has an institutional character derived from the Japanese local finance system which renders the financial power of municipal governments very weak. The fact must be underlined that there are no measures provided in the "Law of Urgent Measures" to strengthen the financial autonomous capacity of municipal authorities in order that they might effectively cope with and prevent the aggravation of under-population problems. All the procedures for executing the measures based on this Law, especially the subsidy system, may, however, contribute to strengthen the actual highly centralized administrative system of Japan. In this respect, we can say that the increasing concentration of human and intellectual resources in metropolitan districts is already the result of the economic and cultural centralization in modern Japan and can contribute to the further similar centralization; and the development measures now in effect are aiding this centralizing tendency.

The Fundamental Law for Agriculture could not attain its aims completely because of the various circumstances arising after its enactment. We can say this especially for the mountainous districts where under-population problems are serious.

The creation of modern large-scale agricultural projects specializing in a new type of remunerative farming, which is the fundamental aim of this law, has been hardly realized in mountainous districts; the intensive garden-farming, involving vegetable production, fruit production and stock-raising, which were considered the three main sectors to be developed, were difficult to carry out in mountainous districts. Intensive truck farming has developed in some mountainous districts (for instance, in Nagano Prefecture), the farmers availing themselves of the climatic conditions favorable to marketing late in the season; and mushroom production has been greatly on the increase during the last decade in all the mountainous districts of Japan. But the development of this sector in mountainous districts is generally limited due to the insufficiency of transportation facilities and also because of the farmers' lack of capital equipment. As for fruit-tree cultivation, especially mandarin oranges, it has been expanded very rapidly during the 1960's (about tripled,) but we should note that the soil and climate conditions of mountainous areas are less suited to this kind of farming compared with those of hilly and plain areas. Therefore, although the history of fruit-tree cultivation in mountainous areas is older than that for the plain, its development in recent years, in mountainous areas, is rather limited. Very often emigrating farmers have planted nut trees in their fields, which they prefer to maintain as their own property rather than to sell them to the remaining farmers. Therefore, though statistical data results show that for some districts the orchard acreage is increasing, actually it is no more than a reflection of the advancement of a kind of social fallow. Stock-rai-

ing, which experts expected would be the most suitable type of specialized farming for mountainous areas also met with many difficulties in developing. The most serious problem in Japanese stock-raising as a whole is the high cost of production, which sometimes pushes up the prices of its products double the international prices. This is mainly due to the use of purchased feed and holds also for the mountainous areas.

The lack of development of pasture or grassland in Japanese mountains is not derived simply from the lack of cattle-breeding tradition. In the frame of the so-called structural improving measures, many attempts have been made in recent years to create pastures or to introduce fodder cultivation. But many socio-economic factors, especially those deriving from the landownership system involving forest land have hampered such attempts; private landowners of forest land generally prefer planting trees for timber to changing the forest into pasture land involving large capital investments. Those who are able to realize a rather big stock-raising enterprise in mountainous areas are rather exceptional in Japan. In this last case, they are able to succeed in realizing specialized cattle-raising farm households with huge capital investments obtained from the sale of part of their forests; for the small farmers who have not the means for such capital investment this is rather difficult. There have been also some attempts to realize collective pasture land on the common land, but generally in Japanese villages the common land, which was formerly a source of grass for manure and fuel, is located too far from the settlements and is difficult to maintain as pasture land.

Concerning the situation of agriculture in depopulated districts, we should note also two contradictory trends in rice cultivation. Because of the governmental price-supporting system, rice cultivation still remains one of the most remunerative sectors in Japanese agriculture, though the government suffered from the increase of the surplus stock of purchased rice in the late 1960's. On one hand, we observed an increase of acreage of paddy fields in some mountainous villages, especially in Tohoku where rice cultivation was considered only as a promising type of farming; and on the other hand the increase of paddy fields, fallow since 1970 when the government adopted subsidizing measures for the suppression of rice production to cope with the surplus stock of rice. These two contradictory tendencies could be considered however a failure of the agrarian policy based on the "Fundamental Law for Agriculture" which foresaw in the early '60s the shift of the basic line of Japanese agriculture which depended mainly on rice production.

In the plain districts, though in very limited numbers, we see the rise of large-scale agricultural enterprises and collectivization of agriculture management; but in underpopulated mountain districts, the enlargement of the management scale of a farm-household meets with more difficulties. The general tendency of Japanese farmers to hesitate to sell or even to rent out land is not limited only to the farmers in mountainous areas; it derives partly from historical and psychological reasons that is, their eagerness for and attachment to the land which they gained under the terms of the Land Reforms (1947-50) and after a long history of hard life as tenant farmers. Further reasons are economic in that real property is the only kind of living security in present-day Japan, where chronic inflation prevails and where the social security system is barely developed. It is necessary to take into account the fact that the Agricultural Land Law after the land reform prescribed severe control over the carrying out of agricultural land transactions to prevent the further concentration of land in the hands of limited proprietors.

To these factors, which generally obstruct the concentration of agricultural land in the hands of upper-class farmers, we have to add another circumstance, that is, in the mountainous areas, very often the remaining farmers belong rather to the lower class which is not financially capable of purchasing land in order to enlarge their management. Also their available labor force is not sufficient to establish them as enlarged, specialized, farming enterprises. In this respect, the above-mentioned model of Sauvy is not applicable to Japanese depopulated areas for it presumes that the lower classes emigrate first. We cannot ascertain that this fact is common in Japan, but we can say that the problem is the general deterioration of living conditions in rural areas; it is not a simple proletarianization of lower-class farmers but the general exodus of material and human resources from rural districts. Thus, we should point out the double character of rural exodus in Japan, that is, the polarization of the farmers and the proletarianization of the lower class on one hand, and the general exodus of rural resources in consequence of exploitation on the part of metropolitan districts, and of the strengthening of the political and economic centralized system, on the other.