

RURAL DEPOPULATION IN POST-WAR JAPAN,  
WITH REFERENCE TO REMOTE RURAL SETTLEMENTS  
OF THE TAJIMA REGION

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"However, all the mutations so increasingly discernible in village life did not originate entirely in the agricultural unrest. A depopulation was also going on. The village had formerly contained, side by side with the agricultural labourers, an interesting and better-informed class, ranking distinctly above the former - the class to which Tess's father and mother had belonged - and including the carpenter, the smith, the shoemaker, the huckster, together with nondescript workers other than farm labourers; ...the banishment of some starved the trade of others, who were thus obliged to follow. These families, who had formed the backbone of the village life in the past, who were the depositories of the village traditions, had to seek refuge in the large centres; the process, humorously designated by statisticians as 'the tendency of the rural population towards the large towns', being really the tendency of water to flow uphill when forced by machinery."

Thomas Hardy, 1891,  
*Tess of the d'Urbervilles.*

## ABSTRACT

The thesis traces the development of rural depopulation in post-war Japan. Emphasis is placed on the demographic, economic and social factors which have affected, and been affected by, rural depopulation. Special reference is made to original research on seven remote depopulated settlements of the Tajima region of northern Hyōgo Prefecture.

It is argued that rural depopulation occurs principally in industrialized nations such as Japan, as a combined result of demographic transition and large-scale rural-urban migration of young, productive people from the remoter rural areas.

In the case of Japan, the late development of the communications network and problems of accessibility in remote rural areas are shown to have had a profound impact on the depopulation process.

Moreover, the poor organizational structure of forest management and problems in the agrarian structure are major drawbacks to the development of depopulated areas. It is argued that although rural depopulation occurred swiftly in post-war Japan, its potential severity has been alleviated on balance by several devices, notably by benevolent agricultural policy and the practice of seasonal migration for employment (*dekasegi*). There has been a rapid increase in the proportion of part-time farming in Japan, which, in depopulated settlements that are often beyond commuting distance to off-farm job opportunities, frequently takes the form of *dekasegi*. *Dekasegi* is demonstrated to be an important transitional stage in the rural depopulation process.

In the remoter settlements of Japan, the instigation of small cooperative activities are shown to alleviate many of the economic and social problems caused by rural depopulation and may help to sustain or revitalize the economy of many depopulated settlements.

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PART ONE: INTRODUCTION

Part One of the thesis will consist of Chapter I, in which the aims of the thesis, its sources and methodology will be explained, and Chapter II, which will present the disciplinary background to the study of rural depopulation, by way of introduction to research into rural depopulation in post-war Japan.

## CHAPTER I: INTRODUCTION

### (i) Aims of the thesis

Hitherto, most scholarly works on the human geography of post-war Japan have focused attention on Japan's rapid economic growth, particularly its implications for industrial development, planning for industrial location, and rapid urbanization. Remarkably little attention has been directed towards the effects of such industrial and urban growth at the national level upon the remoter rural areas of the country.

The most fundamental of these effects upon the remoter rural areas of Japan has been very rapid depopulation. The chief aim of this thesis is to present for the first time in the Western literature a comprehensive overview of rural depopulation in Japan since the Second World War and its effects on settlements in remote parts of the country. It is hoped that this discussion of depopulation will usefully enhance our understanding of present-day Japan.

Japan is the first nation outside the European cultural tradition to experience the kind of rural depopulation which occurs as a concomitant to industrialization. For this reason, research into rural depopulation hitherto has had a strongly European ethnocentric bias. By presenting an analysis of post-war rural depopulation in Japan, it is hoped to widen the debate on rural depopulation as a whole.

This thesis thus seeks to contribute to furthering understanding of (i) post-war developments in the remoter rural areas of Japan, and (ii) rural depopulation in general. While it is not intended to make a comparative study of rural depopulation in the West and Japan, some cross-reference is essential for the attainment of these two aims.

### (ii) Sources

The first half of the thesis is based on secondary sources in both the English and the Japanese languages, and the second half is based upon primary sources, from local case studies of depopulated settlements in Japan.

The English sources are almost exclusively monographs and articles in periodicals on various aspects of rural depopulation and remote rural areas in Western countries. Their treatment of the subject is, with a few notable exceptions, generally fragmented, and they of course make no

reference to rural depopulation in Japan. Taken together, though, they form the core of an interesting debate on the development of the remoter rural areas in industrialized countries. In addition, there is a handful of useful social, economic and cultural anthropological studies in English of life in rural communities of Japan; but none of these concentrates upon rural depopulation as a central issue.

Japanese language sources are of two kinds. First, there is a considerable quantity of literature upon rural depopulation, especially articles in periodicals, magazines and newspapers, but they include also some useful monographs. In the same way that the studies in English treat only of rural depopulation in Western countries, so those in Japanese are concerned exclusively with rural depopulation in Japan. Inevitably, since rural depopulation is a recent phenomenon in Japan, the Japanese literature in general lacks depth and is often rather emotive; even so, it provides a valuable overview of rural depopulation in post-war Japan. Second, use was made of the great wealth of statistical data and government reports which are issued in Japan. These were especially helpful as background material for the second half of the thesis, particularly such material as pertained to Hyōgo Prefecture and the Tajima region.

(iii) Methodology

In order to fulfil the aims of the thesis, extensive reference was made to the existing literature on rural depopulation in both English and Japanese, as described above.

It was also considered important to survey specific villages,<sup>1</sup> both to gain at first hand some insight into depopulated rural settlements of Japan, and to bring the research up to date.

The opportunity for undertaking fieldwork was presented when I was appointed to a two-year teaching post at Shōin Women's University in Kōbe, from March 1978 to September 1980. In the time available to me when free from teaching duties, I was able to establish contacts, interview local government officials and conduct village surveys.

Much valuable academic direction and help with obtaining secondary sources in Japanese was kindly provided by Professor Tetsurō Kawashima, professor of economic geography of Ōsaka City University (currently Professor Emeritus) and Professor Masanori Koga, formerly assistant

professor at Ōsaka City University and now professor of social geography at Hitotsubashi University, Tōkyō.

Through Professor Kawashima, contacts were established with the Planning Department of Hyōgo Prefectural Office. The civil servants concerned allowed me considerable time on several occasions for interviews and discussions about the selected study region, Tajima, in the north of Hyōgo Prefecture, which was chosen for being the closest depopulated region to Kōbe.

The Prefectural Office provided various essential and related statistical data, official reports and planning maps, in addition to introductions to other regional administrative bodies such as the Kinki Agricultural Administration Bureau and to the Rural District Offices of the Tajima region.

For the selection of specific villages, examination of the Agricultural Settlements Cards (*nōgyō shūzaku kādo*) for villages in the Tajima region was the initial step. Up to the time of beginning field-work (1978), there had been three national agricultural censuses: in 1960, 1970 and 1975. This census is conducted in all farming villages of Japan, which, given the very small-scale nature of Japanese farming, means that virtually all non-built-up, rural settlements are included. One "card" is produced for each village surveyed, and along with items related to agricultural production, the change in both total population and total number of households between 1960 and 1970 is recorded. By inspecting the relevant cards for villages in the Tajima regions, various villages were identified as having had very high rates of depopulation during the decade 1960 to 1970. The cards are also useful in providing some basic facts about the economy of the villages.

With this detailed information as a basis, and with the advice and cooperation of the Prefectural Planning Department, it was decided to conduct surveys in Muraoka-chō. This rural district had suffered overall some of the greatest depopulation in Hyōgo Prefecture, and was deemed by the prefectural officials to be "typical" or at least representative of depopulated rural districts in Japan as a whole. This is, indeed, arguably so, for Muraoka has suffered large losses of population since the war, depends basically upon primary economic production, especially farming, receives deep and prolonged snowfall in winter, and has long had high rates of *dekasegi* migration, of the traditional type, to work in *sake* breweries or *kōridōfu* factories (cf. Chapter IV). Five of the most depopulated villages of Muraoka-chō were eventually surveyed.

For additional variety, similar surveys were also carried out in one village in each of two other rural districts, Ōya-chō and Kasumi-chō, as these rural districts depend on mainly mining and fishing respectively. Further information concerning the approach to the field surveys is provided in the Introduction to Chapter VII.

The thesis is therefore composed of three parts: Part One, in which the disciplinary background to rural depopulation is presented; Part Two, in which the post-war trends of rural depopulation in Japan are analyzed; and Part Three, in which the results of the field surveys are analyzed and presented, and some conclusions are drawn.

## CHAPTER II: RURAL DEPOPULATION: AN OVERVIEW

### (i) Introduction

Since the late 1960s a great deal of attention has been directed towards the problems of rural depopulation in Japan, by the government, scholars and the media of the country. Despite the general concern over the issue, there has been a strong tendency for Japanese scholars in the field and for the relevant government departments in particular to treat rural depopulation as a wholly domestic issue. Although many Japanese studies of specific regions and general trends have appeared throughout the 1970s, none has attempted in any depth to place the Japanese experience within the broader context of rural depopulation as it has appeared in various other countries, nor to identify which aspects of the Japanese experience are shared with other countries and which, if any, may be considered peculiarly Japanese.

Also, on account of the lack of accessibility of Japanese research on rural depopulation to the majority of scholars of the subject in other countries, there has been virtually no exchange of information: each side has apparently chosen to attempt to analyze rural depopulation in isolation. While exchange occurs among Western scholars, little takes place between the West and Japan. Whereas rural depopulation is a relatively recent phenomenon in Japan, it has been occurring in countries such as Britain and Ireland for over a century. This longer experience of the problem in several European countries has resulted in the accumulation of a pool of knowledge and understanding - albeit imperfect - to a depth which Japanese scholars and planners have apparently not as yet attained.

This chapter will present a summary of the findings of Western scholars about the mechanism and problems associated with rural depopulation, in order to provide the broadest possible context in which to place the present study of rural depopulation in Japan. Inevitably the examples referred to in this chapter are taken from Western case studies, particularly from European countries. It must be stressed that the purpose of this thesis is not to make a comparative study between Japan and the West with regard to rural depopulation; the present chapter is included wholly in order to facilitate our understanding of the Japanese case within the wider world context.

Some of the investigations referred to in the text are purely theoretical, but the vast majority are based on actual case studies carried out in specific villages or rural areas. The chief problem in tackling a review of this topic is that while many of the studies touch on similar or identical facets of the problem, they do so to only a very limited extent, making direct comparisons difficult. Nevertheless, a limited number of themes emerge throughout. Thus, rather than review each work individually, it may be more fruitful to discuss the findings on each of these themes in turn.

The themes are in fact causal or effective factors with regard to the problems of rural areas, and as such are all interrelated; but we may broadly identify them as follows: (i) demographic problems associated with rural depopulation; (ii) economic problems, which mainly involve (a) agriculture and the agrarian structure, but also (b) non-agricultural employment opportunities; and (iii) the distribution of settlement in rural areas, which is of particular importance with regard to rural development planning and policy.

(ii) Demographic problems

To begin with, what is meant by rural depopulation? As Clout (1976) points out, the terms "rural depopulation" and "rural-urban migration" are often confused or used synonymously; but in fact rural-urban migration is only one of the factors which might bring about rural depopulation. Basically there are four preconditions: (a) natural decrease, (b) net outmigration, (c) net outmigration exceeding natural increase, or (d) net outmigration together with natural decrease.<sup>1</sup>

Contrary to what was formerly believed, it has been recognized in recent years that rural depopulation and desertion of settlements has occurred sporadically throughout Britain, from prehistoric times to the present day.<sup>2</sup> The causes include: climatic changes; the wars and invasions of the Roman, Dark Ages and Medieval times; plagues from the mid-fourteenth century; enclosure of open fields from the fourteenth to eighteenth centuries; emparkment in England from the seventeenth to nineteenth centuries; tenant clearances in the Scottish Highlands from the late eighteenth century; and the potato famine of the mid-nineteenth century in Scotland and Ireland. Apart from natural calamities such as climatic change, epidemics and famines which caused rural depopulation by

natural decrease, rural depopulation largely entailed the forcible and peremptory evictions of villagers as a result of the exigencies of the socio-political climate of the day.

The type of depopulation which is the topic of this thesis, however, is that which has occurred under less dramatic circumstances as a corollary to industrialization. It involves a slow process of village decline and voluntary outmigration from the countryside, and this is the basis of the confusion of rural depopulation with rural-urban migration. This chapter will therefore draw upon research into the areas of Western Europe which are contemporarily considered to be depopulated.

As a phenomenon, the geographical extent of rural depopulation has spread generally eastwards from the British Isles through all areas of Europe over the past century or so.<sup>3</sup> It is the Republic of Ireland more than any other country which has suffered from the effects of depopulation, since the migrants gathered not mainly in domestic urban areas as was the case in Britain, France and elsewhere, but left the country entirely. This began at the end of the eighteenth century, reached a peak with the Potato Famine of the mid-nineteenth century, and continued thereafter.<sup>4</sup>

The severity of rural depopulation in other countries, too, should not be underestimated. Absolute national population growth in all other European countries has been attributable until very recently to the growth of cities, which has often masked enormous decreases in rural populations, both in absolute numbers and as a proportion of the total. For example, although the total population of France grew between 1851 and 1931, the population in all but five per cent of the land area decreased, most especially in the mountainous Massif Central, Alps and Pyrenees.<sup>5</sup> In England and Wales, population growth of the cities was much faster than that of the rural areas between 1751 and 1851, and the rural population began to decline after 1861.<sup>6</sup>

Where depopulation has continued over the past century or so, settlements have become severely depleted of inhabitants compared with their recorded peaks. In communities of the Scottish Highlands which have suffered depopulation over several generations, the population may now be reduced to as little as from between 10 and 25 per cent of their peaks in the nineteenth century.<sup>7</sup> Absolute depopulation has not been unknown, with more than a dozen British villages having been totally deserted even since the 1950s.<sup>8</sup>

It was noted earlier that rural depopulation occurs as a result of the demographic variables of natural increase and migration. Thus, high rates of outmigration *per se* do not necessarily produce depopulation provided that the natural increase rate is high enough to offset the outflow. The redistribution of population in Western Europe from the mid-nineteenth century is therefore closely linked with demographic transition as a whole.<sup>9</sup> Without doubt it has been the reduction in natural increase at national levels coupled with net outmigration at the local level which has resulted in the depopulation of rural areas.

A crucial factor in the depopulation process is that it is typically young people, the sector of the population with the greatest reproductive potential, who outmigrate, especially those aged between 17 and 25 years old.<sup>10</sup> This generally results in the ageing of the residual population, especially as it tends to occur in the context of the ageing of the nation as a whole.<sup>11</sup>

White (1980) found that the 30-34 age group was the "pivot" (i.e., the point at which the population pyramid begins to bulge out again) in the age structure of the residual populations he studied in France,<sup>12</sup> but the 30-34 age group is not necessarily universally the "pivot". That depends on the degree of demographic decline of any individual community, which results from the length of the history of its depopulation and the severity of outmigration. In advanced stages of demographic decline, the "pivot" age group may be considerably higher than 30-34.

Generally, the outmigration of young people compounded with increased longevity accounts for the ageing of the residual communities. There is a marked increase in the proportion, and very often the absolute numbers, of elderly inhabitants.<sup>13</sup>

As a rule it may be said that the degree of demographic decline corresponds more or less with overall environmental conditions: the more inhospitable the place, the more severe the depopulation problem. Accessibility appears to be the chief physical factor involved - accessibility in terms of (a) spatial distance from the centre in the case of peripheral regions such as Cornwall or Brittany, (b) in terms of terrain in the case of mountainous areas such as the Massif Central, or (c) the two together, as in the north-west of Scotland or the Apennines of central and southern Italy.

Within broadly depopulated regions, moreover, a distinct spatial pattern emerges with regard to differentials in the severity of depopulation, primarily between upland and lowland settlements. In north-east Scotland, for example, the population of lowland parishes fell to between 45 and 70 per cent of their nineteenth century peaks, whereas that of the hills and upland core fell to less than 50 per cent; the lowest was only around 20 per cent of its recorded maximum.<sup>14</sup>

In Mid-Wales, an area generally far advanced in the process of demographic decline, Thomas systematizes similar observations into three "stages" which more or less correlate with the identifiable physical features of such an area. In stage I, there is a situation of both natural increase and immigration, "restricted to the market towns and their immediate hinterlands together with certain very limited areas which for economic or physical reasons are particularly attractive in relation to the rest of the region".<sup>15</sup> In stage II, natural increase is more than offset by outmigration, "and this is to be found in most of the lower foothill and upper valley lands which surround the upland moorland core".<sup>16</sup> The upland core itself has reached stage III, in which no immigration and continued outmigration of young people in the child-bearing age groups has resulted in natural decrease and cumulative decline.<sup>17</sup>

The remarkable coincidence of the severity of rural depopulation with peripherality and mountainous terrain appears to justify the argument that the remoteness and poor accessibility that typify such areas are the most important stimulants to depopulation. While economic causes may be demonstrated, these, as will become clear in the following section, ultimately depend upon the prescriptions of the physical environment of depopulated areas.

Problems of inaccessibility are thus fundamental to the problem of rural depopulation. To some considerable extent, though, technological developments in transport and communications may modify rural accessibility. The relationship between rural depopulation and accessibility is thus not a problem of absolute inaccessibility but of relative inaccessibility compared with the norm at any given time.

For example, Cromer cites Cairncross (1953) with regard to the relationship between rural-urban migration in the 1860s and 1870s and the construction of the railways, to the effect that the greatest outflow of population occurred along the railway lines of rural areas near urban

centres, and that the building of the railways was actually a more important element in rural depopulation than vicissitudes in agriculture.<sup>18</sup>

Another study, of nineteen villages in the Cotswolds, found that: "between 1881 and 1931 population declined steadily in all villages, but after 1931 this trend reversed itself, with particularly rapid growth in the four larger villages".<sup>19</sup> The conclusion was that the villages researched were becoming dormitory to Oxford, no doubt as a result of the increased availability of motor vehicles.

Thus it would appear that while depopulation affected virtually all rural areas early on, the increase in motorized transport, which extended feasible commuting distances, has meant that previously depopulating rural areas relatively near to major cities have, on the contrary, grown in population, a phenomenon which has been termed "the suburbanization of the countryside". Implicit in this is the change in the occupational structure which such rural areas undergo, from an agricultural to a manufacturing or service industry bias, for the immigrants from cities tend to use the village as a "dormitory" only, their work, entertainment and services being centred more often than not on a nearby town or city.<sup>20</sup>

According to Commins, "there is a considerable body of evidence to suggest that, in non-farm aggregate terms at least, rural populations are undergoing substantial growth in western societies", particularly in the USA since 1940, England and Wales since 1951 and recently in the Highlands of Scotland.<sup>21</sup> Bearing in mind Thomas's "stages" mentioned earlier, however, this note of optimism is no doubt more appropriate at regional, rather than local, levels: "there has been population growth in 'peri-urban' areas matched by a heavy loss of population in remote districts".<sup>22</sup>

Implicitly taking into consideration the importance of modes of transport and communications, Lewis, in his study of the social geographical aspects of rural communities, produces a conceptual framework of three processes, depopulation, population and repopulation, acting in "post-industrial societies":

First, depopulation as a result, primarily, of net outward migration. At a later stage, the nature of the community may be changed by growth in population as a consequence of a net immigration of adventitious population at an early stage of the life-cycle. Thirdly, there is repopulation, which refers to the retirement to the countryside by people in a late stage of the life-cycle.<sup>23</sup>

This basic concept is developed further over time and space in the following phases:

- A) an urban centre, surrounded by a landscape of traditional communities (I);
- B) an urban centre, surrounded by firstly a ring of repopulation (III), then a band of depopulating communities (II) with traditional communities (I) remaining in the peripheries; and
- C) an urban centre, surrounded by a ring of population (IV), then successive bands outwards of repopulation (III), depopulation (II), and relict features of traditional communities (I) remaining vestigially in the peripheries.<sup>24</sup>

The above section has demonstrated how rural depopulation occurs in the demographic context, how closely it is related to remoteness and problems of accessibility, and how it is the more remote and least accessible settlements which continue to depopulate even when trends towards depopulation may be reversed in lowland settlements.

(iii) Economic problems

In the foregoing section it was noted that the type of rural depopulation which occurs as a corollary to industrialization is characterized by the outmigration chiefly of younger age groups. They tend to leave at two of the crucial stages in the life cycle: leaving school and marriage. Why should this be so?

An unusually comprehensive study of the motives for migration of such young people was conducted by Hannan (1970) in County Cavan, Ireland. According to Hannan, the chief factors involved in the decision-making process on the part of the young people as to whether to stay in or leave their home are economic factors. He found, moreover, that occupational frustration and income frustration were by far the most important economic factors.<sup>25</sup> In other words, the main reasons given for outmigration were the limited variety of job opportunities and an awareness that incomes were lower locally than elsewhere.

This no doubt accounts for the occupational selectivity which has been observed in rural areas: professionals have the greatest propensity to leave, while those involved in agriculture and commerce are relatively static. The latter is due in part at least to the relatively high amount of capital invested in even a small family farm or shop.<sup>26</sup>

Withdrawal from the countryside on the part of farmers, though, while less decisive than among professional people, has nevertheless occurred steadily, and in the opinion of some experts it is the most important element in rural depopulation.<sup>27</sup> The "occupational and income"

frustration prevalent among young rural dwellers is widely recognized as being the result of the lack of occupational variety and opportunity offered in rural areas. Moreover, "the declining areas are predominantly dependent on agriculture frequently carried on in adverse natural conditions and on an economically weak farm structure".<sup>28</sup>

Hannan's study was very valuable in that it focused upon the intentions of young teenagers to move away, and then resurveyed the participants a few years later in order to discover to what degree their intentions had been fulfilled. The study found that farm girls received generally higher levels of education than farm boys, and that they had a greater propensity to migrate.<sup>29</sup>

Young men are often expected to remain on the farm in order to take over the running of it at some future date, whilst this is rarely expected of young women. Not only is farming unable to provide an income competitive with that from industry or commerce, but it is considered undesirable socially, too. Farming tends to be scorned as an occupation, not only by sons of farmers, but also by daughters and parents. Hannan found that only one-fifth of farmers' sons remained at home, and less than one-twentieth of daughters.<sup>30</sup>

Similar patterns of behaviour were recorded by Ogden in his research on migration and marriage spheres in rural France; indeed he noted how these trends have gradually become accentuated over time.<sup>31</sup> The especially high outmigration rate of young women from farming communities "has had a not inconsiderable effect on the boys and young men",<sup>32</sup> since evidence from the 1860s onwards shows that rural girls repudiate marriage to young farmers.<sup>33</sup> It is not that they shun marriage to all men from farm backgrounds, but only those of them who continue to farm.<sup>34</sup>

This general unattractiveness of farming, manifested so clearly by the attitudes of women, is the result of the inability of farming in depopulated rural areas to provide an income compatible with contemporary labour conditions and income aspirations, and this in turn depends largely upon the agrarian structure. The most severely depopulated areas, as was discussed earlier, are often mountainous regions. They tend to suffer steep slopes and poor soils; and naturally unfavourable physical conditions are often exacerbated by outmoded systems of land tenure. These are characterized by absentee landlordism and share-cropping such as in southern Italy, the holding of scattered plots, such as "run-rig"

in Scottish crofts and *parcellement* in France, and an almost universal small size of holding. All these problems reduce the viability of farms, often to a less-than-subsistence level.

Small size of holdings is largely attributable to inheritance customs and the division of family holdings over several generations, and may be as little as only two or three acres of arable land.<sup>35</sup> Such holdings, often fragmented, are characteristic of, for example, the south of Italy, the west of Ireland, France and the north-west of Scotland.<sup>36</sup>

Absolute size does provide some indication of the problems faced by farmers in remote areas, but perhaps more important is the size relative to the agricultural carrying capacity of the land in question and the ability of any given holding to support a family and provide a full-time livelihood. In the late 1960s, two-thirds of the UK's farms were below "commercial", that is, two-man, size,<sup>37</sup> and in the west of Ireland "not more than 33 per cent of farms could be classed as viable or potentially viable".<sup>38</sup> Among the farms of upland Scotland, more than half were considered incapable of providing full-time work for even one man, but only half of those farmers had any other kind of work.<sup>39</sup>

According to a 1961 survey of England and Wales:

The man-day classification established that... in 1955, ...49 per cent [of farms] required less than 275 man-days. The subsequent survey of holdings requiring between 25 and 250 standard man-days, however, showed that in 16 per cent of cases these occupiers had no other source of income.<sup>40</sup>

In other words, such farmers were underemployed by their farm holding. In the south of Italy in 1936, for example, an estimated 30 per cent of man-units were underemployed; in fact this study showed that only 43-83 days were available per man-unit in some parts.<sup>41</sup> In Mid-Wales only 18 per cent of farms were commercial, 28 per cent were viable but not on a commercial scale, and 54 per cent were part-time.<sup>42</sup>

Thus an overall picture emerges of underemployment on farms in remote and depopulated regions. The unviability of farms is partially attributable to the "reluctance of the farm population to change its way of life, however clear the economic case for doing so".<sup>43</sup> Farmers generally in Western Europe prefer instead to take up urban jobs while still working their farms on a part-time basis.<sup>44</sup> Bertrand succinctly puts this into perspective: "Part-time farming is an aspect of the transition in the nation from an agricultural to an industrial economy."<sup>45</sup>

Ever greater mechanization of agriculture in general has made the small farms and fragmented holdings which typify depopulated areas increasingly uneconomic.<sup>46</sup> In other words, the threshold size for farm viability is continually increasing.<sup>47</sup>

Undoubtedly, the antipathy on the part of such farmers towards the mechanization of agriculture is closely related to their now generally high age,<sup>48</sup> for "the elderly people who are left behind are usually the ones least willing to change their farming practices".<sup>49</sup>

Concomitant with the rise in part-time farming, the reduction in the agricultural population has occurred firstly as a result of the out-migration of young people and later also by the reduction of the aged work force through retirement and death.<sup>50</sup> In fact, in the most depopulated areas (that is, those corresponding with Thomas's stage III areas), "deaths and retirements combined and not the movement of younger people off farms to other jobs now accounts for the majority of labour losses...".<sup>51</sup>

The problem of ageing farmers is a serious one, for research has shown that farm households with a balanced age-sex structure are the most efficient:

...when comparisons were made between categories of farmers, similar with respect to soil type and farm size, the farming performance was better for those farms which had "good" household structure, and at least one adult male working full-time on the farm - or the equivalent of this. By "good household structure" was meant situations where (i) the household had pre-school or school-going children and was headed by a male; (ii) the household included a married couple under 45 years; and (iii) the household included at least one male under 45 years. Thus, farms which contributed little or nothing to agricultural growth were those with depleted demographic composition. It was estimated (Conway, 1976, p.94) that such farms accounted for about one third of the land of the Republic [of Ireland] in 1972.<sup>52</sup>

The pattern which emerges in depopulated areas, therefore, is one of small, often fragmented, farm holdings, worked by elderly farmers who are typically underemployed and inefficient, and an acute deficiency of young, innovative farmers with foresight and the skill to run their farm as a going concern. Indeed,

...some rural areas are left with insufficient labour to carry out needful land reforms. The situation is paradoxical. In the long term the drift from the land is likely to be beneficial to both agriculture and industry. In the short term it is giving rise to local, even regional, problems.<sup>53</sup>

The obvious solution to these problems, in addition to rationalization in farming, is the provision of non-agricultural employment in rural areas, appropriate to the needs and capabilities of the residual population. This must vary with the degree of demographic decline involved, but support for the introduction of off-farm job opportunities is apparently unanimous, in principle at least.<sup>54</sup>

But what kind of off-farm employment can be introduced or expanded in rural areas? A greater participation in forestry, the processing of local produce, the expansion or revival of traditional rural crafts, the development of tourism, for which most of such areas are particularly advantaged, and the introduction of new industries are all possibilities.<sup>55</sup> Not only do such jobs provide new employment opportunities for local people, but it is also important that maximum value be added to products locally rather than elsewhere, to accumulate wealth within the region in question rather than lose it to other regions.

Various studies show that practice does in fact support theory in this respect. For example, in West Highland Scotland, forestry and tourism have alleviated population decline,<sup>56</sup> and forestry has reversed it in Galloway and the North Cheviot Hills.<sup>57</sup> The potential job opportunities in forestry in rural areas include not only the management of the forest itself, but also the subsequent processing of the timber. For every one forester, the industry may support four or five employees in processing, so provided saw-mills and so on are located within the region, local job opportunities may be substantially increased.<sup>58</sup>

This is even without taking into consideration the multiplier effect: those employed locally spend most of their income locally, thus supporting local retailers and service industries; and the roads essential to the transport of timber are beneficial to the whole community. Well-planned and well-managed forests may also induce tourism through their suitability as camping and holiday cabin sites, hiking routes and nature trails, which, again, stimulate some, if limited, outside cash-flow into the area.

Most of the depopulated areas, being generally remote and mountainous, are suitable for the development of other forms of tourism, such as the landscape attractions of local beauty spots, skiing, rock-climbing, hill-walking and pony-trekking on the land itself, and boating, canoeing and fishing on lakes and rivers. All these add to the job opportunities available in remote rural areas, for they will produce a demand for accommodation, restaurant and cafeteria facilities, speciality sports

shops, souvenir kiosks, refuse collectors and car park attendants. Again, the multiplier effect is important, for holiday-makers tend to spend more freely than usual, and "it has been estimated that gross tourist expenditure has a higher multiplier effect within a local economy than the average general expenditure within that economy".<sup>59</sup>

Despite the recognized need for industry in depopulated areas,<sup>60</sup> experience has shown that the problems of initiating successful industrial growth are manifold. To begin with, there is bound to be a time lag between the initial identification of areas of severe depopulation and the ultimate establishment of firms there. That time lag may have been significant in depleting the region of its workforce most suited to employment in secondary or tertiary industries, and population projections for the area may have been misjudged.<sup>61</sup> Industrial growth can only effectively take place if industrial relocation is timed to coincide with the outflow of labour from the agricultural sector,<sup>62</sup> but by reason of the fact that a time lag is inevitable, this is practically impossible.

Even if the introduction of industry could be well-timed, there are enormous difficulties still to be overcome. Since the chief issue so far as the inhabitants of depopulated regions are concerned is the expansion of off-farm job opportunities, then the type of industry should be labour-intensive rather than capital-intensive. While labour-intensive industries are preferable for depopulated areas, depopulated areas may not necessarily be attractive for labour-intensive firms. There are several reasons for this.

The small size and sparse distribution of the residual population is such that it may be unable to absorb more than two or three small firms.<sup>63</sup> Poorly developed transport networks are often a major drawback to industrial development.<sup>64</sup> The transport network affects not only the cost of shipment of raw materials and finished goods, but also labour catchment areas. Garbett-Edwards (1972) found that in Mid-Wales, for example, employees could be recruited from within a radius of fourteen miles of a factory.<sup>65</sup> Acceptable commuting distances may be greater or less than fourteen miles, depending upon local conditions, and a prospective firm must first determine this in order to assess not only the size but also the quality of the labour force in the catchment area, before it can begin to consider the viability of the location.

The quality of the potential labour force may be less easy to determine than the quantity, and industrialists accustomed to urban employees may make misjudgements. Farmers may not necessarily prefer

*industrial* off-farm jobs,<sup>66</sup> they may not be suitable on account of age, family circumstances or lack of previous experience,<sup>67</sup> may be insufficiently skilled,<sup>68</sup> and may take some time to adapt to the industrial work pattern.<sup>69</sup> Thus, the major portion of the available labour force consists of older, non-skilled manual workers, and industries which may be induced to relocate in the area are mainly only those which chiefly require such labour or require little training.

The situation is paradoxical, for in contrast to these problems there is also the need for employment which will give incentives for the better educated and intelligent young members of the community to remain, especially opportunities in teaching, research and administration.<sup>70</sup>

However, despite all attempts, rural industrialization in remote depopulated areas can enjoy only limited success, and is summed up in the following:

In the really peripheral areas,...distance must exert a considerable influence either through costs or time or both. But it is arguable that...distance is not the all powerful determinant of structure that it is supposed to be; in these areas other conditions must be accorded their due weight.

The most important of these conditions are the size and skills of the labour force. Rural areas which are distant from the industrial conurbations are sparsely populated; with very few exceptions...they lack sizeable urban centres. Such conditions place narrow limits on the labour force that can be mustered at particular points within them; while the labour that can be obtained in such areas usually lacks the skills more readily usable in manufacturing industry. But there are, of course, other important concomitants of sparse populations, such as restricted local markets and an absence of major infrastructure and some services: these, too, have a deterrent effect on industrial development in the remote rural areas.<sup>71</sup>

Inevitably, even though industry may be successfully introduced into Thomas's stage I type areas, many of the remoter settlements of upland stage III areas remain beyond a reasonable commuting sphere.<sup>72</sup> "Even if desirable, to carry industry into every corner of the countryside is unlikely to be practical".<sup>73</sup>

The lack of infrastructure may be a drawback to industrial development, but experience in southern Italy has shown that even with enhancement of the infrastructure, the ensuing industrial developments may not meet expectations.<sup>74</sup> In this case, concentrated investment in large-scale industrial development attracted labour from the surrounding region and thereby exacerbated the depopulation problems of the peripheral areas.

Moreover, the sparsity of population in depopulated areas raises doubts as to the justification of a full provision of urban-type infrastructure. The very sparsity of the population means that the service provision is more complex and more expensive than elsewhere. Thus:

The result is that far from being underprivileged in this context, these areas are, in fact, over-privileged, since their populations are able to enjoy an element of almost personal service which is denied to those of us who live in the conurbations and large cities.<sup>75</sup>

It is clear, then, that the sparse distribution of population in remote and depopulated areas is the most important single problem holding back the development of such areas. It is that which causes the costs of social service provision to be inordinately high, and it is that which raises necessary commuting distances. Indeed, we begin to understand how the three stages of the demographic cycle demonstrated by Thomas are perpetuated in distinct spatial patterns. The inhabitants of areas in stages II and III are most likely beyond commuting distances of the stage I areas, which are the most favourably disposed towards the introduction of new industry and are likely to have a higher standard of infrastructure. In this way, the viability of economic and social activity calls into question the whole pattern of settlement distribution in existence, to which we shall now turn.

(iv) Problems associated with the distribution of settlement in remote areas

In recent years, a great deal of attention has been directed towards the study of the relationship of the existing distribution of settlements to the modern economy and in what ways it could be improved.

There is recognition of the fact that most settlements of Western Europe were founded in Roman or Medieval times under entirely different socio-economic conditions from those of today.<sup>76</sup> In many cases, their original functions are obsolete and they have failed to adapt and develop a new *raison d'être* under present circumstances.

Various studies are unanimous in their belief that depopulation affects small settlements far more than large,<sup>77</sup> and that larger settlements are more likely to grow. Apparently, therefore, there is some "threshold" level of population below which, when once reached, depopulation will start to occur and will occur at an accelerating rate, and above which population will tend to increase at an accelerating rate under favourable conditions. Is it possible to establish this threshold population? This is where research opinions begin to offer different theories from studies based

upon total village populations,<sup>78</sup> the population of adults,<sup>79</sup> and so-called "centrality"<sup>80</sup> (about which more will be said later). It is most likely that the threshold, the point below which a settlement becomes no longer viable, differs according to local circumstances, that is, according to physical, economic, social, administrative and political conditions.<sup>81</sup>

Why, then, should so much concern be voiced about the "viability" of small rural settlements? What precisely is meant by "viability" in this context? The basic problem has two sides. The first is that the resources associated with any given settlement no longer provide an income which supports its population - or more realistically, fails to provide the level of income which its inhabitants consider satisfactory in order to remain there. (This should be interpreted in the broadest sense: so long as a settlement is within commuting distance to employment elsewhere, it still "provides" a living for its inhabitants and is therefore still "viable".) In some cases, the evidence for the reduction in the viability of a settlement is all too apparent, for example in the case of lead-mining and slate-quarrying villages in mid- and north Wales, respectively, where the mine or quarry has closed. But the process more often simply involves communities based on the outmoded forms of agriculture described earlier.

As mentioned earlier, withdrawal from agriculture, even that carried on with small, fragmented holdings, in remote upland areas, is a slow process. Whilst such settlements still exist, they should still be serviced.<sup>82</sup> This is perhaps the crux of the problem of settlement viability, for there comes a point in the process of depopulation and demographic decline, where the burden of maintaining the afflicted community becomes disproportionate and unreasonable to the region or nation as a whole.<sup>83</sup>

The provision of infrastructure and social welfare facilities are invariably the domain of local authorities and must be paid for by the public purse. The outmigration of the most economically active age groups reduces the local tax base, but the cost of service provision does not decrease accordingly.<sup>84</sup> The costs per capita of the residual population therefore rise as depopulation proceeds, taxes must often be raised, this acts as a further spur to outmigration, and a vicious circle of decline ensues.<sup>85</sup> Part of the problem is that the residual population tends to be aged, and "the evidence is that overwhelmingly the over 60s are the biggest drain on the social welfare sector of the budgets"<sup>86</sup> of local governments.

However:

...if services are to be provided at all, there is an irreducible minimum provision which must be maintained and the economies of size become impossible when the size involves population numbers which could be adequately serviced by one police officer, or doctor, or teacher but which occupy such a large terrain that such an arrangement becomes physically impossible.<sup>87</sup>

Thus in the worst instances, closures of schools, shops, hospitals and so on arise from the decrease in population.<sup>88</sup>

Johnston (1966) made a study of threshold levels of population size required to support groceries and general stores in villages of Yorkshire. He calculated that a population of approximately 160 was necessary to support one such shop in a village, but:

...the number of stores increases at a greater rate than the population, so that the extra population needed to support a second establishment is only 112, and for the third it is 85.<sup>89</sup>

This demonstrates that it takes only a relatively small increase in the population size of a settlement for there to be marked improvements in the viability of service provision. In general, therefore, there is a consensus of opinion that fewer but somewhat larger settlements are required in order to solve the various economic, social and financial problems of depopulated areas.<sup>90</sup>

From the 1960s there has been much interest in "central place" theory and "growth poles". The threshold population for each function of a settlement, whether economic, social, political or administrative, varies according to the specific function. The functional importance of a settlement is referred to as its "centrality". For example, Johnston (1966), as was mentioned earlier, tested this theory by studying the threshold populations required for the function of general stores, and found that centrality did not increase in direct relation to larger population, but increased proportionately more rapidly.<sup>91</sup> This does indeed suggest that the individuals of scattered farmhouses and hamlets would benefit from greater functional efficiency by all moving to one central place. We have already noted that the larger the village or town, the more likely it is to grow and sustain growth; and growing settlements exist even in depopulated areas (Thomas's stage I settlements). Thus, it is argued, the concentration of investment into a depopulated area should be to such a "central place" or "key settlement", whose growth will then be self-sustaining, to turn it into a "growth point" or "growth pole" for the afflicted area. Peripheral hamlets and villages may continue to

depopulate, but at least their outmigrants may be largely retained within the region.<sup>92</sup> Planned "key villages" may contribute to accelerating the natural pace of this process:

...the dominant centre, or key village, generally supports a wider range of services such as shops, schools, and other public services. The usual policy for such a village is to encourage the further concentration of activities including development of a small industrial estate and encouraging residential development, subject to the usual conditions of service capacity and amenity. The permitted level of development will usually decrease down through the hierarchy [of settlements] to the fourth or fifth tier where a policy of non-growth or even phasing out may be adopted.<sup>93</sup>

It may be argued, however, that the benefits of such settlement growth points extend no further than to settlements within feasible commuting distance; that the threshold size of key settlements is bound to increase in the future anyway; that there are economic *costs* to concentration in key settlements, such as congestion and the forfeiting of capital already invested in outlying hamlets, in addition to benefits; and that the concentration into a single key village deprives other equally deserving villages nearby of investment. One solution would be to spread development and investment between five or six most central places (in terms of function, not necessarily spatially) of the region in question.<sup>94</sup>

The debate, however, as to how best to deal with the residual populations of depopulated areas, and indeed how to develop them, is continuing. In a democratic society where the individual's freedom of choice must be respected, it is simply not acceptable to evict inhabitants from their homes and move them to central places if it is against their will, however much it be for the common weal economically, socially or politically.

This dichotomy - the need for both centralized development and respect for the individual's choice of residence - clearly remains unresolved. The argument for social equity admits that those who choose to remain in residual settlements are justified in demanding a certain basic level of service provision.<sup>95</sup> In practice, however, this is simply not possible, and "only by recognising themselves as an integral part of larger geographical areas, where a certain threshold of population will support rural institutions, can smaller rural communities exist in future".<sup>96</sup>

(v) Conclusions

The foregoing sections have considered various written contributions to research into rural depopulation with particular reference to Western European examples.

First, the process by which certain areas of European countries have been affected by rural depopulation was examined in detail, and it was noted that such areas are chiefly remote, peripheral and mountainous regions.

Problems of accessibility to and within such regions are the main underlying cause of rural depopulation. Changes in methods of transport over time, however, have effected fluctuations in the severity of the depopulation problem in some rural areas, especially those closer to urban centres. It is nevertheless plain that even with present methods of transport, the remotest settlements remain comparatively inaccessible and continue to suffer depopulation.

Certain clear events in the history of rural depopulation may be noted, such as the potato famine or clearances of tenants, but generally speaking rural depopulation for the past century or so has involved a secular decline in the population of rural settlements, mainly as a corollary to industrialization, resulting from the combined effects of demographic transition and the outmigration of young people.

The motives for the outmigration of young people are primarily economic: that is, occupational and income frustration. The reason for such frustration is that the areas suffering rural depopulation depend on primary industries, especially agriculture, and given the typically unfavourable physical conditions of such regions, farming alone is generally unable to satisfy the occupation and income aspirations of young people. The adverse natural conditions of affected regions, are, moreover, frequently compounded by problems associated with very small and fragmented holdings. Farmers in residual communities tend to be aged or ageing and underemployed. There is a need, therefore, to provide off-farm employment opportunities for such farmers, which must be suitable for older, unskilled workers. In addition, there is a need for skilled white-collar jobs with good prospects of promotion in order to retain the better qualified younger inhabitants.

The introduction of such industries involves several problems: (1) there is an inevitable time lag between the appearance of rural depopulation and the introduction of industries; (2) the sparsity of the

residual population generally means that the available labour force can support few firms; (3) the quality of the labour force of residual populations may be inadequate; and (4) transport facilities are often inadequate for commuting workers, for the supply of raw materials and for the marketing and distribution of finished goods.

It is thus generally believed that the sparsity of population is the chief drawback to development in depopulated areas. The distribution of settlement is thus thought to be outmoded and in need of nucleation into fewer but larger villages. It is, however, unreasonable to compel evictions from residual communities. At the same time, though such settlements may be deprived of new investment which might stimulate growth, they still require servicing for so long as they do exist. The depletion of the population tends to cause increased *per capita* expenditure of local finances, which in turn tends to push up the rate of local taxation; and increased taxes combined with declining service provision promotes further outmigration in a vicious circle.

Whilst there is thus agreement that a strong dose of planning and development in depopulated areas is essential, there is less consensus as to the exact nature of the prescription and treatment required to cure their ills. There is insufficient information about "ultimate" or "optimal" populations - that is, the level at which populations stabilize - and about the economics of service provision in sparsely populated remote areas.<sup>97</sup> Indeed, White found that in France, "the rural reservoir for migration is now emptying so that populations are starting to stabilize at a level where there is equilibrium between the agricultural resources and their human exploiters".<sup>98</sup> There is also evidence that rural depopulation has largely abated in the Scottish Highlands and the Republic of Ireland, and, moreover, "consideration of total population numbers hides the fact that increases occurred in all regions [of the Republic] among the 'key' age cohorts of 20-29 years".<sup>99</sup>

That, indeed, is good reason for optimism that rural depopulation may really be beginning to "bottom out" in Western Europe, for trends in Ireland, which was the most severely affected country, may be indicative of trends as a whole. Nevertheless, all peripheral and economically marginal areas are sensitive indicators of the general economic climate, and it may only be that these peripheral areas of Europe such as Ireland and Scotland are suffering most acutely from the current economic depression. It remains to be seen, therefore, whether they will revert to their now traditional pattern of depopulation when economic recovery takes place, or whether their new trend will prove to be the beginnings of a

future revival.

Finally, a pertinent summary of the present chapter and its links with the following research is perhaps contained in the theoretical discussion of rural depopulation which has taken place in Japan independently of that in the West. Watanabe (1967) formulates two theories of rural depopulation, the "demographic" and the "regional" approaches.<sup>100</sup> "Demographic" depopulation is that in which outmigration causes reduction in the birth rate, and a decrease in natural increase rates occurs ultimately to the point where deaths exceed births. In other words, demographic decline sets in and the region's population becomes no longer able to regenerate itself. By contrast, "regional" depopulation is that in which initial outmigration causes the labour force of the region to be reduced to insufficient levels, and this brings about a decrease in economic activity, under-utilization or non-utilization of capital resources, and resultant paralysis of the economic and social functions of the region.

There is also the view that rural depopulation is a question of man-land ratios: initial outmigration is invariably from areas of lower economic activity to areas of greater economic activity, so that depopulating regions, contrary to common belief, are not *underpopulated* - they are depopulating because they are economically *overpopulated*.<sup>101</sup>

The following chapters will, amongst other things, illustrate how such commentators have arrived at these conclusions on the basis of their experience of rural depopulation in Japan.

## PART TWO: RURAL DEPOPULATION IN POST-WAR JAPAN

In Part One, an introductory survey of rural depopulation was presented. Part Two of the thesis examines the course of rural depopulation in post-war Japan, focusing upon the demographic (Chapter III), economic (Chapter IV) and social and cultural (Chapter V) factors involved in the process.

CHAPTER III: RURAL DEPOPULATION IN POST-WAR JAPAN:  
DEMOGRAPHIC CONSIDERATIONS

(i) Introduction

As has been shown in the preceding chapter, the various problems associated with rural depopulation are first and foremost indicated by characteristic changes in the demography of a given region, particularly the outmigration of young people and ageing of the residual population.

This chapter will discuss national demographic trends in Japan, especially since the Second World War, in order to explain the demographic context in which rural depopulation in Japan has taken place. Particular emphasis, therefore, will be placed upon changes in the demography of the rural areas of Japan, especially from 1955 to 1980. These changes are most conveniently viewed by breaking them down into what may be termed "natural" demographic features - vital statistics of net birth rates, net death rates, infant mortality rates and life expectancy at birth - and "social" demographic features such as trends in migration and household size.

(ii) Natural demographic features

First of all, it is necessary to examine the absolute increase in Japan's population (see Table III-1). The total population of 72 million in 1945 had risen to 117 million by 1980. This means that the population

Table III-1. Growth of Japan's population.

Year	Population (Thousands)	Average annual increase rate (%)
1945	72,147	0.2
1950*	84,115	2.9
1955	90,077	1.4
1960	94,302	0.9
1965	99,209	1.0
1970	104,665	1.1
1975	111,940	1.4
1980	117,057	0.9

Source: Statistics Bureau, Prime Minister's Office, 1980, p.4.

\* Excluding Okinawa.

in 1945 was approximately only 60 per cent of that of 1980, or that the population increased by two-thirds in 35 years. The abnormally low average annual increase rate of the war years (0.2 per cent from 1940 to 1945) was followed by a few years of delayed marriages, the so-called "baby boom" of 1947 to 1949, which caused the average annual increase rate temporarily to shoot up to 2.8 per cent during the period 1945-1950, whereafter it decreased and levelled off at around 1.0 per cent from 1960 to 1970. The second generation of baby boom children produced a slight but marked increase in population growth rates from 1970 to 1975, but this has since fallen to less than 0.9 per cent.<sup>1</sup>

Japan's demographic structure is hardly affected by international migration, so the post-war increase in population has been due almost entirely to natural increase, that is, an excess of births over deaths. The general decrease in the average annual increase *rate*, however, has been achieved largely by the introduction and rapid success of birth control policies.

The post-war baby boom caused enough concern to necessitate the enactment of the Eugenics Protection Act (*Yūsei Hogo-hō*) in 1948 (subsequently revised several times), which legalized abortion.<sup>2</sup> Furthermore, an official family planning campaign called the "New (Family) Life Movement" was started in 1955. It was implemented primarily through manufacturing companies,<sup>3</sup> but with the relatively high standards of education, communications, hygiene and medical competence in Japan, and with both the close ties between urban migrants and their rural families and the deeply-rooted Japanese tradition of conformity in social behaviour, the practice of birth control permeated through rural areas very rapidly. It can be seen from Table III-2 that the average crude birth rate of 33.6 births per thousand persons in the years 1947 to 1949 rapidly fell to an average of 23.7 from 1950 to 1954. After bottoming out at about 17 in the early 1960s, the birth rate rose<sup>4</sup> to a minor peak of 18.8 in 1970: this was the effect of the second baby boom.

The birth rate steadily declined throughout the 1970s to fewer than 15 per thousand. The efficiency of birth control in Japan is further demonstrated by the fact that the birth rate is low and continuing to fall despite the prohibition of inter-uterine devices and severe restrictions on the prescription of the Pill.<sup>5</sup>

But for such remarkable achievements of family planning, the natural growth rate of Japan's population would no doubt have fallen even

Table III-2. Vital statistics of Japan's population.

Year	Births	Deaths	Natural increase	Infant mortality rate (per 1,000 live births)	Expectation of life at birth	
	Per 1,000 persons				Male	Female
1947-49	33.6	12.7	20.9	67.0	50.06	53.96
1950-54	23.7	9.4	14.3	52.1	59.57	62.97
1955-59	18.1	7.8	10.3	37.7	63.60	67.75
1960-64	17.2	7.3	9.9	25.9	65.32	70.19
1965-69	17.8	6.9	10.9	16.4	67.74	72.92
1970	18.8	6.9	11.8	13.1	69.31	74.66
1974	18.6	6.5	12.1	10.8	71.16	76.31
1975	17.1	6.3	10.8	10.0	71.73	76.89
1976	16.3	6.3	10.0	9.3	72.15	77.35
1977	15.5	6.1	9.4	8.9	72.69	77.95
1978	14.9	6.1	8.8	8.4	72.97	78.33
1979	14.2	6.0	8.3	7.9	73.46	78.89
1980	13.6	6.2	7.3	7.5	73.32	78.72

Source: Statistics Bureau, Prime Minister's Office, 1983, p.18, Table 7.

Note: For 1950-54, average of 1950 to 1952.

For 1947-49, 1955-59, 1960-64 and 1965-69, at the first year of the period.

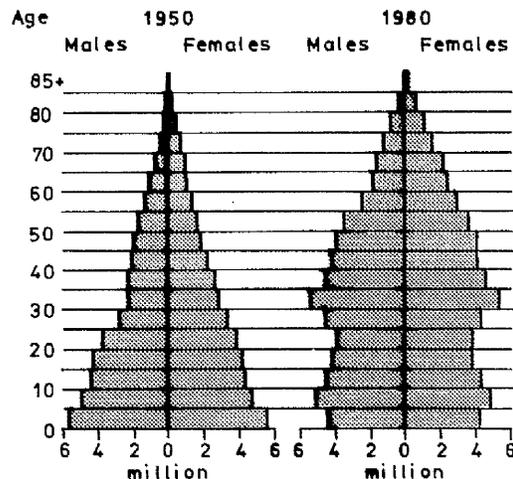
more markedly had there not been a similarly rapid decrease in the crude death rate (see Table III-2). Improvements in health care, diet, working conditions and in living standards generally brought about a rapid reduction in deaths from an average 12.7 per thousand during the period 1947 to 1949, to around 8.0 in the late 1950s. A steady decline has continued since, so that by 1977, the crude death rate stood at 6.1 per thousand, at which it appears to have stabilized. Particularly striking has been the fall in the infant mortality rate, from an average of 67.0 per thousand live births in the period 1947 to 1949, to a mere 7.5 in 1980.

As a result of all these factors, the natural increase rate - the death rate deducted from the birth rate - fell from a relatively high level of 20.9 per thousand from 1947 to 1949, to an average of 9.9 per thousand in the first half of the 1960s (see Table III-2). A steady rise again from the mid-1960s until 1974 was followed by a decline to 7.3 in 1980, a pattern which endorses the occurrence of a second baby boom in the early 1970s. It may also reflect a slight deterioration in economic conditions in the latter half of the 1970s.

The decreases in the death and infant mortality rates have resulted in a large increase in life expectancy at birth from 50.1 years for males and 54.0 years for females from 1947 to 1949, to 73.3 and 78.7 respectively in 1980, some of the highest life expectancy figures in the world.<sup>6</sup> The rapidity of demographic transition in post-war Japan means that although at present the proportion of the productive age group (15- to 64-year-olds) to the total population is the highest in the world at 67.3 per cent in 1978,<sup>7</sup> the population is nevertheless ageing at a rate unprecedented in any other country. This aspect of Japan's demography deserves emphasis, for it is of paramount importance in the rural areas of the country. Arguably it is the greatest single problem - not only demographically but socially and economically too - which Japan must face in the last quarter of the twentieth century. In the rural areas various factors have combined, as will be discussed in detail in section (iv), to magnify the problem, so that depopulated regions are currently experiencing a fore-taste of what the future is likely to hold for the nation as a whole.

This ageing process is clearly illustrated in Figure III-1, which shows how the structure of the population pyramid of Japan changed between 1950 and 1980. The proportion of children under 15 fell from over one-third of the total to less than a quarter, whilst the proportion of the aged very nearly doubled, with an increase from 4.9 per cent of the total to 9.0 per cent. The population pyramid also indicates that there is no abnormal imbalance in the proportions of the sexes in the younger and middle age groups, but that there is clearly a preponderance of females in the higher age groups, which increases significantly over the age of 55.

Figure III-1. Changes in the population pyramid.



Source: Statistics Bureau, Prime Minister's Office, 1981, p.18.

In short, after a brief period immediately after the war of a high birth rate owing to delayed marriages, the birth rate, death rate and infant mortality rate all declined rapidly and stabilized at very low levels. Thus, while the total population of Japan increased by approximately two-thirds between 1945 and 1980, this was accompanied by unprecedentedly rapid ageing.

(iii) Social demographic features

Table III-3 shows how the average number of persons per household has decreased steadily, whereas the total number of households has more than doubled since the war. This is attributable to a combination of factors, particularly the marked tendency towards fewer children per family on average, together with the trend towards "nuclear" families - a preference for only two generations to live together, consisting of married couples and their unmarried offspring, rather than the traditional household consisting of three or more generations as well as unmarried siblings.

Table III-3. Changes in the number of households and average number of persons per household, 1947-1980.

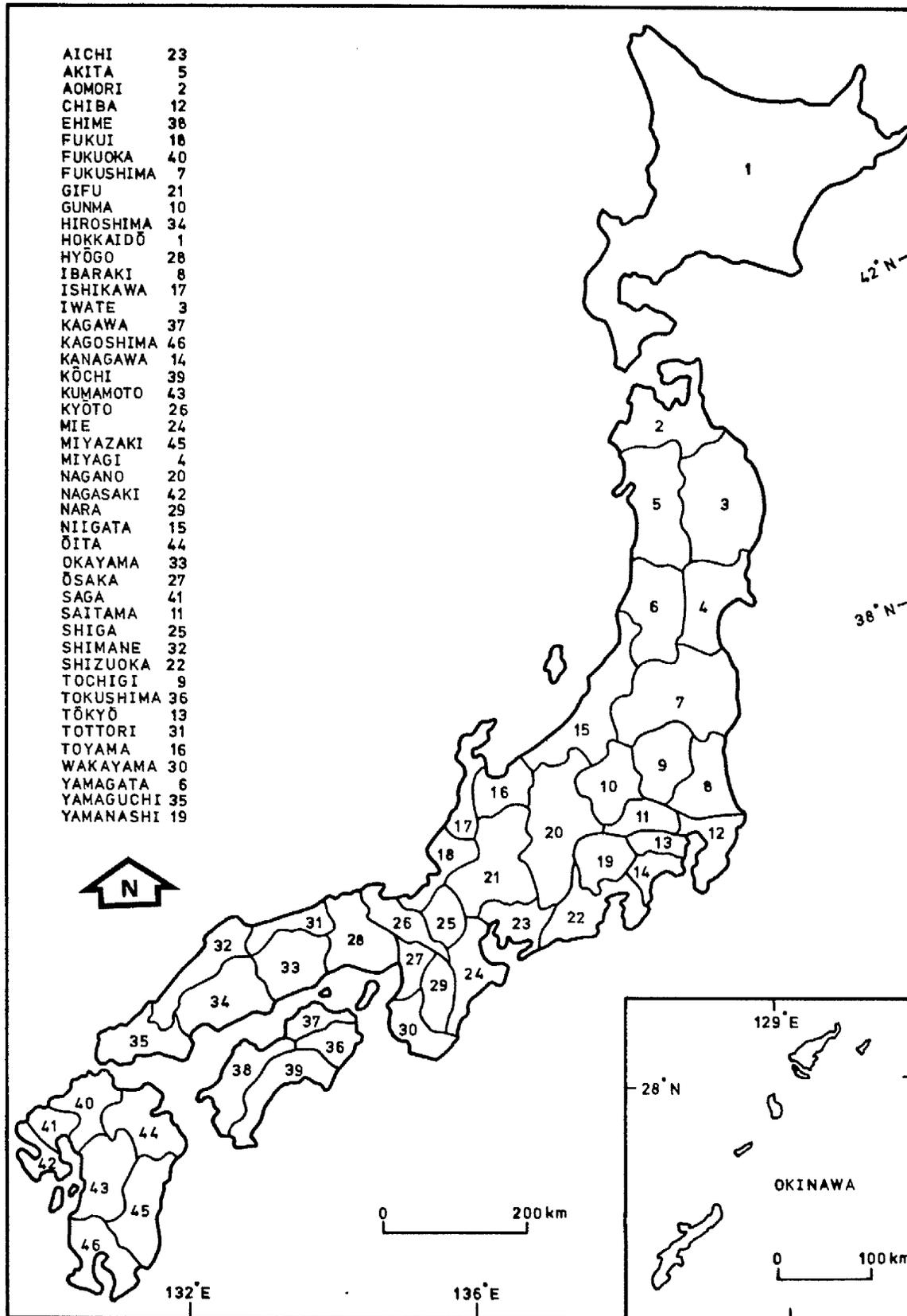
Year	Number of households (Thousands)	Average number of persons per household
1947	15,871	4.92
1950	16,580	5.02
1955	17,960	4.97
1960	20,656	4.52
1965	24,081	4.08
1970	30,391	3.44
1975	33,734	3.32
1980	35,977	3.25

Source: to 1965, Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.1, p.132, Table 17.  
1970-1980, Statistics Bureau, Prime Minister's Office, pp.36-37, Tables 27 and 28.

Note: Figures from 1970 are adjusted to the 1980 census' definition of a household.

The population density of Japan is one of the highest in the world: in 1980, Japan ranked fifth,<sup>8</sup> with an average 314 persons per square kilometre. However, over 60 per cent of Japan's land area is unsuitable for building, and in 1970, for example, the population density was about 1,800 persons per square kilometre of arable land.<sup>9</sup> Very considerable differences

Map III-1. Japan: the prefectures.



in population density exist regionally, however, reflecting the extremely uneven distribution of the population. Thus, by prefecture (see Map III-1) Tōkyō recorded the highest, with 5,391 in 1980, followed by 4,548 in Ōsaka and 2,889 in Kanagawa Prefecture, whilst that of Hokkaidō was only 71 persons per square kilometre.<sup>10</sup> Even excepting Hokkaidō with its short and peculiar colonial history, densities in some of the peripheral regions are low: in Iwate Prefecture, for example, the average density of population in 1980 amounted to only 93 per square kilometre. Bearing in mind this imbalanced pattern of population densities, it is important to examine the pattern of population redistribution in post-war Japan.

As was shown in Chapter II,<sup>11</sup> rural depopulation occurs chiefly as a result of a combination of demographic transition and rural-urban migration. The preceding section demonstrated that demographic transition in Japan was completed very rapidly indeed immediately after the Second World War.

Table III-4 shows changes in the total populations of the prefectures from 1950 to 1980, and Table III-5 records the net numbers of migrants for each prefecture annually from 1955 to 1978. Table III-6 gives the breakdown by prefecture of both natural increase and net migration rates for each intercensal period from 1960 to 1980.

First, as rural-urban migration is a major element in the depopulation process, it is important to note that net outmigration at the prefectural level in Japan has varied not only over time but also spatially. The evidence from Table III-5 indicates that it was the prefectures outside but closest to the chief urban centres in which net outmigration peaked earliest, around 1957. The remoter prefectures in the extreme north-east (Tōhoku) and extreme south-west (western Shikoku and Kyūshū) experienced greater annual volumes of outmigration, which peaked around 1963-4. Finally, net outmigration did not appear in Hokkaidō, the region most remote from the industrialized Pacific Coastal Belt, until as late as 1960, and did not peak until 1970.<sup>12</sup> (See Map III-2.) It may thus be said that rural depopulation in post-war Japan, as indicated by net outmigration rates, spread generally from the rural areas surrounding the main industrialized centres, outwards towards the remote, rural, peripheral regions of the country, and increased in severity as it spread.

As far as migration rates alone are concerned, net <sup>out</sup> migration was recorded in 36 prefectures between 1960 and 1965, in 35 prefectures between 1965 and 1970, 27 between 1970 and 1975, and 28 between 1975 and 1980. The decade from 1955 to 1965 was without doubt the most active period in Japan's post-war history of population redistribution, with literally thousands of

Table III-4. Intercensal changes in the total populations of the prefectures, 1950-1980.

Prefecture	Population increase (%)					
	1950- 1955	1955- 1960	1960- 1965	1965- 1970	1970- 1975	1975- 1980
Total	7.1	4.7	5.2	5.5	7.0	4.6
Hokkaidō	11.1	5.6	2.6	0.2	3.0	4.5
Aomori	7.8	3.2	- 0.7	0.8	2.9	3.8
Iwate	6.0	1.5	- 2.6	- 2.8	1.0	2.6
Miyagi	3.8	0.9	0.6	3.8	7.5	6.5
Akita	3.0	- 1.0	- 4.2	- 3.0	- 0.7	2.0
Yamagata	- 0.3	- 2.4	- 4.4	- 3.0	- 0.4	2.6
Fukushima	1.6	- 2.1	- 3.3	- 1.9	1.3	3.3
Ibaraki	1.2	- 0.8	0.4	4.3	9.3	9.2
Tochigi	- 0.2	- 2.2	0.5	3.9	7.5	5.5
Gunma	0.8	- 2.2	1.7	3.3	5.9	5.2
Saitama	5.4	7.4	24.0	28.2	24.7	12.4
Chiba	3.1	4.6	17.2	24.6	23.2	14.1
Tōkyō-to	28.0	20.5	12.2	5.0	2.3	- 0.5
Kanagawa	17.4	17.9	28.7	23.5	16.9	8.2
Niigata	0.5	- 1.3	- 1.8	- 1.6	1.3	2.5
Toyama	1.2	1.1	- 0.7	0.4	4.0	3.1
Ishikawa	0.9	0.7	0.7	2.2	6.7	4.6
Fukui	0.2	- 0.2	- 0.3	- 0.8	3.9	2.7
Yamanashi	- 0.5	- 3.1	- 2.4	- 0.2	2.8	2.7
Nagano	- 1.9	- 2.0	- 1.2	- 0.1	3.1	3.3
Gifu	2.5	3.5	3.8	3.4	6.2	4.9
Shizuoka	7.2	4.0	5.7	6.1	7.1	4.2
Aichi	11.2	11.6	14.1	12.2	10.0	5.0
Mie	1.7	- 0.0	2.0	1.9	5.4	3.7
Shiga	- 0.9	- 1.3	1.3	4.3	10.8	9.6
Kyōto-fu	5.6	3.0	5.5	7.0	7.8	4.2
Osaka-fu	19.7	19.2	20.9	14.5	8.6	2.3
Hyōgo	9.4	7.9	10.3	8.3	6.9	3.1
Nara	1.7	0.5	5.7	12.6	15.8	12.2
Wakayama	2.5	- 0.5	2.5	1.5	2.8	1.4
Tottori	2.3	- 2.5	- 3.2	- 1.9	2.2	3.9
Shimane	1.8	- 4.3	- 7.6	- 5.8	- 0.6	2.1
Okayama	1.7	- 1.1	- 1.4	3.8	6.3	3.1
Hiroshima	3.2	1.6	4.4	6.8	8.6	3.5
Yamaguchi	4.5	- 0.5	- 3.7	- 2.1	2.9	2.0
Tokushima	- 0.0	- 3.5	- 3.8	- 2.9	1.8	2.5
Kagawa	- 0.2	- 2.6	- 2.0	0.8	5.9	4.0
Ehime	1.2	- 2.6	- 3.6	- 2.0	3.3	2.8
Kochi	1.0	- 3.2	- 4.9	- 3.2	2.7	2.8
Fukuoka	9.3	3.8	- 1.0	1.6	6.6	6.1
Saga	3.0	- 3.2	- 7.5	- 3.8	- 0.1	3.3
Nagasaki	6.2	0.7	- 6.8	- 4.3	0.1	1.2
Kumamoto	3.7	- 2.1	- 4.6	- 4.0	0.9	4.4
Oita	1.9	- 2.9	- 4.2	- 2.7	3.0	3.2
Miyazaki	4.4	- 0.4	- 4.8	- 2.7	3.2	6.1
Kagoshima	1.8	- 4.0	- 5.6	- 6.7	- 0.3	3.5
Okinawa	14.6	10.2	5.8	1.2	10.3	6.1

Source: Statistics Bureau, Prime Minister's Office, p.9, Table 8.

Table III-5. Net numbers of migrants by prefecture, 1955-1978.

Prefecture	(Thousands)							
	1955	1956	1957	1958	1959	1960	1961	1962
Hokkaidō	1	- 2	13	11	0	- 14	- 30	- 32
Aomori	- 5	- 5	- 7	- 8	- 9	- 13	- 17	- 20
Iwate	- 8	- 9	- 12	- 9	- 12	- 15	- 20	- 21
Miyagi	- 8	- 10	- 19	- 12	- 16	- 19	- 21	- 20
Akita	- 11	- 15	- 19	- 17	- 16	- 20	- 24	- 26
Yamagata	- 14	- 15	- 18	- 17	- 18	- 17	- 23	- 23
Fukushima	- 22	- 26	- 31	- 24	- 30	- 36	- 37	- 36
Ibaraki	- 18	- 18	- 18	- 19	- 20	- 17	- 10	- 15
Tochigi	- 20	- 19	- 20	- 19	- 19	- 18	- 14	- 11
Gunma	- 14	- 17	- 22	- 21	- 20	- 17	- 15	- 10
Saitama	1	1	5	8	23	34	42	68
Chiba	- 6	- 6	2	2	4	17	30	47
Tōkyō	218	225	244	224	223	211	189	139
Kanagawa	39	44	60	59	73	93	116	134
Niigata	- 28	- 27	- 33	- 26	- 32	- 33	- 32	- 32
Toyama	- 9	- 7	- 7	- 7	- 8	- 8	- 8	- 8
Ishikawa	- 5	- 5	- 7	- 7	- 6	- 5	- 5	- 6
Fukui	- 5	- 6	- 8	- 7	- 7	- 6	- 6	- 7
Yamanashi	- 10	- 12	- 14	- 13	- 14	- 11	- 11	- 12
Nagano	- 22	- 24	- 27	- 21	- 22	- 22	- 20	- 18
Gifu	- 14	- 11	- 10	- 7	- 4	- 2	- 6	- 2
Shizuoka	- 8	- 11	- 8	- 11	- 8	- 4	- 2	4
Aichi	34	51	52	29	48	69	75	66
Mie	- 11	- 11	- 14	- 11	- 14	- 8	- 5	- 5
Shiga	- 7	- 8	- 10	- 10	- 5	- 2	- 3	- 4
Kyōto	3	2	6	- 1	- 4	- 6	2	4
Ōsaka	76	90	134	104	120	151	168	155
Hyōgo	14	19	30	15	23	34	44	41
Nara	- 8	- 8	- 8	- 7	- 6	- 6	- 4	- 0
Wakayama	- 3	- 7	- 10	- 7	- 7	- 6	- 4	- 5
Tottori	- 5	- 7	- 8	- 6	- 7	- 8	- 7	- 7
Shimane	- 8	- 10	- 13	- 10	- 14	- 13	- 14	- 17
Okayama	- 10	- 9	- 15	- 14	- 14	- 12	- 17	- 19
Hiroshima	- 9	- 6	- 6	- 5	- 7	- 6	- 4	- 0
Yamaguchi	- 6	- 4	- 6	- 6	- 12	- 16	- 19	- 18
Tokushima	- 10	- 11	- 14	- 10	- 11	- 14	- 14	- 12
Kagawa	- 6	- 7	- 12	- 8	- 10	- 12	- 12	- 9
Ehime	- 11	- 12	- 20	- 16	- 18	- 23	- 25	- 26
Kōchi	- 3	- 5	- 11	- 7	- 9	- 13	- 13	- 13
Fukuoka	1	5	12	10	- 5	- 31	- 40	- 35
Saga	- 10	- 12	- 16	- 13	- 15	- 21	- 26	- 27
Nagasaki	- 15	- 10	- 17	- 10	- 16	- 31	- 39	- 42
Kumamoto	- 6	- 13	- 21	- 21	- 22	- 30	- 36	- 33
Ōita	- 8	- 12	- 17	- 15	- 15	- 18	- 21	- 20
Miyazaki	- 5	- 8	- 15	- 11	- 12	- 16	- 19	- 22
Kagoshima	- 19	- 30	- 45	- 31	- 34	- 42	- 43	- 44

Table III-5. (Contd.)

(Thousands)

Prefecture	1963	1964	1965	1966	1967	1968	1969	1970
Hokkaidō	- 41	- 33	- 31	- 28	- 40	- 45	- 55	- 75
Aomori	- 16	- 16	- 16	- 10	- 12	- 12	- 14	- 17
Iwate	- 21	- 24	- 20	- 17	- 19	- 17	- 20	- 21
Miyagi	- 13	- 11	- 9	- 7	- 6	- 4	- 4	- 3
Akita	- 24	- 22	- 21	- 18	- 17	- 17	- 17	- 18
Yamagata	- 21	- 21	- 19	- 15	- 13	- 14	- 14	- 15
Fukushima	- 33	- 30	- 27	- 24	- 21	- 21	- 20	- 18
Ibaraki	- 19	- 17	- 17	- 17	- 8	- 5	11	14
Tochigi	- 11	- 10	- 11	- 10	- 6	- 2	2	7
Gunma	- 10	- 8	- 8	- 8	- 5	- 4	- 3	- 0
Saitama	101	100	105	114	114	114	111	136
Chiba	48	68	52	59	78	90	109	111
Tōkyō	109	38	42	21	- 26	- 47	- 66	-105
Kanagawa	119	150	126	99	114	127	115	128
Niigata	- 32	- 28	- 24	- 23	- 24	- 25	- 25	- 25
Toyama	- 9	- 8	- 8	- 9	- 8	- 8	- 7	- 4
Ishikawa	- 6	- 4	- 4	- 5	- 4	- 4	- 3	- 2
Fukui	- 6	- 7	- 7	- 6	- 6	- 7	- 6	- 4
Yamanashi	- 7	- 8	- 7	- 6	- 5	- 6	- 6	- 5
Nagano	- 19	- 16	- 16	- 15	- 14	- 13	- 12	- 10
Gifu	- 1	- 4	- 3	- 8	- 6	- 7	- 3	1
Shizuoka	6	4	3	- 0	7	4	1	10
Aichi	75	71	49	38	43	48	52	46
Mie	- 5	- 7	- 10	- 10	- 12	- 10	- 4	- 2
Shiga	- 5	- 2	- 3	- 4	- 3	1	3	8
Kyōto	3	3	3	5	8	6	5	3
Ōsaka	139	130	100	76	80	82	81	57
Hyōgo	31	29	19	12	10	15	25	18
Nara	4	2	5	9	9	11	15	17
Wakayama	- 2	- 1	- 2	- 4	- 4	- 5	- 7	- 6
Tottori	- 7	- 7	- 6	- 6	- 5	- 4	- 4	- 4
Shimane	- 17	- 18	- 17	- 13	- 13	- 12	- 13	- 12
Okayama	- 15	- 12	- 7	- 4	- 0	- 1	1	6
Hiroshima	2	5	4	8	10	14	11	9
Yamaguchi	- 28	- 25	- 17	- 19	- 21	- 17	- 15	- 12
Tokushima	- 12	- 12	- 10	- 10	- 11	- 10	- 9	- 8
Kagawa	- 5	- 7	- 6	- 6	- 3	- 3	- 3	- 2
Ehime	- 24	- 20	- 17	- 16	- 16	- 17	- 16	- 13
Kōchi	- 11	- 11	- 11	- 9	- 8	- 9	- 10	- 8
Fukuoka	- 52	- 36	- 23	- 15	- 24	- 31	- 33	- 31
Saga	- 24	- 21	- 14	- 9	- 11	- 17	- 19	- 13
Nagasaki	- 41	- 45	- 28	- 20	- 24	- 28	- 34	- 39
Kumamoto	- 29	- 32	- 23	- 17	- 21	- 26	- 30	- 33
Ōita	- 17	- 21	- 17	- 15	- 15	- 14	- 16	- 8
Miyazaki	- 21	- 20	- 15	- 9	- 13	- 14	- 16	- 18
Kagoshima	- 36	- 37	- 34	- 27	- 29	- 35	- 39	- 39

Table III-5. (Contd.)

(Thousands)

Prefecture	1971	1972	1973	1974	1975	1976	1977	1978
Hokkaidō	- 55	- 39	- 35	- 14	- 5	- 1	- 4	- 4
Aomori	- 15	- 11	- 10	- 9	- 2	- 0	- 2	- 2
Iwate	- 18	- 15	- 11	- 7	- 5	- 4	- 6	- 5
Miyagi	- 1	2	6	9	7	6	4	4
Akita	- 16	- 14	- 13	- 8	- 4	- 3	- 3	- 4
Yamagata	- 15	- 12	- 9	- 7	- 4	- 2	- 2	- 2
Fukushima	- 21	- 16	- 12	- 8	- 8	- 5	- 4	- 5
Ibaraki	10	5	15	19	15	13	15	25
Tochigi	6	3	7	4	0	1	1	1
Gunma	- 1	0	3	2	- 1	4	4	2
Saitama	122	121	122	93	81	72	61	56
Chiba	93	97	99	97	78	65	67	79
Tōkyō	- 96	-125	-173	-166	-129	-122	-106	-106
Kanagawa	114	88	67	49	33	30	35	40
Niigata	- 24	- 19	- 15	- 8	- 8	- 7	- 9	- 6
Toyama	- 4	- 3	- 2	- 2	- 2	- 2	- 1	- 1
Ishikawa	- 3	- 0	1	2	0	1	- 0	- 1
Fukui	- 4	- 2	- 1	- 1	- 1	- 0	- 2	- 2
Yamanashi	- 4	- 4	- 3	- 1	- 3	- 2	- 1	- 2
Nagano	- 7	- 6	- 4	- 3	- 4	- 0	0	- 1
Gifu	- 2	- 1	1	0	- 0	2	4	1
Shizuoka	7	2	7	- 0	- 3	- 5	- 5	- 5
Aichi	32	18	17	0	- 10	- 13	- 7	- 5
Mie	- 2	1	1	2	1	- 1	- 0	- 0
Shiga	6	6	10	10	9	10	10	7
Kyōto	- 1	8	6	- 2	1	1	- 2	- 1
Ōsaka	26	1	- 27	- 29	- 36	- 44	- 47	- 42
Hyōgo	2	0	2	- 6	- 10	- 11	- 14	- 15
Nara	19	20	22	13	11	12	19	19
Wakayama	- 4	- 4	- 5	- 5	- 3	- 2	- 3	- 3
Tottori	- 4	- 3	- 1	- 1	- 1	0	0	- 0
Shimane	- 9	- 6	- 4	- 4	- 2	- 1	- 0	- 0
Okayama	6	0	1	3	1	- 1	- 3	- 2
Hiroshima	13	15	12	2	- 2	- 6	- 5	- 13
Yamaguchi	- 11	- 7	- 8	- 5	- 2	- 1	- 2	- 3
Tokushima	- 7	- 5	- 4	- 3	- 3	- 1	- 1	- 0
Kagawa	0	1	2	3	0	2	2	0
Ehime	- 9	- 7	- 6	- 3	- 3	- 1	- 1	- 4
Kochi	- 5	- 2	- 2	- 2	0	1	0	1
Fukuoka	- 16	- 7	- 5	5	22	18	14	7
Saga	- 13	- 9	- 8	- 5	- 3	- 2	- 1	- 1
Nagasaki	- 23	- 22	- 18	- 8	- 8	- 8	- 6	- 7
Kumamoto	- 24	- 14	- 11	- 4	- 2	3	2	2
Ōita	- 3	- 9	- 7	- 2	- 0	0	- 1	- 0
Miyazaki	- 12	- 7	- 4	1	1	4	4	3
Kagoshima	- 27	- 16	- 12	- 10	- 5	- 2	1	1

Source: Kokudo-chō Chihō Shinkō-kyoku Kaso Taisaku-shitsu,  
1980, pp.218-19, Table 3.

Table III-6. Natural increase rates and net migration rates by prefecture, for intercensal periods, 1960-1980.

Prefecture	Natural increase rate (%)				Net migration rate (%)			
	1960-1965	1965-1970	1970-1975	1975-1980	1960-1965	1965-1970	1970-1975	1975-1980
Total	5.3	5.7	6.4	4.6	-	-	-	-
Hokkaido	6.2	5.7	6.0	4.8	- 3.5	- 5.5	- 3.1	- 0.3
Aomori	6.4	5.9	5.6	4.5	- 7.1	- 5.1	- 2.7	- 0.7
Iwate	5.1	4.4	4.4	4.0	- 7.7	- 7.2	- 3.4	- 1.4
Miyagi	4.9	4.7	5.6	5.1	- 4.3	- 1.0	1.8	1.4
Akita	4.1	3.3	3.4	3.3	- 8.3	- 6.3	- 4.1	- 1.3
Yamagata	3.5	2.8	3.2	3.2	- 7.8	- 5.7	- 3.7	- 0.7
Fukushima	4.5	3.6	4.3	4.2	- 7.8	- 5.5	- 3.1	- 0.9
Ibaraki	4.2	4.4	5.7	4.6	- 3.7	- 0.2	3.5	4.6
Tochigi	4.1	4.3	5.8	4.7	- 3.6	- 0.4	1.7	0.8
Gunma	4.2	4.6	5.7	4.4	- 2.4	- 1.3	0.1	0.9
Saitama	6.8	9.3	10.2	6.4	17.3	19.0	14.5	6.0
Chiba	5.7	7.4	8.8	6.0	11.5	17.2	14.5	8.2
Tokyo-to	7.4	7.8	7.3	4.4	4.8	- 2.8	- 5.0	- 4.9
Kanagawa	8.1	9.4	9.5	6.0	20.6	14.1	7.4	2.2
Niigata	3.9	3.8	4.3	3.8	- 5.6	- 5.4	- 3.0	- 1.3
Toyama	3.5	4.0	5.1	3.5	- 4.2	- 3.6	- 1.1	- 0.5
Ishikawa	3.9	4.5	5.9	4.3	- 3.1	- 2.3	0.8	0.3
Fukui	4.0	3.7	4.7	3.8	- 4.3	- 4.6	- 0.8	- 1.1
Yamanashi	4.0	3.9	4.1	3.2	- 6.4	- 4.0	- 1.3	- 0.5
Nagano	3.4	3.5	4.3	3.5	- 4.5	- 3.6	- 1.2	- 0.2
Gifu	5.1	5.2	5.9	4.3	- 1.3	- 1.7	0.3	0.7
Shizuoka	5.6	5.8	6.7	4.9	0.1	0.2	0.4	- 0.7
Aichi	6.9	7.8	8.5	5.6	7.1	4.5	1.5	- 0.6
Mie	4.3	4.2	5.0	3.5	- 2.3	- 2.3	0.4	0.2
Shiga	3.6	3.9	5.8	4.9	- 2.3	0.3	5.0	4.7
Kyoto-fu	4.5	5.5	6.3	4.3	1.0	1.5	1.5	- 0.0
Osaka-fu	8.0	8.8	8.6	5.2	12.9	5.7	- 0.0	- 2.8
Hyogo	5.8	6.4	7.0	4.6	4.5	1.9	- 0.0	- 1.6
Nara	4.0	5.2	6.5	4.4	1.8	7.4	9.3	7.8
Wakayama	4.0	4.1	4.6	2.9	- 1.5	- 2.6	- 1.7	- 1.5
Tottori	3.1	2.4	3.5	3.2	- 6.3	- 4.3	- 1.3	0.8
Shimane	2.4	1.9	2.5	2.2	-10.0	- 7.7	- 3.1	- 0.2
Okayama	3.1	3.7	5.1	3.6	- 4.5	0.1	1.2	- 0.5
Hiroshima	4.1	5.0	6.4	4.4	0.4	1.8	2.2	- 0.9
Yamaguchi	3.5	3.6	4.4	3.1	- 7.2	- 5.7	- 1.5	- 1.1
Tokushima	2.8	2.4	3.2	2.6	- 6.6	- 5.4	- 1.5	- 0.1
Kagawa	2.9	3.1	4.6	3.6	- 4.8	- 2.3	1.3	0.5
Ehime	3.8	3.4	4.3	3.4	- 7.4	- 5.4	- 1.0	- 0.6
Kochi	2.4	1.9	2.9	2.1	- 7.3	- 5.0	- 0.1	0.8
Fukuoka	4.7	5.1	5.7	4.7	- 5.7	- 3.5	0.9	1.4
Saga	4.0	3.6	3.9	3.6	-11.5	- 7.4	- 4.0	- 0.3
Nagasaki	5.2	4.5	4.6	3.9	-12.0	- 8.9	- 4.5	- 2.7
Kumamoto	4.0	3.3	3.4	3.4	- 8.6	- 7.3	- 2.6	0.9
Oita	3.3	2.9	3.8	3.3	- 7.5	- 5.6	- 0.8	- 0.1
Miyazaki	4.8	4.0	4.6	4.5	- 9.5	- 6.7	- 1.4	1.6
Kagoshima	4.1	2.8	2.7	2.8	- 9.7	- 9.5	- 3.0	0.7
Okinawa	9.7	8.6	9.1	7.6	- 4.0	- 7.4	1.3	- 1.5

Source: Statistics Bureau, Prime Minister's Office, 1980, p.12, Table 9.

Map III-2. Japan: the regions.



Source: Association of Japanese Geographers, 1980, p.419.

rural migrants from all parts of the country converging annually, broadly speaking, on the three main agglomerations centred on Tōkyō, Ōsaka and Nagoya. Intercensal net outmigration rates (see Table III-6) reached over 10 per cent in the three prefectures of Nagasaki, Saga and Shimane between 1960 and 1965. It is noteworthy that the peak rate of out-migration for 31 prefectures was recorded during this period, all of which were rural prefectures. Inter-prefectural population movements reached their peak in the mid-1960s, thereafter declined in volume, and later altered somewhat in character.

The suburbanization process around Tōkyō became marked in the mid-1960s, and Tōkyō Prefecture began to suffer net outmigration from 1967. Tōkyō's maximum rate of net outmigration was experienced between 1970 and 1975, and it was the only prefecture with a peak net outmigration rate during that intercensal period.

In 1973 the oil crisis brought the period of rapid economic growth to an end. This in turn drew large-scale inter-prefectural mobility to a halt. The highest net outmigration rate for intercensal period 1970-1975 was only 5.0 per cent - and that, as mentioned above, was in Tōkyō.

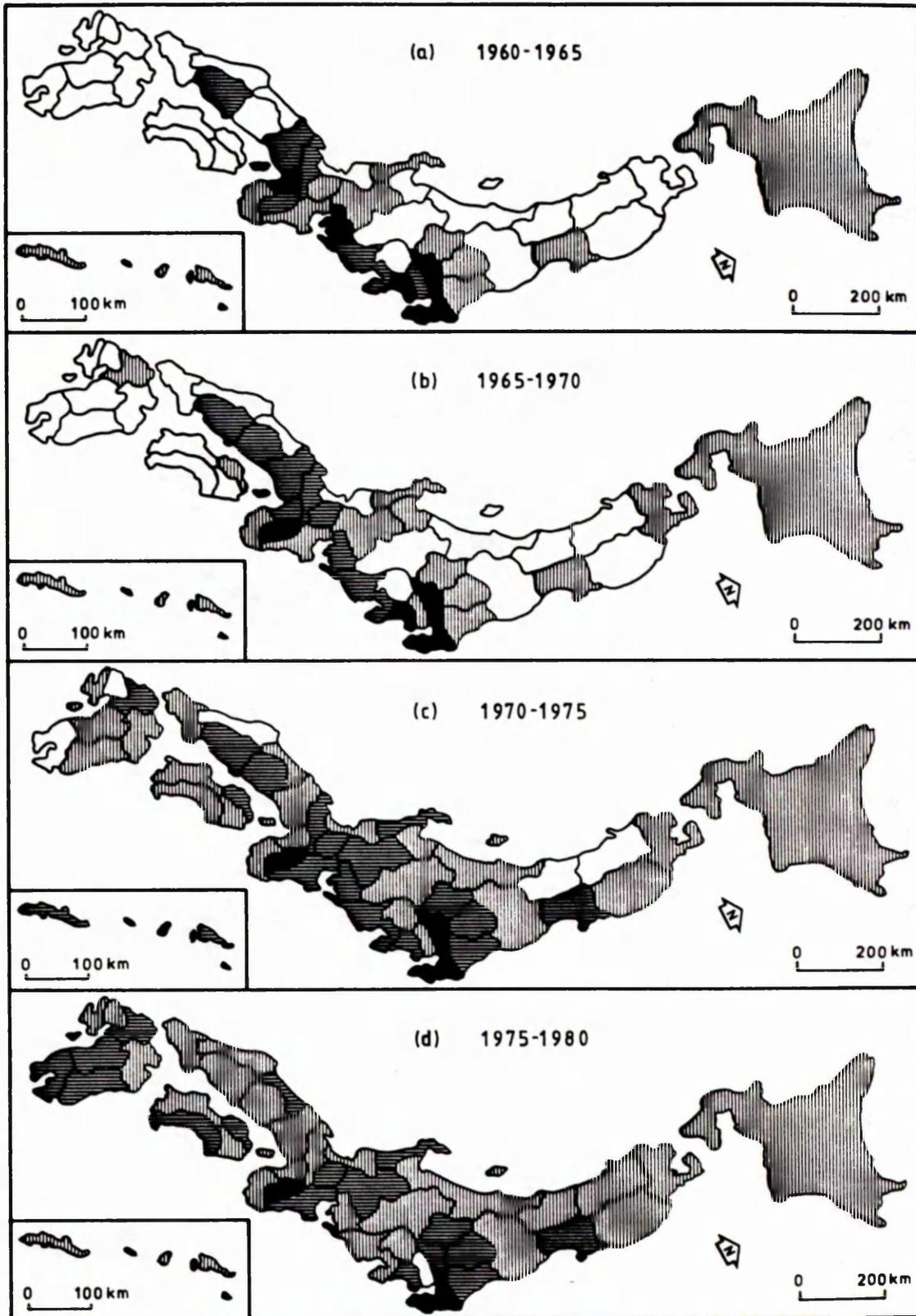
Inter-prefectural mobility slackened even further from 1975 to 1980. Five prefectures recorded their highest outmigration rates since the war during that period: Shizuoka, Aichi, Ōsaka, Hyōgo and Hiroshima, all of which have major urban centres.

In other words, at the prefectural level there has been a complete turnabout in the nature of those prefectures suffering net outmigration, from predominantly rural to predominantly urban, industrialized prefectures, the change becoming apparent from around 1970.

This marked fall-off in inter-regional mobility from the early 1970s gave rise to considerable optimism that a so-called "U-turn" phenomenon of reverse migration (that is, from urban to rural areas) was beginning to take place.<sup>13</sup> This involved not so much return to villages of origin, however, as "return" to the larger provincial cities and to prefectural capitals. (This has been termed the "J-turn" phenomenon.)

With regard to differentials in natural increase rates, the majority of prefectures (32) recorded their highest natural increase rate between 1970 and 1975, no doubt as a result of the second baby boom. Twelve of the other 14 prefectures recorded their highest natural increase rate between 1960 and 1965, all of which were either in the far north, in Hokkaidō and Tōhoku, or the far south, in Kyūshū and Okinawa. It would seem reasonable to deduce that depopulation had already so depleted these

Map III-3. Net migration and natural increase, 1960-1980.



	Prefectures				Population
	(a)	(b)	(c)	(d)	
Immigration > natural increase	5	4	3	2	} Increase
Immigration < natural increase	6	8	17	17	
Outmigration < natural increase	11	15	22	27	
Outmigration > natural increase	25	20	5	1	

regions of their reproductive age groups by the early 1970s that the second baby boom was significantly less conspicuous. On the other hand, the two remaining prefectures, which both recorded their highest natural increase rates from 1965 to 1970, were Tōkyō and Ōsaka, as a result of the massive influx of young people with the greatest reproductive potential during the 1960s.

The combined effects of net migration and natural increase are shown graphically in Map III-3. The prefectures in which net outmigration exceeded natural increase are those which suffered the most acutely from depopulation. Hokkaidō has also been mostly severely depopulated, but the effects at the prefectural level are masked by the growth of its cities, especially Sapporo. In general, though, it may be said that the growth of the urban and suburban areas in post-war Japan has been at the expense of the depopulation of the remote and mountainous prefectures of the Tōhoku, Hokuriku, Tōsan, San'in, Shikoku and Kyūshū regions, especially from the mid-1950s to around 1970.

(iv) Demographic trends in the rural areas

There appears to be a broad consensus of opinion in Japan that rural depopulation has "regional" characteristics; there is less agreement on the regionalization itself, with Hokkaidō or central Japan sometimes being considered as separate regions. A common opinion, though, is that rural depopulation in north-eastern Japan is differentiated from that of south-western Japan.<sup>14</sup> Although this differentiation is based on various factors (including non-demographic ones, such as a larger average size of land holdings in the north-east, and a longer history of commercialization in the south-west), the most frequent assumption cited is that temporary migration for employment (*dekasegi*) is "typical" in depopulated rural areas of the north-east, whereas permanent outmigration of whole families (*kyōka rison*) is common in south-western Japan.<sup>15</sup> As will be shown later, however,<sup>16</sup> the importance of this distinction, especially with regard to outmigration of whole families at once, is somewhat exaggerated.

For the purpose of examining demographic trends in predominantly rural prefectures, it is convenient to define them here as the 38 "provincial" prefectures outside those of the three main agglomerations:<sup>17</sup> that is, all prefectures except Tōkyō, Saitama, Chiba and Kanagawa (the urbanized region centred on Tōkyō), Aichi and Mie (centred on Nagoya) and Ōsaka, Kyōto and Hyōgo Prefectures (centred on Ōsaka).

Table III-7. Net outmigration rates for 15- to 22-year-olds from provincial prefectures, 1955-1970, (%).

Age in census year (1960, 1965 or 1970)	15	16	17	18	19	20	21	22
1955-1960	8.1	13.8	14.2	19.4	24.0	20.9	17.0	15.4
1960-1965	6.8	11.7	12.7	21.0	30.6	25.1	19.4	18.5
1965-1970	4.1	7.6	8.5	19.3	29.1	24.9	19.6	17.5
	23	24	25	26	27	28	29	
1955-1960	11.8	7.6	6.4	5.7	5.3	4.6	4.1	
1960-1965	12.7	7.0	6.8	6.8	6.3	6.1	5.2	
1965-1970	8.4	2.5	1.7	0.9	0.0	0.1	0.0	

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.2, p.484, Table 3.

Outmigrants were characteristically young people, and Table III-7 shows the net percentage of 15- to 29-year-olds who outmigrated from provincial prefectures between 1955 and 1970. Clearly, 19-year-olds consistently showed the highest propensity to leave, with between a quarter and a third of them in provincial prefectures outmigrating during that period. It may reasonably be surmised that the majority of these were school-leavers seeking jobs or going on to higher education establishments.

The concentration of young people from rural areas into the three main urban centres during the late 1960s is demonstrated also in Table III-8, which shows the proportion of the baby boom cohort remaining in their home region in 1970. On average, the provincial prefectures had retained only two-thirds of their 20- to 24-year-olds, whilst the three main agglomerations had gained two-thirds from elsewhere; migrants were predominantly male.<sup>18</sup>

The outflow of young people caused a marked increase in the proportion of the middle and higher age groups in rural areas, not only because of their outmigration *per se* but also because the demographic effect of their leaving is to deprive the region of their potential offspring. From Table III-6 it can be seen that the lowest natural increase of all prefectures was 1.9 per cent, recorded in both Shimane and Kōchi during the intercensal period 1965-1970. This contrasts very markedly

Table III-8. The proportion of the baby boom cohort remaining in their home region, 1970.

	Age 0-4 1950 (A) *	Age 20-24 1970 (B) *	B/A
Hokkaidō	664	514	0.77
Tōhoku	1,604	934	0.58
Northern Kantō	1,059	716	0.68
Tōkai	538	467	0.86
Hokuriku	375	257	0.69
Peripheral Kinki	312	269	0.86
San'in	201	95	0.47
San'yō	689	517	0.75
Shikoku	575	324	0.56
Northern Kyūshū	1,054	684	0.65
Southern Kyūshū	669	313	0.47
Provincial total	7,740	5,090	0.66
Total of three main agglomerations	3,465	5,570	1.61
Total of Japan	11,205	10,660	0.95

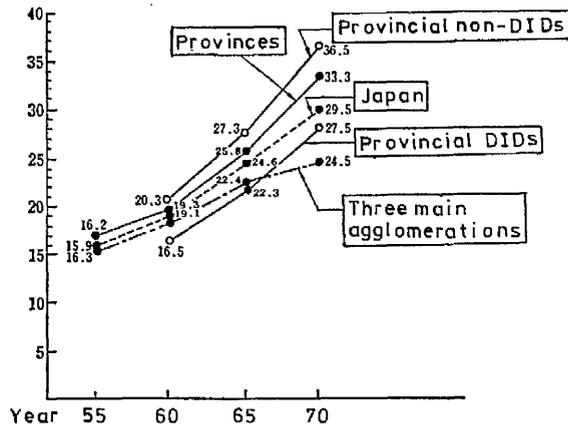
(\* Thousands)

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.2, p.485, Table 5.

with the highest figure of 10.2 per cent natural increase in Saitama during the period 1970-1975. Generally speaking, natural increase in predominantly rural prefectures has been consistently and substantially lower than in urbanized prefectures, the former being often only half the latter.

The outmigration of young people and the subsequent low birth rates exacerbate the ageing process to a considerable degree. In the DIDs (densely inhabited districts)<sup>19</sup> of even rural areas in Japan this is less marked, but, as may be seen from Figure III-2, the non-DID inhabitants of provincial prefectures show the highest index of ageing, which is defined as the proportion of those of 65 years or more to the juvenile population of 0- to 14-year-olds. Indeed, from Table III-9 it is clear that the population of DIDs in *gun* (prefectural subdivisions which are predominantly rural) actually grew by nearly two-thirds between 1965 and 1970, whereas that in non-DIDs decreased by 6.6 per cent. Moreover, the table shows

Figure III-2. Changes in the index of ageing.



Source: Kokudo-chō, 1978, Vol. 2, p. 486, Fig. 2.

that a consistent increase in the population of DIDs in all types of areas is matched by a consistent decrease in non-DID type areas. Thus there is sufficient evidence that even within rural areas, population is tending to migrate from sparsely inhabited parts to pockets of more concentrated population.

Table III-9. The population in DIDs and non-DIDs, 1965-1970.

		Population of DIDs	Population of non-DIDs
Increase (Thousands)	Total	8,273	-2,828
	<i>Shi</i>	7,016	-1,025
	<i>Gun</i>	1,257	-1,803
Increase (%)	Total	17.5	-5.5
	<i>Shi</i>	15.5	-4.3
	<i>Gun</i>	63.2	-6.6

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.2, p.492, Table 10.

Table III-10. Comparison between designated depopulated districts and Japan as a whole, of changes in the proportions of the major age groups.

		1965/1960	1970/1965	1975/1970	1975/1960
0 - 14 yrs.	Depop. Japan	-25.1 -10.3	-26.2 - 1.6	-20.7 8.3	-56.1 - 4.5
15 - 64 yrs.	Depop. Japan	- 8.4 -11.5	- 9.2 6.5	- 6.1 5.1	-23.6 27.0
Over 65 yrs.	Depop. Japan	7.1 15.5	6.9 18.7	9.8 19.9	25.7 64.4
TOTAL	Depop. Japan	-13.3 5.2	-13.1 5.5	- 8.2 6.9	-30.9 18.7

Source: Kokudo-chō Chihō Shinkō-kyoku Kaso Taisaku-shitsu, p.16, Table 1-12.

(Depop. = designated depopulated districts)

Table III-10 compares the progression of age structure imbalance in areas designated as districts of rural depopulation<sup>20</sup> with that of the country as a whole between 1960 and 1975. From this it is clear that the numbers of children in depopulated districts decreased by more than half during that period, but the numbers of old people increased by one quarter. Indeed, the proportion of over-65-year-olds in depopulated districts in 1975 was that projected for the nation as a whole in 1995, and:

Depopulated districts have been transfigured from 'areas of largely old people and children' to 'areas of largely old people', due to the continued outmigration of population, particularly young people.<sup>21</sup>

This increase in the proportion of the aged naturally inflates mortality rates in rural areas. Various other factors may also be cited - such as significantly poorer and fewer medical facilities, poorer quality housing, lower standards of services such as sewerage, refuse disposal and piped water, and lower levels of education amongst old people - which together result in higher mortality rates in rural than urban areas.<sup>22</sup>

Age-specific mortality rates affect expectation of life at birth, and Table III-11 shows age-specific mortality rates by prefecture. Slight deviations from the rule of thumb "rural areas = higher mortality rates, urban areas = lower mortality rates" may be observed for certain age groups, but the results are quite surprisingly consistent. Kōchi Prefecture appears

Table III-11. Prefectural age-specific mortality rates, 1975.

Age group	Males			Females		
	Highest	Lowest	Average	Highest	Lowest	Average
0	15.09 (Iwate)	9.2 (Okayama)	11.76	12.00 (Iwate)	6.80 (Yamanashi)	9.25
1	2.31 (Iwate)	0.97 (Kyoto)	1.60	1.97 (Toyama)	0.89 (Shimane)	1.35
2	1.96 (Tottori)	0.70 (Chiba)	1.08	1.37 (Aichi)	0.51 (Okinawa)	0.78
3	1.37 (Aomori)	0.46 (Nara)	0.81	1.18 (Miyazaki)	0.29 (Oita)	0.60
4	1.19 (Kochi)	0.38 (Nagano)	0.69	0.97 (Tottori)	0.14 (Nara)	0.49
5-9	3.33 (Kagawa)	1.59 (Fukui)	2.32	1.93 (Kochi)	0.58 (Shimane)	1.43
10-14	2.22 (Kochi)	0.94 (Saga)	1.51	1.55 (Oita)	0.59 (Tochigi)	0.96
15-19	6.93 (Ibaraki)	2.66 (Tokyo)	4.68	2.71 (Kochi)	1.27 (Tokyo)	1.76
20-24	9.33 (Kochi)	3.32 (Tokyo)	6.30	4.46 (Okinawa)	2.11 (Tokyo)	2.95
25-29	8.54 (Kochi)	3.95 (Tokyo)	5.92	4.66 (Kagoshima)	2.53 (Fukui)	3.36
30-34	10.03 (Kochi)	5.05 (Aichi)	7.24	5.47 (Iwate)	3.31 (Chiba)	4.19
35-39	16.24 (Kochi)	7.92 (Tokyo)	10.63	7.32 (Kagoshima)	4.71 (Kanagawa)	5.76
40-44	21.63 (Kochi)	11.93 (Fukui)	16.46	10.62 (Okinawa)	7.03 (Niigata)	8.51
45-49	28.64 (Nagasaki)	18.11 (Fukui)	23.08	14.32 (Tokushima)	10.26 (Shimane)	12.55
50-54	42.86 (Miyazaki)	29.08 (Aichi)	33.74	23.31 (Tokushima)	16.30 (Tottori)	19.40
55-59	62.17 (Aomori)	45.97 (Kanagawa)	52.73	33.91 (Kochi)	25.75 (Yamanashi)	29.37
60-64	99.91 (Aomori)	75.17 (Kanagawa)	84.77	52.96 (Tokushima)	39.09 (Okinawa)	46.90
65-69	167.61 (Akita)	122.79 (Okinawa)	140.65	92.15 (Akita)	61.20 (Okinawa)	79.96
70-74	259.06 (Akita)	198.91 (Okinawa)	227.50	165.66 (Akita)	103.33 (Okinawa)	142.36
75-79	393.08 (Tochigi)	283.41 (Okinawa)	352.35	280.49 (Akita)	188.63 (Okinawa)	252.80
80-84	559.77 (Shiga)	414.08 (Okinawa)	511.93	479.96 (Akita)	303.94 (Okinawa)	416.08

Source: Kōseishō Jinkō Mondai Kenkyūsho, 1980, p.78, Table 10.

frequently amongst the highest mortality rates, whilst Tōkyō has a good record in this respect. The most conspicuous exception to the general rule is that although Akita, a rural prefecture in the north, heads the list of highest mortality rates in the over-65 age groups, Okinawa, the southern-most but also rural prefecture, consistently has the lowest for the same groups. This suggests that for the aged in all regions climatic factors (particularly winter temperatures) have the greatest influence over mortality rates.

In 1965 the five prefectures with the highest average life expectancy at birth were, in order, Tōkyō, Kyōto, Kanagawa, Aichi and Gifu - all characteristically urbanized or suburbanized, whilst the five prefectures with the lowest were Aomori, Akita, Iwate, Nagasaki and Fukushima - predictably, all predominantly rural prefectures. Considering the high proportion of old people in rural areas and the high proportion of young people in urban areas, this is as may be expected, and Table III-12 demonstrates this tendency. Nevertheless, it also shows that the gap between expectation of life at birth in rural and urban areas did narrow considerably over the decade 1965 to 1975, even despite the rapid ageing of the population in rural areas. From this it may be inferred that lower expectation of life in rural areas at the beginning of that period was due not merely to the top-heavy age structure of the population, but also to a considerably lower standard of living and amenities in rural areas at that time than in urban areas. The narrowing of the gap in life expectancy has very probably been achieved by more rapid improvements in living standards in rural areas than in urban areas during that decade.

Table III-12. Distribution of average life expectancy by prefecture, 1965-1975.

	(Years)					
	MALES			FEMALES		
	1965	1970	1975	1965	1970	1975
Longest	69.84 (Tōkyō)	71.30 (Tōkyō)	73.19 (Tōkyō)	74.70 (Tōkyō)	76.37 (Okayama)	77.89 (Tōkyō)
Shortest	65.32 (Aomori)	67.56 (Akita)	69.69 (Aomori)	71.24 (Akita)	73.13 (Iwate)	75.86 (Akita)
Difference	4.52	3.74	3.50	3.46	2.24	2.03
Average	67.49	69.41	71.44	72.88	75.05	76.84

Source: Kōseishō Jinkō Mondai Kenkyūsho, 1980, p.77, Table 9.

Finally, the average size of family also differs regionally, with more traditional, predominantly rural prefectures showing slightly higher figures than the "modern", generally more urbanized prefectures: the highest average number of persons per household in 1980 was 3.87 recorded in Yamagata, followed by Toyama, Fukui, Saga, Okinawa and Fukushima, whereas Tōkyō recorded the lowest, 2.70, followed by Kagoshima, Kōchi, Hokkaidō, Ōsaka and Kyōto. Of these latter, Kagoshima, Kōchi and Hokkaidō are peripheral prefectures which have suffered some of the most serious depopulation, and it is reasonable to surmise that their low average numbers per household are due to their having a relatively high proportion of what may be termed "residual" households, that is, middle-aged and elderly couples and single person households who have remained after the outmigration of their children or the death of an elderly spouse. This is quite the opposite of urban areas, where there is a high proportion of single person households consisting of young people not yet married, or young couples embarking on married life.

(v) Conclusions

This chapter has analyzed the chief demographic characteristics of rural areas in post-war Japan in the context of the demography of the nation as a whole.

Population change in Japan since the Second World War may be regarded as being inextricably related to the rapid growth of the industrial economy. In broad terms, the population characteristics of Japan during the last twenty years or so are those normally associated with the final phase of the classic demographic transition - the phase, that is, in which fertility, mortality and family size tend to stabilize at low levels, contemporaneously with high rates of industrialization and urbanization. Indeed, the discussion drew attention to the fact that relatively high birth and death rates in Japan immediately after the war have been reduced to some of the lowest in the world, with the accompanying side-effect of a general ageing more rapid than ever experienced elsewhere.

The expansion of the industrial economy has been accompanied, amongst other things, by rural depopulation essentially similar to that discussed in Chapter I. Several important features identified by observers of rural depopulation in Western Europe are equally apparent in Japan. It has been predominantly young people who have left the rural areas. As a result, residual communities within areas suffering from rural depopulation are characterized by a disproportionately large population of old people, and

the ageing of the population of such communities is proceeding at a faster rate than the national average.

Moreover, rural depopulation developed temporally and spatially outwards from central Japan, intensifying as it proceeded to the peripheries of the country. This evidence lends support to the contention that rural depopulation is at its most severe in peripheral and mountainous regions.

Discussion of the various economic and social causes and effects of rural depopulation has been reserved for the following chapters.

CHAPTER IV: RURAL DEPOPULATION IN POST-WAR JAPAN:  
ECONOMIC CONSIDERATIONS

(i) Introduction

The preceding chapter analyzed in general terms the changes which have taken place since the Second World War in the demography of Japan's rural areas; but why did such changes occur, and what have been the effects on the residual populations of depopulated areas?

To provide some of the answers to these questions, this chapter will turn attention to the chief economic factors influencing rural depopulation in post-war Japan. This involves tracing the recent events of Japan's economic history, in particular how events at the national or macro-level have affected activities at the village and farm household or micro-level.

The economies of the majority of depopulated rural areas have traditionally relied largely upon primary economic activities, especially farming, forestry and mining for metal ores. Therefore it is chiefly upon these activities in the remoter rural areas of Japan that the chapter will focus, but at the same time attempts will be made to relate developments in these sectors to the progress of the Japanese economy as a whole since the Second World War.

(ii) Agriculture

It is first necessary to examine the role of agriculture in rural depopulation in Japan, for in almost all of the districts designated by the government as suffering from rural depopulation (*kasō chiiki*),<sup>1</sup> farming is a major economic activity. Any analysis of the causes of rural depopulation in post-war Japan would be seriously incomplete without consideration of the changes which have taken place in the agricultural sector of the Japanese economy since 1945. An understanding of post-war developments in agriculture and their implications for the remoter rural areas of the country is therefore a prerequisite to this study.

In roughly chronological order these main developments included Land Reform in 1946; technological innovations from the early 1950s; changes in livestock production from the mid-1950s; and abandonment of farming and a rapid rise in the proportion of part-time farmers, again especially from the mid-1950s.

(a) Agricultural policy

Of fundamental importance to the post-war development of agriculture was the Land Reform of 1946, by which absentee landlords were dispossessed and their land reallocated to former tenants (see Table IV-1). Also, strict limitations were imposed on the area of land which could be rented out by resident landlords; and since the architects of the Land Reform assumed that the basic unit of agricultural organization in the countryside should be the small family farm, the Land Reform placed limitations on the amount of land that could be held even by owner occupiers.<sup>2</sup> As a result the average size of the Japanese farm holding has remained at or around one hectare since 1946 (see Table IV-2).<sup>3</sup> Furthermore, the Land Reform did nothing to encourage the consolidation of holdings, which were traditionally fragmented.

Table IV-1. The ownership pattern of farm holdings.

(1,000s/%)

	1941		1960		1975		1980	
Owner-farmers	1,656	30.6	4,552	75.2	4,160	84.0	4,028	86.4
Part-tenant farmers	2,216	41.0	1,309	21.6	726	14.7	574	12.3
Tenant farmers	1,516	28.0	178	2.9	56	1.1	48	1.0
Exceptions	24	0.4	18	0.3	12	0.2	11	0.2
Total	5,412	100.0	6,057	100.0	4,953	100.0	4,661	100.0

Sources: to 1975, Yano Tsuneta Kinekai, 1978, p.209, Table 16-8;  
1980 figures, Statistics Bureau, Prime Minister's Office, 1981,  
*Japan Statistical Yearbook*, p.109.

Note: 1941 figures exclude Okinawa.

Owner-farmer = 90 per cent of more of cultivated land is owned by the farmer who cultivates it.

Part-tenant farmer = 10 per cent to 90 per cent of cultivated land is owned by the farmer who cultivates it.

Tenant farmer owns less than 10 per cent of the land he cultivates.

Exceptions = households cultivating less than the minimum (10 ares arable land in Eastern Japan, 5 ares in Western Japan) to qualify as a "farm household", but which nevertheless shipped agricultural produce to the value of ¥20,000 or more in 1960 or ¥70,000 or more in 1975.

Table IV-2. Farm households, by size of cultivated holding  
(households in thousands)

Area (ha.)	Under 0.5	0.5- 1.0	1.0- 1.5	1.5- 2.0	2.0- 3.0	3.0 and over	Average (ha.)
Year							
1950	2,522	1,973	961	379	208	125	1.00
1960	2,320	1,923	1,014	417	233	151	1.00
1965	2,130	1,775	955	416	238	150	1.06
1970	2,025	1,614	876	410	256	161	1.09
1975	2,014	1,444	733	354	247	160	1.12
1976	1,920	1,459		1,085	252	175	1.13
1977	1,911	1,439		1,059	252	175	1.14
1978	1,892	1,418		1,047	254	178	1.15
1979	1,878	1,394		1,035	256	180	1.15
1980	1,927	1,311		990	249	174	1.01

Source: Statistics Bureau, Prime Minister's Office, 1981, p.31.

Land Reform applied only to arable land. It brought sweeping changes in the system of arable land tenure and converted the agrarian structure to one based on small-scale, owner-farmer, family farm units, which relied primarily on rice production for commercial sale together with fruit and vegetables for farm household self-sufficiency. In the immediate post-war years, this no doubt appeared to be the most appropriate system of agricultural production for Japan, suffering as it did acute food shortage and unemployment problems in the aftermath of the Second World War.

During the 1950s, however, the reserves of labour in the rural areas were depleted by the urban labour market, and in the latter half of the decade agriculture began to suffer from a labour shortage. Moreover, the very rapid rise in the national average standard of living during the 1950s meant that there was a great increase in the demand for foodstuffs of all kinds, but especially of meat, dairy products, fruit and vegetables (see Table IV-3). Against this, however, agriculture was unable to provide equivalent increases in the levels of income to those taking place in other sectors of the economy, notably manufacturing industries, and efforts had to be seen to be made towards raising the level of income of farmers. Moreover, the government finally succumbed in 1960 to international pressure towards a certain degree of liberalization of trade, including imports of certain agricultural products.

Table IV-3. Changes in per-capita calorie and protein consumption.

	Calorie supply	Percentage components				Protein supply (grams)	Percentage components		
		Starchy origin	Animal origin	Sugar	Oil and fat		Animal origin	Of which, livestock & poultry	Of which, fishery products
1934/36	2,026	77.2	4.6	6.6	1.1	52.2	13.4	3.8	9.2
1955	2,217	77.2	6.1	5.8	3.0	65.7	25.7	5.2	19.8
1965	2,408	74.1	10.4	8.2	6.7	73.7	36.4	14.1	20.5
1975	2,467	52.0	14.1	11.1	11.2	78.8	44.5	22.1	22.4

Source: Ogura, 1979, p.716, Table 3-34.

In response to all these pressures - the change in preferred diet, increasing affluence causing a demand for high quality agricultural produce, the inability of farm incomes to keep pace with those in manufacturing industries, and international pressure for trade liberalization - the Agricultural Basic Act was enacted in 1961. It was designed to assure farmers of a reliable income from farming by: (a) converting Japan's farms from a subsistence to a commercial type of farming, (b) the "selective expansion of agricultural produce", that is, by the promotion of growth sectors such as meat, dairy products, fruit and vegetables production, and (c) increasing agricultural productivity through increasing the average size of holdings by mechanization and reduction of the labour force.<sup>4</sup> The latter, in particular, failed as the value of land rose steeply and farmers retained their land as a hedge against inflation, even in cases where they no longer farmed it.<sup>5</sup>

"Selective expansion" was achieved to some extent, but perhaps no more than market forces would have determined anyway. The chief reason for this was the rice price support system, which is such an important aspect of agricultural policy that it requires explanation at some length.

During the war and in the early post-war era, rice was rationed because it was in short supply. The government purchased rice from the producers and sold it to the consumers. Today there is no need to ration rice because there is a surplus, but the government continues to be involved in rice distribution in order to maintain prices at a high level. What happens is that the government buys the rice from farmers at a higher price than would be achieved by supply and demand and sells it to urban consumers at a lower price than it paid. The deficit, of course, is made up from general tax funds. In short, farmers are receiving a subsidy.<sup>6</sup>

As a result of the rice price support policy, it continued to be far more lucrative for the majority of farmers to grow rice than engage in any other form of farming, despite incentives provided for in the Agricultural Basic Act towards growth sectors earmarked for selective expansion.

At first sight, then, the continuation of the rice price support policy appears to detract from the aims of the Basic Act: which indeed it did. However, discontinuation of the policy would have been detrimental to the ruling Liberal Democratic Party (LDP). The reason for this is that:

The allocation of seats [in the Diet] between rural and urban constituencies greatly favors the former, because the urban migration that persists year after year has not been fully taken into account. The present electoral system and basic allocation of seats was established in 1947, when the population in the cities still reflected the dispersal of persons into the rural areas during the war.<sup>7</sup>

A minor adjustment was made in 1967, but:

Since no representatives were taken away from the rural districts that have been losing population, these districts are still very much overrepresented.<sup>8</sup>

How much truer is that statement today than when it was first written. Farmers are traditionally conservative in their outlook and are the chief support of the LDP, especially as:

voting is inversely related to urbanization. Rural voters consistently turn out in larger numbers (proportionately) than do city dwellers.<sup>9</sup>

As a result, the electoral system is favourable to the LDP, and it would be against the party's interests to attempt to change it. It means, however, that they need to retain the votes of the rural electorate, and this, in turn, is the chief reason for their benevolent attitude towards farmers, especially with regard to rice price support.

The Agricultural Basic Act was the first major legislation regarding agriculture since the Land Reform. However, the policy failed to fully achieve its aims, despite provisions and incentives to farmers to diversify, and by the end of the 1960s Japan was having to stockpile large quantities of domestically produced, expensive rice, surplus to its falling consumption demands. There is no doubt that the rice price support policy and the failure of the Agricultural Basic Act meant that for many farmers, even those with marginal land, the continuation of farming provided an adequate income and was an acceptable lifestyle. To

that extent, agricultural policy was a significant brake on potential outmigration of farmers of marginal farmland throughout the 1960s.

In the Agricultural Basic Act, the government recognized that some relaxation of the restrictions on permitted acreages was essential if it were to succeed in its aim of increasing agricultural productivity through increasing the average size of holding, and it was considered that the agricultural cooperative was the most desirable body for achieving this. As a result, in 1962 the Agricultural Cooperative Act of 1947 was amended, for the recognition of "legal person associations of farming affairs" (*Nōji Kumiai Hōjin*), and for permitting such legal persons to acquire the ownership or leases of cultivated land.<sup>10</sup>

This amendment provided for the establishment of both "total" cooperatives, involving all farming operations of the member farmers, and "partial" cooperatives, which relate to only certain farming operations, such as for dairy farming or rice cultivation only. The establishment of the latter was an enormous success, so that by 1965 there were 4,638 "partial" cooperatives. "Total" cooperatives, however, failed to attract farmers, and in that year there were only 380.<sup>11</sup> The chief reason for this was that most farmers are reluctant to relinquish their freedom to dispose of their own land as they may wish.<sup>12</sup>

Nevertheless, the cooperatives rapidly acquired the function of mediator between the government bureaucracy and national agricultural policy on the one hand and the individual farmer on the other, and the cooperative soon covered virtually all facets of the farmer's life that he was willing to entrust to it.<sup>13</sup> This included receipt of a vast number of subsidies and loans for agriculture. Thus:

As the sixties wore on and the cash available increased, the subsidies and loans policy acquired a slightly broader function: the co-operatives became, along with state finance for local government and a high rice price, the third arm of the government's policy of redistributing to rural areas part of the wealth created by industrial growth.<sup>14</sup>

Indeed, by the late 1960s it was the cooperatives in particular, in their capacity as representatives of farmers, which were pressurizing the government to raise annually the producers' price of rice. Thus, although the rice price support policy and the formation of cooperatives were originally independent issues, they soon became strongly interlinked. The result was ever greater over-production of rice, and by the late 1960s the government showed increasing concern at the huge and mounting rice

surplus, especially as it was occurring against a national secular fall in consumer demand. In 1968 a "Comprehensive Agricultural Policy" was introduced, primarily for reducing the production of rice. In 1970, the surplus amounted to 7,200,000 tonnes.<sup>15</sup> This rice production adjustment policy at last forced farmers of rice, particularly those in marginal conditions, to reconsider their farming practice, and either convert to other crops or retire from farming altogether.<sup>16</sup> Rice cultivation had by then become so highly mechanized<sup>17</sup> that conversion to other crops entailed a higher intensity of labour, which in depopulated areas may simply not be available, so according to Ikegami (1975), agricultural policy accelerated rural depopulation.<sup>18</sup>

Nevertheless, incentives to farmers to grow crops other than rice were inadequate compared with the continued profitability of rice cultivation and, what with bumper harvests in 1975 and 1977, the rice production adjustment policy was only partially successful. Renewed efforts were made by the government from 1978 to persuade farmers to convert their paddy acreage to other uses.

In short, agricultural policy in Japan since the war has been characterized chiefly by the rice price support system, which has been maintained on account of the need for the ruling LDP to retain its rural supporters. Attempts to improve efficiency in agriculture by means of generous loans and subsidies and by encouraging the formation of larger holdings and diversification of farming activities on a commercial scale have repeatedly failed to meet up to expectations. The most notable of these attempts have been the Agricultural Cooperative Act, and the rice production adjustment policy from 1968.

An apparently unanticipated result of the rapid formation of agricultural cooperatives - originally intended to increase agricultural efficiency - was that they gave the farmers an even stronger lobbying organization for the maintenance of high rice prices. Although some Japanese scholars, such as Ikegami, argue that agricultural policy has exacerbated rural depopulation, this view overlooks the fact that it was largely the artificially high price of rice which had hitherto retained farmers in remote rural areas who, under freer market conditions, were potential outmigrants. The rice production adjustment policy of 1968 onwards, therefore, merely made a small breach in the dam which the price support policy had for many years built across the rural reservoir of farm labour. As is shown in Chapter VIII, the most vulnerable farmers

were the elderly farmers of residual households in remote rural areas, who typically were near or past industrial retirement age and who had been cultivating rice fields hitherto in economically irrational conditions. In such remote areas, the breaching of the dam has not caused a great flood of outmigration, as the reservoir had virtually dried up already.

(b) Technological innovations

Land Reform not only increased the disposable income of those who had previously been tenant farmers, and had often had to pay very high rents either in money or in kind, but also provided them with new and strong incentives to raise agricultural output. In both these respects the Land Reform legislation paved the way for a series of technological developments, especially with regard to rice cultivation, which quickly led to labour saving and higher agricultural productivity. Thus from the early 1950s onwards, cold-resistant and high-yielding hybrids of rice were developed and widely adopted throughout the country. This made rice growing possible at higher altitudes and latitudes than hitherto, which was a significant development for farmers in mountainous districts, and in northern regions, such as Hokkaidō and Tōhoku. With the expansion of the petrochemicals industry, a wide range of chemical fertilizers, pesticides and weedkillers became available to farmers at relatively low cost, and it became possible to cultivate rice on previously unsuitable and marginal land.

Moreover, small, motorized cultivators (*kōunki*) appeared around 1950, and since these were well adapted to use in the small fields of the typical Japanese farm, they rapidly came into widespread use<sup>19</sup> (see Table IV-4). Various trailers and attachments for them were developed from the 1950s onwards, in addition to mechanical rice transplanters (*taueki*) and small combine harvesters (*konbain*) for irrigated wet-rice paddy fields. This mechanization has been mainly oriented towards paddy rice cultivation, and such machinery is highly efficient when used in relatively large fields with consolidated plots. Although the plains have undergone land improvement schemes for paddy land in recent years, which involve reallocation, consolidation and reshaping of scattered plots together with soil and irrigation improvement works, such schemes are unlikely to materialize in mountainous regions - which suffer most severely from depopulation - due to the terrain. As a result, while the use of

Table IV-4. Number of powered agricultural machines per farm household.

(Unit: 1,000)

	Powered Cultivators	Engines	Powered Threshing Machines	Powered Sprayers	Rice Power Planters	Combines, Auto-threshers
1951	18	382	972	20	-	-
1956	141	1,476	2,210	-	-	-
1961	1,020	1,673	2,702	232*	-	-
1966	2,764	-	-	717	-	-
1971	3,534	-	-	1,149	77**	84
1976	3,904	-	-	1,325	1,046	428
1977	4,015	-	-	1,382	1,247	530

Source: Ogura, 1979, p.751, Table 5-21.

Note: \*1960; \*\*1970.

machinery has boosted rice production in mountainous regions, its use on the scattered, often terraced, fields, generally up steep mountain paths, is in fact highly inefficient.<sup>20</sup>

In his (1968) study, Imai found that over 95 per cent of farmers who left their village had no tractor or powered cultivator.<sup>21</sup> It is likely that such migrants were poorer farmers unable to afford such machinery, and having invested less in machinery, they had less incentive to remain on their farm.

However, whilst Imai's observations may have been valid for the early 1960s, it seems that during the 1970s there was little significant disparity in rates of machinery ownership between mountain villages,<sup>22</sup> which were depopulating rapidly, and other types of village. The result has been that in such mountain villages there is even greater over-investment in machinery than elsewhere in Japan. Often farmers are obliged by the costs of their purchase and maintenance to depend even further on non-farm income.<sup>23</sup> Over-mechanization reduces profitability, and is caused largely by technological improvements, frequent model changes, and massive advertising campaigns which encourage a "keeping up with the Joneses" attitude on the part of farmers, who tend to keep on buying new machines in order to show off to their neighbours.<sup>24</sup>

Abiko, (1976), argues that the emphasis on capital equipment did raise relative productivity and the value of agricultural produce, but that the increased operation costs and farm household expenditure were greater than increases in income.<sup>25</sup> This in turn contributed to the abandonment of farming, especially in the form of part-time farming

(*kengyō*), on the part of the mainstay adult labour force, or outmigration altogether.

(c) Animal husbandry

As a result of the increase in mechanization, the need for draught animals declined rapidly, with the result that the total number of draught cattle, for example, decreased by half a million, from 2,300,000 to 1,800,000, between 1961 and 1968. Draught cattle have now virtually disappeared altogether.<sup>26</sup>

Before the Second World War, the Japanese diet consisted of little meat or dairy products, so, typically, animals owned by farmers on the plains were kept for draught purposes and manure, whilst the mountain villages, with generally less cultivable land at their disposal, specialized in the breeding, rearing and commercial sale of the animals, with manure as a by-product. The breeding of livestock, generally horses in the north-east and cattle in the south-west, provided an attractive alternative source of cash income to mountain villagers, but since it was carried out entirely by family labour, the potential for expansion was limited to the amount of labour available in the household, and only one to three animals were kept on average.<sup>27</sup> Fodder was generally home-grown and grazing, where available, was on common land,<sup>28</sup> so the only expenses incurred were those for insemination, veterinary fees and the like.

After the war, with the rapid diffusion of mechanization in farming, the demand for horses and draught cattle showed a secular decline. However, changing tastes in diet (see Table IV-3) caused a new demand for meat and dairy products, and the numbers of cattle increased as many former horse breeders converted to cattle breeding, the raising of beef cattle, or dairying. Conversion to dairying, for example, took place from about 1948, and particularly from 1955.<sup>29</sup> The number of dairy cattle more than doubled nationally between 1949 and 1955, from 200,000 to 420,000 animals; and rose from 970,000 to 1,630,000 between 1961 and 1968. The number of beef cattle peaked at 2.7 million in 1956, declined to 1.5 million by 1967, but rose slightly again by 1976 to 1.9 million; the number of households keeping beef cattle in the mid-1970s was only about one-fifth of the number in 1956.<sup>30</sup>

In Japan, beef cattle farming is fundamentally divided into two stages: breeding, and fattening. Breeding is typically carried on in the remoter regions, while fattening takes place in regions nearer the

urban centres of consumption.<sup>31</sup> However, both breeding and fattening continue to be carried out along small-scale traditional lines, and the national average for cattle farmers is only 4.3 beasts per farm household which farms cattle. In the mid-1970s, as many as 63 per cent of such farm households kept only one or two animals.<sup>32</sup>

There has been increasing regional specialization in animal husbandry since the war, and in the decade 1960 to 1970 the numbers of cattle increased 852 per cent in Hokkaidō, 172 per cent in southern Kyūshū and 10 per cent in the Tōhoku region, whereas those in the Chūgoku, Shikoku and Tōkai regions declined by 20 to 40 per cent during the same period.<sup>33</sup> In the Kinki region in particular after the Second World War there was an extremely rapid decrease in the numbers of both horses and cattle, reflecting a proportionately greater decrease in farming as a result of the rapid enlargement of the labour market in the region.<sup>34</sup> Even so, regional specialization has not entailed any marked trend towards enlargement in the scale of beef cattle farming, and all the specializing regions apart from Hokkaidō have fewer animals per household than the national average.<sup>35</sup>

Thus, after the war many breeders of horses or cattle did convert to other forms of animal husbandry, particularly the rearing of beef and dairy cattle; but several factors contributed to an overall decline, apart from mechanization. Little pasture is available for grazing, and great changes took place between 1960 and 1975, from mainly natural fodder to concentrated feeds.<sup>36</sup> The ratios of purchased feed to home-grown fodder changed from 13:17 in 1960 to 33:3 in 1975.<sup>37</sup> Purchased feed is mainly imported, and prices fluctuate. In 1972-73, for example, the "feed crisis" caused rapid rises in the price of livestock feed, and the proportion of feed costs to total production costs rose from 30 per cent in 1960 to 36 per cent in 1975.<sup>38</sup> Other problems associated with the small-scale nature of cattle rearing are that for a farmer who keeps only one or two cows, the failure of a cow to calve may entail the loss of a whole year's income from that source. The market price for calves has fluctuated widely annually, and moreover, there are differences in the market price obtainable according to the sex of the calf, with females often fetching twice as much as males. For many farmers, then, the risks of cattle raising have become prohibitively high, especially since a regular wage may be secured from alternative sources such as day labouring, temporary migration or permanent outmigration.

(d) The response of farming to the expansion of the urban labour market

During the early 1960s, spectacular growth of manufacturing industries and the service sector took place, and this caused a rapid expansion of the labour market, especially along the Pacific Coastal Belt. As we noted earlier, farms are extremely small,<sup>39</sup> as is shown in Table IV-2, and such small farms soon became generally unable to provide the level of income obtainable from working in secondary and tertiary industries.<sup>40</sup>

The level of income from agriculture for "upper class" farmers (i.e., working 2 ha or more), who constitute less than 5 per cent of the total number of farm households, is considerably less than the average wage of industrial workers.<sup>41</sup>

(See also Table IV-5.) Moreover, not only have incomes in the manufacturing and services sector been higher than in farming, but work in factories and offices is considered pleasanter and less laborious than in the fields, and jobs in the non-primary sectors carry greater prestige.

Table IV-5. Income disparities between agriculture and manufacturing industries.

		1960	1965	1970	1975
Agricultural income per working day (in yen)	Average (a)	525	1,148	1,841	4,537
	Working 2 ha or more (b)	811	1,583	2,484	6,265
Daily wage for workers in manufacturing industries (in yen)	Average (c)	847	1,472	3,028	7,255
	5-49 employees (d)	542	1,120	2,266	5,133
	500 or more employees (e)	1,198	1,849	3,831	9,668
Comparative indices (in percentages)	(a/c)	62.0	78.0	60.8	62.5
	(b/c)	95.7	107.5	82.0	86.4
	(a/d)	96.9	102.5	81.2	88.4
	(b/d)	149.6	141.3	109.6	122.1
	(a/e)	43.8	62.1	48.1	46.9
	(b/e)	67.7	85.6	64.8	64.8
Wage disparity in manufacturing industries (in percentage)	(d/e)	45.2	60.6	59.1	53.1

Source: Ishii, in Association of Japanese Geographers, 1980, p.213, Table 2.

Many authorities point to the increasing disparity in productivity between sectors of production,<sup>42</sup> especially between the primary sector and secondary or tertiary industries in the late 1950s and early 1960s.<sup>43</sup> Ikegami quotes from Shimodaira to the effect that income from agriculture is lower than that from manufacturing and related industries because "the evaluation of labour time per unit expended in the production of agricultural produce is low, whilst that of manufactured goods, especially in growth-sector machine manufacture, is high".<sup>44</sup>

The result has been a steady movement of farmers out of agriculture (a process referred to in Japanese as *rinō*; see Table IV-6), which has involved a decline in the number of farm households by 24.5 per cent between 1950 and 1980, with a simultaneous rapid rise in the proportion of farm households which become part-time farmers and take up off-farm employment (*kengyō*)<sup>45</sup> (see Table IV-7). Between 1950 and 1980, the proportion of farm households engaged solely in farming (*sengyō*) fell from 50.0 per cent to a mere 13.4 per cent of the total, whilst the proportion of those obtaining their main income from non-agricultural work (type II *kengyō*) rose from 21.6 per cent to 65.1 per cent during the same period.<sup>46</sup>

Table IV-6. Changes in the percentage of the labour force engaged in primary economic activities to the total labour force.

(%)

	Farming	Forestry	Fishing	Total
1940	41.7	0.9	1.7	44.3
1950	45.2	1.2	1.9	48.3
1960	30.0	1.0	1.6	32.6
1965	22.7	0.6	1.3	24.6
1970	18.0	0.4	1.0	19.4
1975	12.6	0.4	0.9	13.9
1980	-	-	-	10.4

Source: 1940-1975, Yano Tsuneta Kinkenai, 1978, p.93, Table 8-2.  
1980, Statistics Bureau, Prime Minister's Office, 1983, p.105, Table 65.

Notes: 1950-1970 exclude Okinawa  
1940 figures are for all ages; 1950 figures are for 14 years and above; 1960 onwards, figures are for 15 years and above.

Table IV-7. Farm households, by type.

	(Households, in thousands)					
	Total	<i>Sengyō</i>	<i>Kengyō</i>			Rate of increase (%)
			Total	Type I	Type II	
1950	6,176	3,086	3,090	1,753	1,337	-
1960	6,057	2,078	3,979	2,036	1,942	-
1965	5,665	1,219	4,446	2,081	2,365	-6.5
1970	5,342	831	4,510	1,802	2,709	-5.7
1975	4,953	616	4,337	1,259	3,078	-8.3
1976	4,891	659	4,233	1,002	3,231	-1.2
1977	4,835	643	4,192	931	3,261	-1.1
1978	4,788	620	4,168	884	3,284	-1.0
1979	4,742	595	4,147	844	3,303	-1.0
1980	4,661	623	4,038	1,002	3,036	-1.7

Source: Statistics Bureau, Prime Minister's Office, 1981, p.31.

Note: *Sengyō* = farming exclusively.  
 Type I *kengyō* = main income from farming.  
 Type II *kengyō* = main income from non-agricultural work.

(1) The abandonment of farming.

The abandonment of farming has had a profound effect on rural areas and has been a major cause of outmigration, since most depopulated areas are dependent upon primary industries, especially farming with another occupation. There are two types of farm household which abandon farming: a) those which leave farming but remain in their village (*zaison rinō*), and b) those who give up farming and leave their village too (*rison rinō*).<sup>47</sup> The propensity to outmigrate at the same time as abandoning farming appears to be a function of the availability of job opportunities within commuting distance. In Hokkaidō, where there are few such opportunities, 70 per cent of farmers abandoning farming were found to outmigrate at the same time (*rison rinō*), whereas elsewhere in Japan 73 per cent remained (at least for a while) in their village. Moreover, whereas 47 per cent of "mountain village"<sup>48</sup> farmers who abandoned farming came into the *rison rinō* category, the corresponding percentage for "farming mountain village" farmers was 36 per cent, for "plain village" farmers it was 16 per cent and for "urban fringe village" farmers it was as little as 6 per cent.<sup>49</sup> Hokkaidō's high percentage of *rison rinō* may also be accounted for by its relatively harsh climate,

distance from labour markets and lack of traditional attachment to the land,<sup>50</sup> due to its shorter history of colonization.

Generally speaking, those in the *zaison rinō* category were no longer dependent on their agricultural income anyway before they gave up farming: 84 per cent of them were found to have been type II *kengyō* farmers, that is, depending on off-farm employment for the greater part of their income, whereas only 63 per cent of *rison rinō* farmers had been type II *kengyō* farmers; and similarly those who stayed in the village had been cultivating an average of 21 ares of arable land, whereas those who outmigrated had been cultivating an average 39 ares (nearly double).<sup>51</sup> The main reasons for giving up farming were given as follows: 1) retirement, illness or death of farmers,<sup>52</sup> 2) insufficient labour,<sup>53</sup> 3) preference for other employment, 4) failed at farming. Of those who remained in the village, however, the last of these reasons was rarely given: the main reason was increased opportunities for off-farm employment.<sup>54</sup>

Throughout Japan, and not just in the remoter districts, the labour force left in agriculture has become progressively weaker, due to fewer school leavers entering farming and the outmigration of young males, with the result that the labour force has aged rapidly, and the proportion of women in the labour force has risen (see Table IV-8). By 1974, approximately 70 per cent of the agricultural labour force consisted of females, or of males over 60 years of age.<sup>55</sup>

Typically, school leavers and young household members outmigrate, the head of the household takes up non-agricultural employment (commuting or temporary migration), and farming is left for his wife and/or elderly parents to carry on.<sup>56</sup> As a result, agriculture loses the most productive members of the farm household<sup>57</sup> (see Table IV-9).

With such conditions prevailing in farming villages in the country as a whole, clearly those in depopulating mountainous regions are even more disadvantaged than elsewhere: apart from any other factors, the terrain restricts the potential for enlarging holdings. However:

Of course, there is some potential for high altitude, cool-climate vegetable growing or animal husbandry, which utilize mountain plateaux; but there is little likelihood of that potential being realized by the villagers, considering the many difficulties they face with roads, capital and labour.<sup>58</sup>

It may be expected that once a farmer has ceased to cultivate his land, he would be likely to sell it or rent it out to neighbouring farmers, bringing about an increase in the average size of holding. This has, indeed, occurred, but only to a very small extent (see Table IV-2) and

Table IV-8. Population of owner-farmers, by age and sex.

1,000s/%

	Total	% 60 years and over	Males				Females						
			Total	% 16-29	Age		Total	% 16-29	Age				
					30-59	60 and over			30-59	60 and over			
						%				%			
1960	14,542	17.5	5,995	41.2	4,645	1,350	22.5	8,546	58.8	7,358	1,188	13.9	
1965	11,514	22.0	4,565	39.7	748	2,528	28.3	6,949	60.4	186	4,521	1,242	17.9
1970	10,352	26.8	4,015	38.8	663	2,036	32.8	6,337	61.2	907	3,918	1,454	22.9
1975	7,909	31.6	2,975	37.6	446	1,389	38.3	4,932	62.4	575	3,000	1,359	27.6

Source: Ogura, 1979, p.764, Table 6-16 (f) and (ff)

Table IV-9. Number of family farms by composition of the labour force.

	1,000s	
	1970	1975
Total family farms	5,342	4,953
with no regular farm worker	2,250	2,725
with only female regular farm worker(s)	834	615
with one or more male regular farm worker(s)	2,258	1,612
with male regular farm worker aged less than 60	-	1,250

Source: Ogura, 1979, p.764, Table 6-15.

Notes: 1970 figures exclude Okinawa.

Regular farm worker = one engaged solely or mainly in farming.

the average size of holding in Japan rose from 1.00 ha. to only 1.15 ha. between 1950 and 1978, but fell again to 1.01 ha. in 1980.

Moreover, rapid economic growth caused remarkable rises in the value of land (see Table IV-10). Thus, one important reason why there has been little increase in the average size of holding has been that farmers have tended to regard their land as an investment or a hedge against inflation, and have been reluctant to part with it.<sup>59</sup> This occurred particularly on the fringes of the larger urban centres, where there was a rapidly expanding demand for land for housing and non-agricultural economic activities. On the other hand, farmers in the remote rural areas, where there was little potential for development of any kind, were generally unable to find buyers, especially for arable land, even if they did wish to sell,<sup>60</sup> and they were often left with such land with either uneconomic utilization or no utilization. Moreover, officially at least, the Land Reform legislation set limitations on the area of land it was permissible to rent out.<sup>61</sup>

Table IV-10. Changes in land values.

¥1,000/10a

	Arable				Forest		Urban
	Paddy Fields		Dry Fields		(excluding Hokkaidō)		(1955=100)
	Ordinary	Medium	Ordinary	Medium	For timber	For fuel	
1960	186.6	198	112.0	129	16.0	12.2	280
1965	203.9	343	123.2	281	20.6	15.3	768
1970	327.7	1,022	184.4	914	32.7	22.8	1,395
1975	626.7	2,824	387.2	2,663	64.8	43.5	2,691
1980	928.5	3,828	555.9	3,479	86.0	56.0	3,231

Source: *Nihon Nōgyō Nenkan*, 1982, p.193, Table 26.

Notes: Okinawa excluded.

Medium-grade paddy and dry fields: data based on Zenkoku Nogyō Kaigisho. All other data based on Nihon Fudōsan Kenkyūsho.

(2) The increase in part-time farming (*kengyō*).

In present-day Japan, as we have seen, *kengyō* farm households are those which derive income from an occupation other than farming, in addition to their income from farming. The term is applied to the household as a whole, without regard to how many, or which, household members are engaged in non-farm jobs. Type I *kengyō* households are those which obtain their main income from farming, and type II are those which obtain it from an off-farm job.

The term is used rather loosely by farmers themselves. Generally they seem to consider "agriculture" (*nōgyō*) to be arable cultivation only, especially paddy growing, in which case animal husbandry, sericulture and the like are considered to be *kengyō* sources of income; but these are included in "agriculture" by the Ministry of Agriculture, Forestry and Fisheries for the purposes of agricultural censuses.<sup>62</sup> *Kengyō* is usually further divided into three broad categories: casual day labouring (*hiyatoi*), regular commuting jobs (*tsūkin kengyō*) and temporary migration for employment (*dekasegi*). *Dekasegi* is most often on a seasonal basis (*kisetsu dekasegi*), but it may also last all year round (*tsūnen dekasegi*), in which case it tends to become semi-permanent outmigration. Ultimately there is permanent outmigration (*ryūshutsu*), which is referred to as *kyōka rison* when whole families outmigrate at once or within a very short space of time.

Table IV-7 shows the rapid increase in *kengyō* in general in post-war Japan. With the increasing inability to earn a satisfactory income from farming, forestry, mining, etc., villagers began to seek additional sources of income, preferably within commuting distance, or *dekasegi* if not.<sup>63</sup> This was facilitated to a large extent by improvements in the transport and communications networks.<sup>64</sup>

Yoneyama notes that without the rapid increase in *kengyō*, out-migration and rural depopulation would no doubt have been more severe than they have been, and that the rapid rise in land values has made it a wise choice for many farmers.<sup>65</sup> It is a system of labour supply which is advantageous to firms, too, since they do not have to pay bonuses, fixed wage rises, provide fringe benefits, retirement pay or meet union demands to employees not employed within the terms and conditions of the lifetime employment system.<sup>66</sup>

(3) Temporary migration for employment (*dekasegi*).

*Dekasegi* is a type of *kengyō* beyond commuting distance from the migrant's village.<sup>67</sup> It may even be regarded as seasonal rural depopulation.<sup>68</sup> This is why *kengyō* and *dekasegi* are considered relevant to the study of rural depopulation, and they are generally interpreted amongst Japanese scholars as an undesirable side-effect of Japan's post-war capitalist development.<sup>69</sup>

There has been a long tradition of *dekasegi* in many parts of Japan,<sup>70</sup> but it has increased rapidly since the Second World War.<sup>71</sup> Rural areas have long held a "reserve" of labour for industry.<sup>72</sup> Out-migration from rural areas, especially of younger sons, occurred even before the Second World War; in times of economic depression or illness, the unemployed returned to the rural areas and were supported by the extended family system. The main difficulty before the war was that of securing stable employment: manufacturing industries were as yet unable to absorb so much labour as to deplete the rural reserves.<sup>73</sup> With the speed of economic growth, especially of heavy industries after the war the situation changed. There was an increase in dependence on *hiyatoi* from 1959, and it is said, for example, that from around then the twenty-four largest shipbuilding companies employed 57 per cent of their workers on a temporary or *hiyatoi* basis.<sup>74</sup> Vast construction projects in cities also required site labourers. Thus, there was a great increase in opportunities for *dekasegi*, especially of the day-labouring kind.

The most common types of traditional *dekasegi* employment were

seasonal agricultural work such as tea picking, mandarin orange picking, reed cutting, rice transplanting, and sericulture; in manufacturing, males were chiefly engaged in *sake* brewing and the making of *kōridōfu*<sup>75</sup> or *kanten* (seaweed jelly), and females in textile factories, especially spinning; and in the commercial sector employment was typically found in medicine peddling (especially Toyama and Nara Prefectures), flower selling (Shimane) and clothes selling (Yamanashi).<sup>76</sup> Before the war, 60 per cent of *dekasegi* migrants were absorbed by *sake* breweries and textile factories.<sup>77</sup>

This situation changed dramatically in the 1960s with the boom in construction along the Pacific Coastal Belt, especially from 1963-4.<sup>78</sup> In 1971, 80 per cent of *dekasegi* migrants went to destinations in the agglomerations, and as many as a half of those went to the Keihin region alone.<sup>79</sup> Approximately 80 per cent of both migrants and the farm households from which they originated were from the Tōhoku, Kyūshū and Hokuriku regions.<sup>80</sup> By 1970, over one third of the national total of households sending *dekasegi* migrants, and nearly 40 per cent of migrants themselves, originated in Akita, Aomori and Yamagata Prefectures.<sup>81</sup> It is important to note that at the national level regions of origin more or less correspond with depopulated rural areas.<sup>82</sup> Generally speaking, the smaller the farm, the more important was the income from *dekasegi* to the migrants concerned,<sup>83</sup> and approximately 85 per cent of *dekasegi* migrants and their households of origin owned holdings of less than two hectares.<sup>84</sup> As many as 93 per cent of migrants were male; 58 per cent were head of their household, 29 per cent were successors to the headship (*atotsugi*) and approximately one-third of the total were in their forties.<sup>85</sup> Two-thirds went to jobs in the construction industry and one quarter to manufacturing.<sup>86</sup> Eighty per cent found employment in unskilled manual jobs,<sup>87</sup> typically during the winter months.<sup>88</sup> The rice production adjustment policy, aimed at reducing rice output, caused a sudden increase in the number of *dekasegi* migrants from 1971, especially from the rice monoculture areas of the Tōhoku district, but this declined again from 1973 as the price of rice rose in the world grain market.<sup>89</sup>

Also, migrants have aged considerably: before and shortly after the war, *dekasegi* migrants were typically school leavers and unmarried women. Not only has the proportion of women fallen dramatically, but whereas only 14 per cent of migrants were aged 35 years or more in 1958, by 1969 the proportion had risen to 70 per cent, and by 1971 to 75 per cent.<sup>90</sup>

This reflects a combination of factors, chiefly the increased opportunities for permanent employment for school leavers from farm households, and the general ageing of farmers.

(4) Summary.

The writings of Japanese scholars suggest that *hiyatoi*, *tsūkin kengyō* and *dekasegi* are in a sense transitional stages between full-time farming and permanent outmigration.<sup>91</sup>

Ōkawa believes that the increase in *dekasegi* since the war is due to factors extraneous to farming itself, such as the development of job opportunities in the urban labour market and the rice production adjustment policy,<sup>92</sup> or the "pull factor of non-agricultural capital".<sup>93</sup>

Satō agrees that it was the concentration of capital into the Pacific Coastal Belt which caused urbanization on the one hand, depopulation on the other, and consequent great regional imbalance; the surplus of rural labour was a prerequisite for this, so that typically commuting *kengyō* became general in the suburbs of the Pacific Coastal Belt, whilst Tohoku and Hokuriku, which had only weak urban centres, supplied *dekasegi* migrants, and remote mountain villages were depopulated.<sup>94</sup> He goes on to add, however, that although in theory the mobility of labour is determined by the regional pattern of capital accumulation, in practice, other factors such as housing, local customs, etc., are also strong influences.<sup>95</sup>

(iii) Forestry

Mountains and hills occupy as much as 74 per cent of the total land surface of Japan.<sup>96</sup> In 1975, 66.7 per cent of the total land area was afforested,<sup>97</sup> and forestland, by and large, corresponds geographically with the mountainous areas, the villages of which, as we saw earlier, are generally suffering from the most acute problems of depopulation.

There are two official definitions of "mountain villages". The Ministry of Agriculture and Forestry defined mountain villages (*sanson*) as being composed of less than 10 per cent arable land and 80 per cent or more forest, and with 10 per cent or more of farm households engaged also in forestry. Also, for the purposes of the Act for the Development of Mountain Villages (1965),<sup>98</sup> a mountain village was defined as an administrative district (before local government reorganization) in which 75 per cent or more of the land area was afforested and the population

density was less than 1.16 persons per hectare.<sup>99</sup> By this definition, in 1974 there were 2,376 such districts (i.e. *kyūson*<sup>100</sup>), within 42 per cent of the new local government districts, and they occupied 52 per cent of the national land area. They are broadly coincident with designated depopulated districts,<sup>101</sup> and as a rule of thumb one may even say that in Japan, mountains = forests = depopulation.

Before the Second World War, it was common for 80 to 90 per cent of the area of mountain villages to be forested, but the major portion of forestland was owned by the Imperial household, the state or by large absentee landlords, and resident villagers held only small stands of trees, if any. As the post-war Land Reform applied only to arable land, little has improved in mountain villages in this respect,<sup>102</sup> as is shown in Table IV-11, from which it is clear that in 1970 as many as 88.6 per cent of households owning private forestland held less than five hectares. Indeed, of the 1,140,000 households owning one hectare or more, as many as 77 per cent obtained no income at all from their forestland.<sup>103</sup> Table IV-6 shows what a small proportion of the labour force have been engaged in forestry.

Table IV-11. Size of private forest holdings, by households and acreage, 1970.

	Households		Area (ha.)	
	Thousands	%	Thousands	%
Total	2,566	100.0	6,701	100.0
0.1 - 1 ha.	1,421	55.4	539	8.0
1 - 5	853	33.2	1,766	26.4
5 - 30	268	10.5	2,645	39.3
30 - 50	14	0.5	514	7.7
50 - 100	7	0.3	457	6.8
100+	3	0.1	790	11.8

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.3, p.628, Table 51.

In addition, approximately half of all villages in Japan, excluding Hokkaidō, still own common forest and/or grassland, either alone or jointly with neighbouring villages. The average size of holding is twenty-eight hectares, and 38 per cent of farm households hold rights to these common lands;<sup>104</sup> but "even where common lands are still important, rationalization

of management methods has greatly changed their communal character".<sup>105</sup> Village inhabitants retain rights to common land only so long as they remain in the village. It is thus not uncommon for this to be a reason why older family members remain after others have left. In some cases an appearance of "remaining" is kept up after all family members have left, as the household may continue to be officially registered as residing in the village, and a family member may return periodically (ranging from every weekend to only one or two days a year), ostensibly to air the house. In this way the household can retain its rights to common land, and to this extent, then, rights to common land may detain rural inhabitants.

This is far outweighed, however, by the general post-war decline in forestry which is often cited as one of the major causes of outmigration from mountain villages.<sup>106</sup> The changes date from around 1955, largely as a result of what the Japanese call the "energy revolution". As oil, town gas, propane gas and electricity replaced coal, firewood and charcoal, the demand for the latter fell steeply. Charcoal burning had hitherto been the chief source of non-farm income in mountainous regions,<sup>107</sup> and production of firewood peaked in 1955 and charcoal in 1957.<sup>108</sup> In 1955, charcoal met 3 per cent of the total national energy requirement, and firewood 5 per cent, but their contribution had fallen respectively to 0.2 per cent and 1.5 per cent by 1965.<sup>109</sup> Charcoal production had reached a peak in 1940, and after the war that level was restored in 1951,<sup>110</sup> but the rapidity of the decline is shown in Table IV-12 and Figure IV-1.

Table IV-12. Changes in charcoal production.

a)

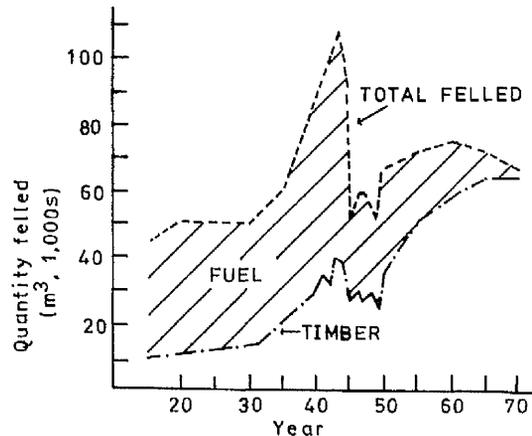
	Production (tonnes)
1940	3,080,000
1960	1,500,000
1963	930,000
1967	450,000
1970	180,000

b)

	Persons	Households
1957	420,000	200,000
1970	41,000	33,000

Source: Saitō, 1976, p.22.

Figure IV-1. Fluctuations in the quantities felled of timber and fuel wood (for firewood and charcoal).



Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.2, p.555, Figure 5.

Charcoal production was concentrated mainly in the mountain backbone of the Tōhoku, Chūbu, Chūgoku, Shikoku and Kyūshū regions;<sup>111</sup> the Chūgoku region was most severely affected by the fall in demand for charcoal, with an 80 per cent decline in production between 1957 and 1965, and the Tōhoku region also suffered badly, with a 40 per cent decline over the same period.<sup>112</sup> From a case study of Nishiyayama-mura in Tokushima Prefecture, Ōkawa found that there was no particular activity which replaced charcoal burning when it declined.<sup>113</sup> Table IV-13 shows the regional distribution of forestland which was previously "charcoal or firewood" forest and which remained un-reafforested in the mid-1970s.

Sugano cites three reasons for the decline in charcoal production: a) the so-called energy revolution; b) the rapid development of the urban labour market, due to high rates of economic growth: the outflow of population to cities, in addition to an increase in day labouring (*hiyatoi*) and temporary migration (*dekasegi*), reduced the supply of labour for charcoal burning; and c) increasing difficulty in obtaining timber for charcoal burning. This timber was traditionally felled from mixed broadleaf forests, and the charcoal industry had to compete from around

Table IV-13. The regional distribution of unreaforested former charcoal and firewood forests.

(Area in 10,000 ha.)

	Area of Privately Owned Primitive Forest	Former charcoal and firewood forest			% age of Charcoal Production 1957
		Area	% age of National Total	% age of Primitive Forest	
Hokkaidō	131	21	5.0	16.0	4.8
Tōhoku	158	109	25.7	69.0	23.1
Hokuriku	99	34	8.0	34.3	12.2
Northern Kantō, Tōsan	134	49	11.6	36.6	6.7
Southern Kantō, Tokai	57	33	7.8	57.9	7.9
Northern Kinki, Chūgoku	240	88	20.8	36.7	18.3
Southern Kinki, Shikoku	83	34	8.0	41.0	12.8
Kyūshū, Okinawa	110	55	13.1	50.0	14.2
Total	1,012	423	100.0	41.8	100.0

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.3, p.655, Table 24.

Note: Tōhoku = Aomori, Iwate, Miyagi, Akita, Yamagata, Fukushima.

Hokuriku = Niigata, Toyama, Ishikawa, Fukui.

Northern Kantō, Tōsan = Ibaraki, Tochigi, Gunma, Saitama, Yamanashi, Nagano, Gifu.

Southern Kantō, Tōkai = Chiba, Tōkyō, Kanagawa, Shizuoka, Aichi, Mie.

Northern Kinki, Chūgoku = Shiga, Kyōto, Ōsaka, Hyōgo, Tottori, Shimane, Okayama, Hiroshima, Yamaguchi.

Southern Kinki, Shikoku = Nara, Wakayama, Tokushima, Kagawa, Ehime, Kochi.

Kyūshū, Okinawa = Fukuoka, Saga, Nagasaki, Kumamoto, Ōita, Miyazaki, Kagoshima, Okinawa.

1955 with the large paper and pulp mills when they changed from using primarily coniferous forests<sup>114</sup> (see Table IV-14).

Table IV-14. Changes in the consumption of pulp materials.

	(m <sup>3</sup> thousands)					
	1960	1965	1970	1974	1975	1976
Coniferous	5,741	3,643	2,502	1,962	1,698	1,727
Broadleaf	3,678	4,577	4,775	2,259	1,743	1,747
Woodchip	2,923	8,629	21,066	28,836	25,331	28,375
Total	12,342	16,849	28,343	33,057	28,773	31,848

Source: Yano Tsunta Kinenkai, 1978, p.372, Table 39-1.

The last of these three causes occurred most markedly in western Japan, where a higher proportion of forestland is in private ownership<sup>115</sup> (see also Table IV-15). The increased demand for timber throughout Japan, especially from paper and pulp mills, along with the general trend for rapidly rising land values and a construction boom during the 1960s and 1970s, caused forestland values to rise steeply too. Taking 1955 values of forestland as an index of 100, by 1974 the index of timber forest had risen to 677 and that of charcoal and firewood forest to 593.<sup>116</sup> This again caused a great deal of speculation in forestland, as is demonstrated in Table IV-16. During the decade 1960 to 1970, there was a notable decline in the number of farm households owning forestland and a great increase in the number of non-farm households, corporate bodies and companies. Many of the latter were companies operating in the three main conurbations, especially construction firms and estate agencies,<sup>117</sup> with a vested interest in securing timber-producing land.

One major problem of Japan's forestry is that whilst forests cover approximately two-thirds of the total land area, a high proportion of them are of poor quality mixed broadleaf trees, unsuitable for manufacturing industries. Moreover, the demand for timber in post-war Japan also included tropical hardwoods, so that by 1966 one third of Japan's timber requirements were being imported,<sup>118</sup> and the domestic production of timber was overtaken by imports in 1970.<sup>119</sup> Felling of trees during the Second World War, in addition to demand caused by the Korean War, had

Table IV-15. Type of forestland ownership by region, 1970.

(Ha., thousands)

		National	Prefectural	Municipal	Corporate	Private	Total
Hokkaidō	%	56.1	11.1	4.8	-	28.1	100.0
	Area	3,023.6	598.5	256.1	-	1,512.2	5,390.6
Tōhoku	%	43.6	1.9	4.2	2.5	47.8	100.0
	Area	2,317.7	102.1	221.0	131.2	2,543.1	5,315.1
Capital area Chubu area Kinki area	%	18.1	4.3	3.7	2.5	71.5	100.0
	Area	1,350.0	317.1	275.3	183.3	5,329.7	7,455.4
Chūgoku Shikoku	%	11.1	2.1	5.0	1.5	80.3	100.0
	Area	408.4	77.9	183.8	57.1	2,968.0	3,695.2
Kyūshū	%	21.1	2.7	5.7	0.5	70.0	100.0
	Area	554.2	71.0	150.1	12.5	1,838.5	2,626.2
Japan Total	%	31.3	4.8	4.4	1.6	58.0	100.0
	Area	7,653.8	1,166.9	1,086.4	384.1	14,191.5	24,482.6

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.2, p.553, Table 7.

Table IV-16. Changes in type of forest ownership, 1960-1970.

Common forest holdings	1960	1970
Farm households	2,545,000	2,279,000
Common forest holdings	110,000	74,000
Companies	3,200	11,400
Corporate bodies	29,000	68,000
Non-farm households	16,000	286,000

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.3, p.656.

brought about a short period of endeavour in reforestation schemes (which is reflected in Table IV-6), but even this declined from 1956 as the pool of labour in mountain villages began to dry up: the result was that the numbers engaged in forestry halved from 400,000 to 200,000 in the decade 1960 to 1970<sup>120</sup> (also see Table IV-17).

Table IV-17. Reforestation, 1955-1973.

(Area in 10,000 ha.)

	1955-1959	1960-1964	1965-1969	1970-1973	Total
A	118	153	145	105	521
B	60	48	36	20	164
Total	178	201	181	125	685

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.3, p.654, Table 23.

Notes: A = New afforestation, reforestation of felled primitive forest, with *sugi* (Japanese cedar, *Cryptomeria japonica*), *hinoki* (Japanese cypress, *Chamaecyparis obtusa*).

B = Reforestation of felled plantations.

Yoneyama points out also that small forest landowners are generally employed by large forest landowners to carry out work on a day labouring (*hiyatoi*) basis. Permanent engagement of foresters is exceptional, so that forestry is extremely unreliable as a source of income. Work cannot be carried out on wet days, with the result that most villagers relying upon forestry as a source of income are likely to be working on average no more than fifteen to twenty days per month. That is one of the reasons why employment in forestry is shunned and why foresters migrate to urban jobs.<sup>121</sup>

There seems little doubt, therefore, that the organizational structure of forestry in Japan has been a major "push" factor in migration from mountain villages.

It was seen earlier<sup>122</sup> that well organized and well planned silviculture can play an important role not only in maintaining or increasing national self-sufficiency in timber for future generations, but it can also produce various positive and immediate economic benefits to the smaller afforested region. At first sight it would appear that the scope for the development of forestry in present-day Japan is enormous: (a) a vast proportion of the country is already afforested; (b) there is an incessant demand for various kinds of timber (especially for paper manufacture and building construction); (c) there is a great need for new job opportunities in mountainous (= depopulated) areas, and forestry is one occupation in which there is an abundance of extant traditional skills; and (d) there is, moreover, a great demand on the part of the affluent urban population for precisely the kind of recreational activities to which forests are especially suited - the more so in Japan in summer, when the cool of the shade of the higher altitude and latitude forests can offer a welcome retreat from the sweltering heat of the urban centres.

However, as the foregoing section has shown, forestry in Japan is far from even beginning to realize its potential. The problems are manifold. The timber of the mixed broadleaf forests, once essential to mountain village inhabitants for a supply of firewood, charcoal, building materials and green manure, has relatively little economic value nowadays. The labour required to fell it is scarce in depopulated areas, and the costs of the felling and reforestation of such forests often exceed any immediate income from the timber felled, especially as the rate of income tax on the lump sum is extremely high. No further income is

obtainable for at least another thirty years or so, and mountain village inhabitants show increasing reluctance to make the investment which reforestation requires, for the benefit of their offspring, who are nowadays much more mobile than in the past and less attached to their ancestral home.

One of the chief stumbling blocks to development is the existence of a high proportion of small, fragmented forest holdings in private ownership. This is especially the case in western Japan; and it is perhaps ironical that it is the mountainous regions of the west which, being relatively accessible from the built-up Pacific Coastal Belt, are those with the greatest potential for development, both for the supply of processed timber with relatively low transportation costs and for recreational use.

Moreover, the trend from the 1960s for urban-based companies and affluent urban non-farm households to buy up forestland has been particularly unhelpful from the point of view of rural development. The vast majority of purchasers have had no interest in the land other than speculation for capital gain from the value of the land itself. They have little or no interest in forest management and reforestation works nor in the expansion of job opportunities in mountain communities. Generally, at best they may "entrust" to a local man the "management" of the forest - by which is usually meant little more than "keeping an eye" on it.

The (mainly) farm households who are persuaded to sell to them (see Table IV-16) may enjoy a short term material gain from the transaction, but in the long run the community as a whole benefits little. What degree of control they formerly had over the environment surrounding their homes is utterly lost to them, and traditional attachment to the land is further eroded.

Thus, while there is enormous potential for forestry development in Japan, which would be of chief benefit to the depopulated rural areas, there is at present little likelihood of such development taking place without legislation for sweeping reforms of forestland ownership and management. It is beyond the scope of this thesis to elaborate further on this point; suffice it to say that such changes are unlikely to occur within the foreseeable future. Far from helping to stem rural depopulation, then, it appears that trends in forestry in Japan as a whole are likely to continue to exacerbate the depopulation problem.

(iv) Mining

In the same way that the "energy revolution" and high economic growth rates may be cited as causes of depopulation in the majority of mountain villages, so can they also for mining villages. Mining settlements in Japan have been of two distinct types: those based on coal mining and those based on metal ore mining.

The period of high growth rates in the national economy from around 1955 caused an almost insatiable demand for metal ores, which, like timber, could not be met by domestic production. Ores such as zinc, copper and lead have been mined from small mines in most mountainous regions of Japan for several centuries, but it soon became clear that these domestic mines could not compete with cheaper imports from overseas territories such as South East Asia and Australia, and they began closing in rapid succession from the mid-1950s.

Thus a depopulation problem was brought about by rationalization of ore mines, and the so-called mining village type became one of the typical types of rural depopulation.<sup>123</sup>

The chief characteristic of rural depopulation caused by mine closures was the rapidity with which it occurred. Typically, mines are owned by large companies such as Mitsubishi, which employ miners on a somewhat similar basis to other company employees. That is to say, miners are moved from place to place at the company's behest. As a result, a large proportion of miners live in company housing, and may not necessarily be socially integrated with the resident "indigenous" population. This is not to say that no local people at all become involved in mining, but it does mean that when the company concerned decides to close a mine, a large number of their "own" employees and their families may be moved out all at once. Hence the sudden depopulation in mining villages.

Sugano describes, for example, the case of the Matsuo Sulphur Mine in Matsuo-mura, Iwate Prefecture. In 1956, it was the largest sulphur mine in East Asia; it was capitalized at ¥840 million, employed 4,631 workers and produced 60,000 tonnes of sulphur and 550,000 tonnes of iron pyrites, 31 per cent and 22 per cent respectively of the total national output for that year. But problems of foreign competition and pollution caused the mining company to reduce the labour force by 1,082 in 1962 and finally to cease operations altogether in 1969.<sup>124</sup>

The speed with which mine closures and job losses occur causes acute problems for the "indigenous" population. Rapid "downward spiral effects" jeopardize local retailers and services, and local finances

suffer greatly, since local taxes from the mine are suddenly unforthcoming. In the case of Matsuo-mura, 80 to 96 per cent of local taxes in the late 1950s were derived from the sulphur mine.<sup>125</sup> Adjustment to the new circumstances is often extremely difficult for the local authorities involved.

Depopulation due to mine closures, then, has not affected large numbers of people at the national level, but nevertheless relatively large numbers *are* involved at the local level, and such communities are scattered throughout Japan. Thus although mine closures have not been a major cause of rural depopulation in terms of absolute numbers, the severity of their economic and social effects on local communities means that they warrant due consideration.<sup>126</sup>

(v) Conclusions

The remote rural areas of Japan, like those of Western Europe, have traditionally depended on primary production, particularly farming, forestry and metal ore extraction, and there is little doubt that the process of rural depopulation has been inextricably related to the vicissitudes of these economic activities since the Second World War.

Metal ore mining, for example, has seen a secular decline due to competition with cheaper imported ores, and mine closures have caused small pockets of dramatically rapid depopulation at the local level throughout mainland Japan. Due to the nature of industrial organization in mining, however, the populations directly affected in this way have mainly comprised miners and their families originally from other parts of Japan. Although mine closures place financial strains on the local authorities in whose areas they are located, the loss of the miners themselves, who rarely integrate with the indigenous inhabitants, affects the social fabric of the original community to a far lesser degree.

The decline, both relative and absolute, in the importance of forestry, has also been a major "push" factor to outmigration from rural areas. Although steep rises in land values, including forestland, have undoubtedly tempted some rural inhabitants who own forestland - and especially those with rights to village common forestland only so long as they remain in the village - to stay in the village, this has only been possible while alternative sources of income (from, say, farming) have been available. In general, therefore, it is not unreasonable to suggest that such "pull" factors in forestry have been far outweighed by the almost

universal and absolute decline in the derivation of virtually any income by villagers from forestry. This has been largely due to (a) the obsolescence of mixed broadleaf forest for charcoal burning, due to competition with fossil fuels, and (b) competition with cheaper imports of both pulp and timber for manufacturing and building industries.

The situation with regard to agriculture is far more complex. First, it must be remembered that the population living in rural areas at the end of the war was inflated by urban evacuees and demobilized troops. Once economic recovery began to take place, manufacturing industries developed rapidly in the three major urban and industrial regions, and by the late 1950s and early 1960s they began to exert a very strong pull on the rural labour force, as incomes from farming consistently fell in comparison with incomes in manufacturing and service industries.

Apart from this important extraneous factor, various opposing forces were at work within agriculture itself. The Land Reform had resulted in the conversion of Japan's arable land ownership to one of mainly owner-farmers, and this fact, together with rapid rises in land values, gave farmers new incentives to remain on their land and farm it profitably. This was aided by various technological innovations, and particularly by the rapid diffusion of agricultural machinery. On the other hand, the Land Reform had placed limitations on the size of holdings, which continued to be small and often held in scattered plots. In remote rural areas, especially, the mountainous terrain made consolidation of holdings very difficult. On account of this, the labour released by mechanization was not utilized for enlarging holdings, but instead freed farmers for work in off-farm jobs. Part-time farming became the norm, with non-agricultural income being derived from commuter jobs and seasonal migration. Undoubtedly, the predominance of such practice retained many farmers in remote rural areas who otherwise would most likely have out-migrated permanently.

An extremely important economic consideration which encouraged farmers to behave in this way was the benevolent attitude of the government towards them, notably in the form of generous subsidies and loans and a high price of rice in return for relatively little investment in labour. Moreover, the bargaining power of farmers was increased by the establishment of cooperatives. This policy particularly induced farmers in remote rural areas to continue with their farming operations. By the

time the effect of attempting to redress the situation by means of the rice production adjustment policy came to be felt in the early to mid-1970s, the residual farmers in such remote depopulated areas were already ageing, and few young potential outmigrants were left, so in such areas the adjustment policy had relatively little effect on rural depopulation.

Thus, it is clearly justifiable to argue that since incomes in agriculture were unable to keep pace with the rise in incomes in other sectors, the situation in agriculture must have caused rural depopulation. This, indeed, seems to be a commonly held view in Japan. However, this argument fails to take account of the fact that, as we have seen, agriculture on the whole, especially until around 1970, tended to favour the retention of practising farmers on their land. As such, agriculture was a pull factor, rather than a push factor, in rural depopulation. The *net* result was depopulation, because pull towards manufacturing and service industries - located mainly in urban areas - was even stronger than the pull towards agriculture.

CHAPTER V: RURAL DEPOPULATION IN POST-WAR JAPAN: SOCIAL AND CULTURAL CONSIDERATIONS

(i) Introduction

Chapter III noted that the pattern of rural depopulation in Japan has chiefly taken the form of the outmigration of school leavers and young people, with consequent rapid ageing of the residual population.<sup>1</sup> This selectivity by age would suggest that there are several social and cultural aspects to the problem apart from the economic factors considered in Chapter IV. How do such factors influence the decision of certain sectors of the population, especially the young, to leave, and others, especially the middle-aged and elderly, to remain?

While the motives that impel young people from villages have been examined by Japanese scholars in some detail, they appear to have failed to draw attention to the social and cultural forces that persuade older people to stay (as is also the case with Western studies). Many commentators have noted the rapid changes which have occurred in the social structure of villages in Japan since the Second World War;<sup>2</sup> but what changes have been wrought in social and cultural terms upon remote communities once they have started to suffer from depopulation?

This chapter will provide some answers to these questions.

(ii) Changes in value judgements

(a) The loss of village functions and community spirit

The breakdown in the community functioning of the village, according to Yoneyama (1969),<sup>3</sup> is the most important push factor in rural depopulation. The various economic, educational, cultural and social functions of the village were what used to give villagers their *raison d'etre*. But since the Meiji Restoration (1868), these functions have tended to be carried out at a progressively higher level - at the level of the rural district, the prefecture, the region or the national level - due to the loss of local autonomy and the predominance of a national lifestyle over traditional, local ways of life.<sup>4</sup>

Imai (1968) suggests that settlement viability is twenty to thirty households,<sup>5</sup> and from Table V-1 it is clear that as many as 15 per cent of rural communities consisted of fewer than twenty households in 1975. The table shows that the proportion of settlements with more than a hundred households increased significantly from only 13.6 per cent of

Table V-1. Percentage distribution of rural settlements, by number of households.

	Under 19	20-49	50-99	100-149	150 and over	Number of rural communities
1960	14.0	47.1	25.3	6.9	6.7	152,431
1965	12.8	42.1	25.8	8.3	11.1	150,326
1970	15.2	41.5	24.4	8.1	10.8	142,699
1975	15.0	37.7	23.7	8.5	15.1	142,092

Source: Ogura, 1979, p.737, Table 4-13-i.

Note: excluding Okinawa.

the total to 23.6 per cent between 1960 and 1975, whereas the proportion of settlements with fewer than fifty households fell from 61.1 per cent to 52.7 per cent. These figures suggest that it has, indeed, been smaller settlements which have suffered most from depopulation;<sup>6</sup> they also suggest that threshold viability, if measured in terms of the stability or growth in the number of households, is considerably higher than twenty, and is probably between fifty and a hundred households. If such a definition is acceptable, then it means that more than half of all rural settlements in Japan should be considered unviable. Of course, this definition is a purely demographic one. Thresholds of economic or social viability may differ somewhat from demographic viability, but by and large they are so closely interdependent that for our purposes they may be considered to more or less coincide. By social viability, for example, we mean the ability to organize and perform the social activities of the life cycle or annual cycle which custom and tradition have developed and sustained over the centuries. Such activities in Japan include, for example, hedging, ditching and repairs to communal roads and irrigation channels; the performance of summer *bon* dances and shrine festivals; participation in village activity groups such as the Young Men's Association or the Old People's Association; or the mustering of neighbours' help in rethatching a roof, rebuilding a house, conducting a funeral service or putting out a fire. For each of such activities there is a minimum, or threshold, number of participants, below which it becomes impracticable to carry out the activity or causes too great an imposition on participants' purses, free time or physical strength.

With changing mores the perception of such social activities has also changed, especially on the part of young villagers. For previous generations, all such activities had an enjoyable or beneficial side of some sort: even the unpleasant aspects of communal labour or funerals were offset by the parties afterwards. To the youth of Japan nowadays, however, such parties seem unsophisticated and naive forms of entertainment compared with the cinemas, pinball parlours, electronic games centres, bowling alleys, coffee shops, bars and discos every night of the week in the cities. The enjoyable aspect of village social activities is no longer considered adequate compensation for the work they usually entail. Once the enjoyable aspects are no longer perceived with pleasure, only the irksome ones remain.<sup>7</sup> For example, if a villager is offered free help by a neighbour nowadays, he is rarely wholly glad to receive it: he views his neighbour's offer with cynicism, as he knows that he will be obliged to return the favour some day.<sup>8</sup> Even without outmigration, the falling birth rate has meant that there are fewer young people in the village, so even when it comes to purely enjoyable social events such as shrine festivals, the few young people remaining are pressurized willy-nilly into performing all the functions that were traditionally carried out by larger numbers, such as bearing the *mikoshi* (portable shrine) through the village. As a result, they are largely deprived of the enjoyment of the occasion.<sup>9</sup>

Ikegami (1975) succinctly summarizes Yoneyama's (1969) findings on the new attitudes to traditional social functions in rural areas since the Second World War as follows:<sup>10</sup>

<u>Old values</u>		<u>New values</u>
1) Mutual aid	=	obligations
2) Cooperative unpaid labour	=	an unnecessary tax
3) <i>Yobai</i> and <i>Bon</i> dancing <sup>11</sup>	=	corruption of public morals
4) Meticulous ceremonies	=	obstacles to modernization
5) Village traditions	=	feudalism
6) Rural codes of conduct	=	being a country bumpkin

Thus the contrast between the bustling cities and the rural areas is so great that young people in the villages often feel physically, geographically and psychologically isolated from the mainstream of current events.<sup>12</sup> Table V-2 shows the temporal distance to the nearest town with a DID<sup>13</sup> from rural settlements in 1970, from which it is clear that it took between thirty minutes and two hours from more than half the total number of villages.

It is well known that in Japan integration into, and conformity with, one or several social groups is extremely important for the psychological well-being and sense of security of individuals.<sup>14</sup>

Table V-2. The total number of households and proportion of farm households in rural settlements, by temporal distance to a DID, 1970.

	Number of agricultural settlements		Temporal distance to a town with a DID				
	Number	Percentage	Less than 0.5 hours	0.5-1 hours	1-2 hours	2 hours and over	Unrelated to DID towns
Total (%)	142,576	-	43,621	50,255	30,145	5,188	13,367
	-	(100.0)	(30.6)	(35.3)	(21.1)	(3.6)	(9.4)
	-	100.0	100.0	100.0	100.0	100.0	100.0
Total number of households		%	%	%	%	%	%
Less than 9	3,563	2.5	0.9	2.0	3.6	6.2	5.5
10-24	29,929	21.0	14.0	19.9	25.3	33.5	33.7
25-49	47,378	33.2	29.7	34.5	35.1	34.8	34.8
50-99	34,834	24.4	27.4	25.4	22.5	17.3	18.3
100-149	11,475	8.0	10.7	8.1	6.2	4.5	4.5
150 and over	15,397	10.8	17.2	10.1	7.3	3.7	3.2
Percentage of farm households							
Less than 10	4,902	3.4	5.7	3.1	2.3	1.1	1.0
10-30	12,428	8.7	13.4	7.7	6.3	3.9	4.4
30-50	13,424	9.4	12.3	9.0	7.9	7.0	6.1
50-70	21,448	15.0	16.9	15.0	13.7	14.1	12.3
70-90	45,858	32.2	30.6	33.6	32.2	32.2	32.0
90 and over	44,516	31.2	21.1	31.6	37.6	41.7	44.3

Source: Ishii, in Association of Japanese Geographers, 1980, p.204, Table 1.

Isolation from the outside world and a sense of rivalry with neighboring villages over the right to use water and forest resources gave hamlet members a strong sense of belonging.<sup>15</sup>

Thus the traditional frame of reference was the *ie* (family) or *mura* (village community).<sup>16</sup> Traditionally in rural areas, an individual's decision to stay or to migrate, for example, was determined less by his own free will than by the consensus of the *ie* or *mura* elders.<sup>17</sup> Nowadays such restraints on the individual's freedom of action have broken down to a considerable extent.<sup>18</sup> Nevertheless, as traditional sociological groups they are still stronger in the rural areas than elsewhere, and many young people find that the restraints they do still impose are psychologically

stifling.<sup>19</sup> But in rural areas there is often no other, or substitute, group to which to "belong".

Yoneyama (1969) believes that the problem stems from the fact that individuals no longer depend on the village alone for their livelihood and existence. Their existence now depends on a larger social sphere, one which is impersonal. Residents are often no longer individual participants in the achievement of common ends within a community in which all know each other, but are regarded by the higher authorities on which they now depend as "the labour force", "tax payers" or "human resources".<sup>20</sup> There has been a loss of personal identity and an increase in a sense of alienation.

The choice of personal associates, particularly amongst peer groups, in one's immediate neighbourhood is limited; and as we saw from Table V-2, it may take a considerable amount of travelling time to reach places where a wider choice does exist. The word *sabishii* in Japanese is highly emotive, meaning "lonely", "desolate", "lacking in companionship", and it is the word most often used, with wholly negative, non-romantic connotations, to describe life in remote areas,<sup>21</sup> which present a "dark" image to the minds of the general public.<sup>22</sup> Such negative attitudes to rural areas, both from within and without the village, have resulted in defeatist attitudes and the feeling that life "lacks a future" in rural areas, which have without doubt exacerbated rural depopulation in Japan.<sup>23</sup>

(b) Permeation of the cash economy and the rise in consumer expenditure

During the 1950s and 1960s, rapid urbanization and industrialization took place along the Pacific Coastal Belt.

There was rapid development of heavy industries based on iron, steel and petrochemicals, and light industries, especially electrical goods and textiles. One of the main stimulants to rapid economic growth during the 1950s and 1960s was the growth of the domestic market for both capital and consumer goods. As regards consumer goods, demand developed first in the cities, then in the rural areas of the country.<sup>24</sup>

It was noted earlier that traditional Japanese society was extremely cohesive.<sup>25</sup> This cohesiveness was conducive to producing the kind of mentality in which "keeping up with the Joneses" was all-important. Rivalry and competition amongst villagers was (and is) very strong, with the result that fashion held sway over necessity, and once consumer durables appeared in rural areas, their diffusion was extremely rapid.<sup>26</sup>

Such was the case with refrigerators, televisions, washing machines, gas heaters, water heaters and so on; and the same trend is evident with vehicles and farm machinery, which led to great over-investment in machines in remote rural areas.<sup>27</sup>

However, this urgent desire for consumer durables could only be gratified by means of readily available cash with which to pay for them.<sup>28</sup> The demand from companies for labour and the demand for a cash income on the part of under-employed rural dwellers were complementary, and as a result there was a rapid rise in part-time farming and seasonal migration for employment.<sup>29</sup> It is only a very recent phenomenon that people feel unable to live without consumer goods.<sup>30</sup> Yoneyama discusses the concept of standards of living in this context, and concludes that even in remote rural areas what may be considered as the "civil minimum" standard of living is actually a very high one, especially compared with the biological minimum requirements of food, water, warmth and shelter to support life.<sup>31</sup>

The distribution of consumer goods in rural areas rivalled that of urban areas within a short space of time,<sup>32</sup> and by the mid-1960s rural areas were a significant market for consumer goods.<sup>33</sup> Therefore rural-urban migration was not caused by any lack of consumer durables in rural area.<sup>34</sup> However, when one considers that part-time farming and seasonal migration are in part due to the desire for consumer goods and are also transitional stages between full-time farming and permanent outmigration, it is arguable that the permeation of "consumer society" is at least indirectly a cause of rural depopulation.

Rural depopulation did not become a problem until the early 1960s, principally affecting mountainous regions, which had developed sources of cash income - such as charcoal burning, livestock breeding, sericulture, the sale of local handicrafts products such as wooden ladles, chopsticks and straw sandals, and traditional forms of seasonal migration - earlier than other rural areas, and several decades (even from the mid-Tokugawa period)<sup>35</sup> before rural depopulation became a problem.<sup>36</sup> Such forms of subsidiary income were admittedly earned on a very small scale, and the economy remained fundamentally a subsistence economy. Ikegami (1975) asserts that the changes in the value judgements of rural society which bring about "consumer consciousness" occur as the result of capitalism, and that it is the permeation of the wage and cash economy which destroys the traditional order of interdependence.<sup>37</sup>

At any rate, the permeation of a cash economy of an urban character involving commuting and day labouring took place rapidly from the

early 1960s; and Saitō (1976) found that by 1973 the *average* farm household income was ¥2,690,000, which was somewhat higher than the national average income of ¥2,048,000. Of the farm household income, an average of 67.9 per cent was derived from off-farm employment. Moreover, household expenditure per member of farm households, at least for households owning less than one hectare, was found to be 5.8 per cent higher than the national average for workers.<sup>38</sup> Saitō attributes these facts to the low level of income from farming, the increase in consumption by farm households, their dependence upon non-agricultural income and the outflow of farm labour due to absorption by the non-farm sector.<sup>39</sup> This does suggest that farmers *in general* are less disadvantaged than many writers would have us believe, and certainly this may be said of farm households which have healthy members and a well-balanced demographic structure.<sup>40</sup>

Considering that household expenditures of the farmer with two hectares or more are almost equivalent to the average for all working families, the traditional image of the impoverished farmer struggling along on slightly over an acre is no longer applicable.<sup>41</sup>

An important problem of residual populations in depopulated rural areas, however, is that there are disproportionately large numbers of households with an aged demographic structure.

Abiko (in Saitō, 1976) reports that generally in depopulated mountain villages of Western Japan:

A typical aged farmer's household grows just enough rice for home consumption and relies upon remittances from family members for main living expenses.<sup>42</sup>

The purchasing power of such households is likely to be far more restricted than that of households which contain young and economically active members.

(c) The influence of mass media on value judgements

It appears that the permeation of consumer consciousness was one of the chief spurs to the desire for higher incomes and the increase in part-time farming. There is little doubt that the mass media, especially television and high-pressure television advertising, played a major role in the diffusion of this consciousness.<sup>43</sup> They were the main vehicles by which rural dwellers were able to compare their own life-style with that of the cities.<sup>44</sup> Thus the mass media were largely responsible for the "urbanization" of the attitudes of people in rural areas,<sup>45</sup> and accelerated the breakdown in the social functioning of the village. For

example:

Communal work still has to be organized..., but now at the end of the day everyone goes back home to his solitary sake bottle in front of his own TV set.<sup>46</sup>

Yoneyama believes that the diffusion of consumer goods itself is not responsible for outmigration, since there is little difference in that respect between rural and urban areas, but that mass media did make villagers aware of vast disparities in the standard of infrastructure,<sup>47</sup> and this no doubt was a cause of depopulation. Ikegami lends support to this argument, by reference to an NHK survey of 1972-3, in which transport, public services, leisure facilities and problems in winter were all given high negative ratings by respondents in depopulated areas. He concluded that the poor standard of infrastructure reduced residents' attachment to their region.<sup>48</sup>

(iii) Inheritance and marriage patterns

The traditional inheritance pattern of Japan is a system of primogeniture, by which it is customary for the eldest son to succeed to the headship of the household; or in exceptional circumstances a younger son may become the successor (*atotsugi*).<sup>49</sup> If there are no sons, then the eldest daughter's husband may be adopted by the family: he takes on the family's surname, and becomes the successor and head of the household in due course.<sup>50</sup> Either way, the role of the head of the household is an onerous one: he feels that he is not merely the "owner" of the material property to which he has succeeded, but is acting vicariously for the family line, as trustee for their ancestors.<sup>51</sup> As such, it is his duty to ensure the continuance and prosperity of the family: hence the importance of securing a successor.

From before the Second World War, younger sons were either married off as "adopted successors" (*yōshi*),<sup>52</sup> or if that were not possible, they were generally sent to work in the cities. This pattern by no means threatened the continuation of the household, as the eldest son would succeed to the headship, and if he died before producing a child, or became incapable through illness or such like, a younger son would often return to take over from him.<sup>53</sup> This situation changed, however, with the beginning of the post-war period of high rates of economic growth. Before long, not only younger sons, but also eldest sons and even middle-aged heads of households began outmigrating for higher incomes in the cities.<sup>54</sup> One stimulus to this has been a general rise in young people's aspirations, especially in association with a rise in the general level of education.<sup>55</sup>

Not only do farmers' sons not wish to enter farming as an occupation, but few of their fathers wish it either.<sup>56</sup> Hence the low proportion of school leavers from farm households who enter farming as an occupation (see Table V-3).

Table V-3. New entrants (boys and girls) to farming among school-leavers from farm households.

	1,000s; %			
	1963	1965	1970	1971
Total number of school-leavers	1,284.7	1,334.7	1,161.6	1,130.3
of which, economically active (A)	582.1	598.4	496.6	460.1
of which, engaged in farming (B)	89.9	68.0	36.7	31.9
of which, high school leavers (%)	31.8	39.7	67.6	71.9
B/A (%)	15.4	11.4	7.4	6.9

contd.

	1972	1973	1974	1975	1976	1977	1978
Total no.	1,044.4	992.2	978.9	917.6	853.7	848.4	765.6
(A)	401.7	375.7	345.1	311.6	281.5	298.2	274.1
(B)	22.0	18.3	14.3	9.9	10.2	12.0	9.0
(%)	72.7	74.3	76.9	81.8	79.4	75.8	78.9
B/A (%)	5.5	4.9	4.1	3.2	3.6	4.0	3.3

Source: Ogura, 1979, p.767, Table 6-20.

Note: Figures for 1975 include Okinawa.

From Table IV-7 earlier it was seen that there was a decline in the total number of farm households, by as much as 24.5 per cent between 1950 and 1980. The majority of households which abandoned farming had no successor or the successor had chosen to abandon farming altogether and outmigrate. This figure does not even include farm households where the successor remained or returned but took up non-agricultural full-time employment and entrusted farm work to other family members.

As one elderly man put it, trying to indicate how extreme the situation has become, "Even the successor has to take a full-time job".<sup>57</sup>

Thus, although the successor may take over the headship of the household, he rarely enters farming nowadays. A survey of Nagano Prefecture in 1974 found that in as many as seven out of 39 designated depopulated districts, there were no successors to farming at all under the age of 25, and five or fewer in 25 of the districts, making a total of only 110 successors taking up farming out of a total of 1,861 farm households.<sup>58</sup>

Moreover, the succession of a son to the family headship will have little meaning unless he, in turn, marries and produces an heir. It is essential for him to find a bride. However:

The problem of getting a son to be a farmer is as nothing compared with the problem of getting a girl to be the bride of a farming son. Even in the 1950s it was the *hope* of most girls that they would rate a town husband, though many of them recognized they would be lucky to do so. By the sixties, with all the young men leaving, a salary-man husband came to seem like every girl's birthright.<sup>59</sup>

The distaste of young women for marriage to farmers<sup>60</sup> is based on manifold grounds. Inevitably they would be required to help with the farm work, and in remote areas where her husband may practise seasonal migration wives may be separated from their husbands for half the year or more.<sup>61</sup> Moreover, despite mechanization, farming is still considered to be hard work.

It is evident that even girls who have been brought up in *dekasegi* households and are therefore likely to be psychologically better equipped to cope with such a way of life, aim at marrying a salaried man with stable employment within the lifetime system. In such a position, they will not have to do tiring labour in the fields, they may live apart from their parents-in-law, will have their husband's reassuring presence all year round, and may enjoy prestige which they would not have if they became farmers' wives.<sup>62</sup>

The reluctance of young women to marry farmers had become such a common nationwide phenomenon that on 1st December, 1978, the weekly "NHK Special" documentary series broadcast a programme entitled *Hanayome Daiboshū*, perhaps best translated as "Brides Wanted!". The programme showed interviews with young farmers in various parts of Japan, including Ehime and Shizuoka prefectures and Hokkaidō. In all cases, the plea of the young farmer was "Please, somebody come and marry me". The point is that many young men are obviously motivated to leave their village for fear that they may be unable to marry or may have great difficulty in obtaining a suitable bride.<sup>63</sup>

Generally speaking, the choice of marriage partner - for both young farmers and young women - is restricted to those who have chosen to remain in their home district.<sup>64</sup> The shortage of brides is a "barometer" for the region's future potential, as many young farmers are induced to leave solely in order to seek a wife.<sup>65</sup>

The result of such trends is ironic: "parents, especially mothers, are inconsistent; on the one hand they hope their eldest son will marry a farm girl, but on the other, they want some other life for their own daughters".<sup>66</sup>

There is little doubt, therefore, that attitudes towards farming as discussed above have effected changes in both inheritance and marriage patterns in rural areas, which have in turn been a cause of outmigration of young people in particular.

(iv) Education and patterns of employment

It was noted earlier that various traditional functions of the village have been steadily removed to higher administrative levels since the Meiji Restoration.<sup>67</sup> The extreme geographical concentration of the "central management functions" of all economic, social, cultural, political and administrative activities, particularly into the Keihin region centred on Tōkyō, has been severely criticized.<sup>68</sup> The high degree of centralization of further education establishments is no exception. In 1976, for example, nearly one half of all students receiving further education were to be found in southern Kantō (47 per cent), and another 21 per cent in the Keihanshin region, 6 per cent in Aichi Prefecture and 5 per cent in Fukuoka Prefecture. Thus nearly 80 per cent of all students were attending colleges and universities in those four urban areas alone.<sup>69</sup>

Table V-4 shows that there has been a steady rise in the proportion of middle school pupils who go on to receive high school education and high school pupils who proceed to further education institutions. It is clear from the above figures that places available in such institutions are concentrated mainly in the Keihin and Keihanshin regions, with the result that school leavers in rural areas who wish to proceed to further education have generally no alternative but to leave their area and migrate to a city. This circumstance alone explains why such a large proportion of 18- and 19-year-olds leave rural areas (see Table III-7).

The increase in the numbers of students proceeding to high school and further education establishments reflects the great importance attached

Table V-4. Changes in the percentage of students proceeding to post-compulsory education, 1955-1975.

	Percentage of students proceeding to:								
	High School			College, University			Postgraduate studies		
	Total	M	F	Total	M	F	Total	M	F
1955	51.5	55.5	47.4	10.1	15.0	5.0			
1956	51.3	55.0	47.6	9.8	14.7	4.9			
1957	51.4	54.3	48.4	11.2	16.8	5.4			
1958	53.7	56.2	51.1	10.7	16.0	5.2			
1959	55.4	57.5	53.2	10.1	15.0	5.1			
1960	57.7	59.6	55.9	10.3	14.9	5.5			
1961	62.3	63.8	60.7	11.8	16.9	6.5			
1962	64.0	65.5	62.5	12.8	18.1	7.4			
1963	66.8	68.4	65.1	15.4	21.7	9.0			
1964	69.3	70.6	67.9	19.9	27.9	11.6			
1965	70.7	71.7	69.6	17.0	22.4	11.3	4.2	4.7	1.9
1966	72.3	73.5	71.2	16.1	20.2	11.8	5.2	5.7	2.3
1967	74.5	75.3	73.7	17.9	22.2	13.4	5.0	5.5	2.4
1968	76.8	77.0	76.5	19.2	23.8	14.4	4.8	5.3	2.4
1969	79.2	79.5	79.5	21.4	26.6	16.1	4.9	5.5	2.3
1970	82.1	81.6	82.7	23.6	29.2	17.7	4.4	5.1	1.5
1971	85.0	84.1	85.9	26.8	32.5	20.8	3.8	4.4	1.5
1972	87.2	86.2	88.2	29.8	35.7	23.7	4.0	4.6	1.7
1973	89.4	88.3	90.6	32.2	37.5	26.6	4.2	4.7	1.7
1974	90.8	89.7	91.9	34.7	39.9	29.3	4.0	4.6	1.6
1975	91.9	97.0	93.0	38.4	44.1	32.4	-	-	-

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.4, p.952, Table 2-3-1.

to education by Japanese people of virtually all socio-economic strata, including farmers.<sup>70</sup> Indeed, many farmers do not wish their children to enter farming, and see the greater opportunities afforded by high levels of education as the means by which to prevent it.<sup>71</sup>

It is thought that one of the motives for proceeding to establishments of further education is the aspiration of young people towards white-collar employment, and another is the secondary motive of conforming to the general pattern - of going because everybody else does.<sup>72</sup>

Without doubt there are enormous incentives to obtain a white-collar job. The reason for this is that white-collar jobs for males fall almost universally within the so-called "lifetime employment system".<sup>73</sup> Within this arrangement, the employee receives a salary which rises automatically with his age, regardless of ability, as well as with promotions for merit; in addition, he receives annual or six-monthly bonuses, which may increase his annual income by up to six months' pay; his salary will be higher than that of those employed on a temporary basis; he will not lose his job providing he commits no legal offence; and he will receive all kinds of fringe benefits, including cheap housing, health insurance, free commuter tickets, leisure facilities, and so on. (See also Table IV-5, especially the comparison of average agricultural income (a) to wages in large firms (e).) As a result, there is fierce competition for entry into such jobs by young men, and selection is determined almost exclusively by academic performance. From this stems the determination to succeed at school and enter a "good" university. One's future prospects are thus determined before the age of eighteen.

Thus there are extremely strong educational pull factors operating in cities, siphoning school leavers from rural areas. Moreover, not only are there very few further education establishments in remote rural areas, but there are also many problems in providing even compulsory schooling. The combination of reduced birth rates and initial outmigration has resulted in greatly reduced numbers of pupils. Many such schools have had to resort to multi-grade classes and amalgamations or closures.<sup>74</sup> The latter in particular cause many problems for pupils who must commute long distances to school<sup>75</sup> as a result<sup>76</sup> (see Table V-7). They become tired with travelling and have little time to participate in extra-curricular activities.<sup>77</sup> PTA meetings become difficult to arrange. Teachers with children of their own are reluctant to accept posts in remote rural areas, so generally teachers are young and lack experience.<sup>78</sup> The shortage of teachers in rural areas results in some middle school staff having to

Table V-5. Disparities in the standard of educational facilities, 1974.

	Primary schools					Middle schools					Libraries No. of books per 1,000 population
	Wooden school buildings	Schools with dangerous buildings	Insufficiency of school buildings	Schools with insufficient gymnasiums	Schools with- out swimming pools	Wooden school buildings	Schools with dangerous buildings	Insufficiency of school buildings	Schools with insufficient gymnasiums	Schools with- out swimming pools	
Large urban <sup>1</sup> areas	18.9	11.9	62.9	78.6	18.6	20.1	9.4	58.2	70.6	21.3	361
Medium-size <sup>2</sup> cities	31.5	27.2	66.7	62.7	31.2	34.8	24.8	61.8	45.2	36.7	543
Towns <sup>3</sup>	43.2	34.5	58.8	56.0	44.9	45.4	25.1	53.2	40.0	54.4	425
Rural <sup>4</sup> districts	56.6	31.7	52.2	57.2	60.6	46.4	23.7	47.9	41.3	60.3	112
Total	40.0	29.2	56.4	59.6	47.3	38.9	22.5	51.5	43.8	54.4	399

Source: Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol.2, p.525, Table 33.

Notes: a) Figures for primary and middle schools show rates (%) of relevant topics in relation to the legally stipulated standards.

b) 1 = Tōkyō-to, Yokohama-shi, Nagoya-shi, Kyōto-shi, Ōsaka-shi, Kōbe-shi, Kitakyūshū-shi and Sapporo-shi.

2 = All other cities of population 150,000 and more.

3 = Population 50,000 and more but less than 150,000.

4 = Chōson.

5 = All shichōson.

teach subjects for which they are not qualified.<sup>79</sup> Taken together, these factors result in lower academic standards in remote rural areas than elsewhere. Imai recorded that the proportion of middle school leavers who went on to high school was only half that of the national average during the 1960s.<sup>80</sup> Furthermore, long absences from school are more common in remote areas than other regions.<sup>81</sup>

Table V-5 shows moreover the disparities in the quality of educational facilities between urban and rural areas. (See also Table V-7.) Although rural schools are at an advantage in terms of gymnasiums, they are considerably less well provided with durable and sound buildings and swimming pools.

Children in remote rural areas are clearly disadvantaged in the "education race", and this relative disadvantage is a significant cause of outmigration. Its importance is generally under-estimated by Japanese commentators, but Imai notes that a 1966 survey of Ōtō-chō, Wakayama Prefecture, found that "For the children's education" was the third most common response as to why inhabitants had outmigrated, after "To secure a stable job and income" and "Because my children left".<sup>82</sup> And Ikegami notes that school amalgamations are a spur to depopulation.<sup>83</sup>

Of those who outmigrate for educational reasons, some do indeed return at a later date;<sup>84</sup> however, job opportunities in rural areas are limited. Of a total of 620,728 school leavers in 1974, for example, 90,677 (14.7 per cent) wanted work in their own prefecture, but were unable to obtain employment there. That proportion was 42 per cent of the 214,408 who had left their own prefecture.<sup>85</sup> Also:

... as a result of the combined effects of migration to enter universities and migration to obtain employment upon graduation, provincial prefectures tend to lose at least one-half of their brighter senior high school graduates to other areas.<sup>86</sup>

This is largely as a result of the competition for white-collar jobs, which tend to be concentrated in secondary and tertiary industries; and generally speaking, the higher the level of economic activity the greater the concentration into the agglomerations.<sup>87</sup> And since the higher levels of central management functions cream off those with outstanding academic records, there is evidence to suggest that:

return migration of university graduates may well select against "quality", in that it is the graduate of the least-ranking university who is most likely to return.<sup>88</sup>

As a result, those who either remain in the village or do return to it are largely those who engage in skilled or semi-skilled manual labour. The only openings in white-collar jobs in rural areas which are unlikely to involve reposting elsewhere are mainly administrative jobs, for example at the town or rural district local government office, the agricultural cooperative or local hospital. Manual workers generally have lower academic records, so rural-urban migration involves a kind of "brain drain". In effect, the intellectual quality of the village is likely to decrease in greater proportion than the quantity of outmigrants.<sup>89</sup>

(v) The ageing of the population and problems of the aged

In the above section the discussion drew attention to the reasons why young people, especially school leavers, have such a high propensity to outmigrate from rural areas. Basically, the lifetime employment system necessitates this: it is essential to realize one's full potential before the age of eighteen in order to secure a stable job, and this system works strongly to the disadvantage of "late developers". The system has no place for those of low educational achievement or physical or mental disabilities.

As a result, young people are required to make crucial decisions about their future before leaving school, as it will become very difficult indeed for them to enter the system later on. The other side of this coin is that those born before or shortly after the war, when educational levels were generally lower - especially in rural areas - and economic opportunities restricted, are also unacceptable to the lifetime employment system. Thus middle-aged and older inhabitants of rural areas are in effect deprived of such white-collar job opportunities.

The alternatives to the lifetime system are far less attractive. They include blue-collar work, production line work, piece work, and so on. Even though such jobs may be relatively secure during periods of economic growth, they are less so in a depression or if the company runs into financial difficulties. Then such workers are far more likely to be laid off at short notice, which is why they are sometimes called "temporary" (*paato*) workers.<sup>90</sup> Wage rates may not relate closely to length of service, which of course is disadvantageous to middle-aged and older employees; prospects for promotion are considerably lower than in the lifetime system, and there are fewer, if any, fringe benefits. Another alternative is casual day labouring (*hiyatoi*).

Thus middle-aged and older rural inhabitants who wish to increase their cash income have three basic choices. They may seek such "temporary" (*paato*) or day labour (*hiyatoi*) work in cities on a permanent basis, in which case they must leave the village altogether; or they may seek it on a seasonal basis (*dekasegi*); or they may seek it in the area in which they live, in which case they generally become part-time (*kengyō*) farmers.<sup>91</sup>

Now, in Japan's overcrowded cities, housing and food are extremely expensive. Rural dwellers generally have inherited their house, typically a spacious one, from their fathers, and thus have only maintenance costs for housing. And, although farms are small, they are able to provide a substantial proportion of the household's food requirements.

While wage rates in the cities may be higher, in real terms a farmer is likely to be better off remaining in the village and depending on a local *paato* type commuting job or day labour for cash income. In some ways, *dekasegi* is a convenient way of benefiting from the best of both worlds.

Considering the rapidity of economic growth in Japan during the late 1950s and '60s, it is surprising at first sight that rural depopulation in Japan was not far more severe than it was. Migration of whole families at once (*kyōka rison*) occurred remarkably little, even in western Japan, and this is largely explained by the prevailing lifetime system type pattern of employment. It is this system which stimulates almost total outmigration of school leavers, but acts as a strong deterrent to outmigration on the part of older people. Strange to say, this important point does not seem to have been observed by Japanese commentators on the topic: they tend to ask only why some people leave, not why others stay. ✓

Of course, many psychological factors also act to cause the retention of middle-aged and older inhabitants in depopulated areas. Such people have been brought up within the traditional family system of reverence for the ancestors and continuation of the family line *in situ*. Thus many feel that it is their duty to remain in the family house, looking after both the inherited property and the spiritual welfare of the ancestors, and tending the family grave. There is also strong attachment to land which may have been worked by one's family for generations. Moreover, the vast majority of such inhabitants have lived in the area, often in the same house, for many years, typically since they were born or married; thus "cumulative inertia"<sup>92</sup> is likely to make them characteristically reluctant to leave.

The combination of all the above factors has contributed to the extremely rapid ageing of residual populations in Japan's depopulated regions. In a sense, the old people in post-war Japan are suffering from the transition from the traditional social organization towards a welfare state. In their youth, they had to care for their own elderly parents, and many find it inexcusable that their children do not do the same for them. On the other hand, pension and health insurance schemes are in their infancy. They have lost on both counts.<sup>93</sup>

Recently free medical examinations and treatment have become available to all old people in Japan, about which more will be said later. However, both Imai and Ikegami highlight the disproportionately high rates of suicide amongst old people in remote areas, particularly the instance of Ōchi-gun, Shimane Prefecture, which recorded ten suicides of people aged 60 or more in 1966 - as compared with only three fatalities due to traffic accidents. Inquests all revealed a loss of will to live, due to ill health, and not all were in severe financial straits. Surprisingly, most were not living alone, but with their families. In some cases they needed assistance to attend medical examinations, which meant the giving up of time and loss of income on the part of other household members, as well as increases in household expenditure for medical treatment. Not wishing to burden the family in such ways, suicide was the chosen course.<sup>94</sup>

In cases where old people live alone and are unable to reach a doctor, they often do not seek medical treatment until their condition is serious.<sup>95</sup> In other instances, where they do live with their families, their middle-aged sons are likely to have taken up off-farm employment, and farming is fobbed off onto the old folk.<sup>96</sup> In many cases the work is really too strenuous.

Moreover, traditionally, the status of the household head was endorsed by his long experience of farming practices.<sup>97</sup> Once technological innovations were introduced, both his lower level of education to cope with the new technology and his declining physical strength to handle sometimes heavy machinery meant that he had to defer to younger members of the household to a far greater degree than hitherto. In this way, the conventional authority of older people in rural areas has been undermined in post-war years, resulting in a loss of their self-confidence and an increase in anxiety.<sup>98</sup>

Thus old people are often under both physical and mental pressure.<sup>99</sup> The "nuclearization" of families has meant that children tend to prefer

to live separately from their parents nowadays, even in rural areas; they may live at a considerable distance, making frequent visits difficult. So single-person aged households are common in rural areas, especially in the mountains.<sup>100</sup> Ikegami cites Matsubara, who believes that nuclearization of families does not mean that young people have no obligation to support aged parents.<sup>101</sup> Nevertheless, if children have moved away and have financial commitments of their own, financial support is not always any more forthcoming than emotional support.<sup>102</sup> Even so, a 1968 survey found that more than 60 per cent of those aged 65 or more were financially dependent upon their families, due to the low level of pension and welfare provision.<sup>103</sup> Remittances from family members are typically relied upon for main living expenses,<sup>104</sup> but generally speaking, old people prefer to be dependent upon their families for emotional support, but have a strong desire to remain financially independent.<sup>105</sup>

Ikegami discusses at length the pension system for senior citizens in Japan and its importance with regard to depopulated areas, because of the high proportion of old people in such areas.<sup>106</sup> He particularly criticizes the fact that most pension schemes in Japan have adopted a reserve system, by which the first generation of recipients are disadvantaged since they made few contributions to the fund, rather than a levy system, in which present contributions are distributed among eligible recipients.<sup>107</sup>

One extremely important aspect of the complicated pension system in Japan is the age at which pensions become payable. The retirement age recommended by the Ministry of Labour, chiefly of importance for company employees, is age 55, but the pension entitlement age set by the Ministry of Health and Welfare is 60 years, resulting in a gap of at least five years; but the actual age at which pensions become payable depends on the individual pension schemes, of which there are several. The National Pension (*kokumin nenkin*), for example, is the scheme set up in 1959 with compulsory flat-rate contributions for all workers who are not members of other pension schemes. This affects many of the aged farmers in depopulated areas. It is, however, not payable until age 65, after a minimum of 25 years' contributions before the age of 60. As a transitional measure, "welfare pension" (*fukushi nenkin*) is payable to those who have not met these requirements, but payments are means-tested and payable only after

the age of 70. Clearly, the inadequacies of the pension system in Japan have the greatest repercussions in depopulated areas, which have not only a high proportion of aged inhabitants, but also a high proportion of old people living without younger, wage-earning family members and a high proportion of inhabitants dependent upon pension schemes such as the National Pension.<sup>108</sup>

There are also problems of spatial isolation in remote depopulated settlements for old people with low levels of mobility, and more geriatric hospitals and old people's homes are needed in rural areas.<sup>109</sup> There is, however, a very strong psychological resistance against entering old people's homes in Japan,<sup>110</sup> partially no doubt as a result of traditional Confucian ethics, which stress that it is one's duty to look after parents in their dotage. Ikegami suggests that a more satisfactory solution might be the reception of old people from outlying settlements by local centres of population, their dispersal throughout that settlement and their integration within that community.<sup>111</sup> In that way, the senior citizens concerned would not suffer the perceived indignities of old people's homes but would at the same time have relatively easy access to transport facilities and medical attention. They would also remain in fairly familiar surroundings.

(vi) Problems of the infrastructure in depopulated rural areas

It is pertinent to include problems of the infrastructure in this chapter on social and cultural aspects of rural depopulation, for, as was seen earlier,<sup>112</sup> many of the provisions which are now generally regarded as publicly provided infrastructure were traditionally provided and maintained communally by the inhabitants of the villages themselves. They included especially repairs to roads and irrigation channels, hedging, ditching, maintenance of domestic water supplies and village schools, and participation in fire-fighting. The social organization for the carrying out of these tasks (which it may be argued are economic as well as social functions) was broadly similar to, and generally overlapped with, that of more purely social functions such as the Young Men's Association. The assumption of responsibility by local authorities for many of these provisions has been a very recent innovation in Japan.

While rapid rebuilding of Japan's major urban centres took place during the 1950s and 1960s, the infrastructure of rural areas, especially those which began to suffer depopulation at that time, remained little developed from its pre-war state. As a result, the differences in the

level of provision of infrastructure in depopulated areas increasingly lagged behind that of the cities.

According to Yoneyama, this differential with regard to infrastructure between rural and urban areas was a spur to rural depopulation.<sup>113</sup> Ikegami supports this view, and adds that the initial outflow of population causes a deterioration in services, which again stimulates further out-migration, thus bringing about a vicious circle of decline.<sup>114</sup> Furthermore, he enumerates various policy attempts during the 1960s to redress this regional imbalance, which were intended to benefit areas that in most cases corresponded with areas of rural depopulation.<sup>115</sup> However, the regulations for financial aid to backward areas were not enforced strictly enough; the policies were little more than goodwill gestures; and although investment in infrastructure is a necessity, it neither brings about an immediate stoppage of outmigration nor is it sufficient for stimulating the regional economy.<sup>116</sup>

The financial problems surrounding the provision and maintenance of public facilities in depopulated areas of Japan are manifold: the decrease in population results in a relative decrease in income from local taxes, from taxes on fixed assets and from taxes on consumption (VAT); and while an increasing proportion of the population becomes exempt from certain taxes due to ageing, there is an increase required in expenditure on social welfare for the same sector of the population;<sup>117</sup> regional transfer payments are calculated on the basis of the fiscal index,<sup>118</sup> which is itself calculated according to population figures, and a decrease in the population thus results in a decrease in revenue from such sources; and the outflow of young people in productive age groups deprives the district of potential future revenue.<sup>119</sup>

Moreover, the decrease in population does not cause a proportionate decrease in the number of villages to be served, so there is no decrease in expenditure required. Similarly, administrative costs do not decline: an intake of new public employees must be maintained to prevent ageing of the administrative workforce (on account of the lifetime employment system), as an increase in the age of public employees would result in proportionately larger sums having to be expended on their salaries due to the *nenkō joretsu* (earnings related to years of service) system.<sup>120</sup>

The combined result is an increase in required local government expenditure per capita of population, together with a reduction in the efficiency and utilization of public facilities. It is difficult, however, to make cuts in expenditure.<sup>121</sup> The methods of balancing losses include

regional transfer payments and the issue of local bonds.<sup>122</sup>

Thus, in 1970, the Act for Urgent Special Countermeasures for Areas of Rural Depopulation ("the Depopulation Act") was passed. It was aimed chiefly at improving the infrastructure of depopulated areas, with a view to stemming the depopulation problem.<sup>123</sup> Funds for this purpose were allocated at two administrative levels: the prefecture (*tođofuken*) and the rural district (*shichōson*) (see Table V-6).

Table V-6. Expenditure of funds under the Depopulation Act, 1970-79.

	¥100 millions, %		
	Cost	%	% of total
<b>Rural districts</b>			
Transport and communications	16,617	37.7	21.0
Educational and cultural facilities	9,406	21.4	11.9
Health and welfare facilities	9,233	21.0	11.6
Development of farming, forestry, fishing	7,600	17.3	9.6
Redistribution of settlements	196	0.4	0.2
Others	974	2.2	1.2
Sub-total	44,026	100.0	55.5
<b>Prefectures</b>			
Prefectural roads	20,312	57.6	25.6
Development of farming, forestry, fishing	9,917	28.1	12.5
Main rural district roads	2,345	6.7	3.0
Medical facilities	2,324	6.6	2.9
Others	337	1.0	0.4
Sub-total	35,235	100.0	44.4
<b>Total</b>	<b>79,261</b>		<b>100.0</b>

Source: based on Kokudo-chō Kaso Taisaku-shitsu, 1980, pp.2-3.

Designated districts<sup>124</sup> formed one-third of all administrative districts in Japan, contained one-twelfth of the total population and covered two-fifths of the land area. Virtually half of the ¥7,926,100 million spent during the decade of the 1970s under this programme was spent on the provision and improvement of roads and other transport and communications works. Indeed, the level of provision of public facilities in depopulated

areas rose markedly throughout the 1970s, as is shown in Table V-7.<sup>125</sup> Nevertheless, national standards continued to rise too, and despite the improvements in infrastructure in depopulated areas, the table also shows that they still failed to bring standards up to those of non-designated areas: differentials remained. In the case of children commuting long distances to school, for example, standards actually deteriorated in depopulated areas, due to school closures and amalgamations, whereas they improved in other parts of the country.

It is pertinent at this point, therefore, to discuss certain aspects of particular infrastructure in rural areas of Japan. Educational facilities and the development of primary industries (see Table V-6) have been examined in detail in section (iv) above and Chapter IV respectively, and the discussion of these aspects needs no further elaboration. Of at least equal importance is the provision of transport and communications, which, indeed, accounted for half of the funds allocated under the provisions of the Depopulation Act.

According to Ikegami, roads are the most important infrastructural requirement of depopulated areas, since they facilitate economic, social and cultural activities; but Japan's depopulated areas have a poorly developed road network, which is thus hampering the development of such areas.<sup>126</sup> Until the "opening" of Japan and modernization was embarked upon in 1868, mobility even within the country had been restricted for nearly three hundred years. Travel on horseback by common people had been forbidden during the Tokugawa period,<sup>127</sup> and the road network remained poorly developed. A network of main roads linked major castle towns and cities to Edo (Tōkyō) and Kyōto, but even these were relatively primitive; all the more so the minor routes which led into them. Most of these major roads were later designated as National Routes, and those which ran between major urban centres became well-developed in the late nineteenth and early twentieth centuries; virtually all other roads, however, remained relatively undeveloped until after the Second World War. In effect, the road network of rural areas, especially remote rural areas, remained essentially unchanged and unimproved from feudal times until the 1970s. As the transportation networks of the urban areas were developed apace in the immediate post-war period and as private vehicle ownership increased rapidly, the differential in the standards of road provision and maintenance between urban and rural areas became all the more marked.

Throughout the post-war period, priority in the budget for the provision of roads was given to the ever-expanding urban areas, and within rural areas themselves the remaining funds were inevitably allocated to improving main roads (national routes, *kokudō*, and important provincial roads, *jūyō chihō dōro*).<sup>128</sup> It was not until relevant provisions were made in the 1970 Depopulation Act that funds became available for the overall development of non-trunk, local roads in designated depopulated rural districts. Imai (1968), writing before the enactment of the Depopulation Act, claimed that the building of roads actually exacerbated the depopulation problem: it simply made it easier for inhabitants to leave.<sup>129</sup>

Traditionally, works such as road repairs, ditching and so forth, were the communal responsibility of village inhabitants,<sup>130</sup> but the decline in population made this increasingly burdensome on the residual population and often impracticable;<sup>131</sup> in many cases, fines began to be imposed on villagers who failed to participate in such works.<sup>132</sup> It was thus imperative in this respect too, not merely financially, that local governments should assume greater responsibilities towards local roads in depopulated areas, and the provisions of the Depopulation Act at last facilitated this.

With the onset of depopulation and the rise in private vehicle ownership, the demand for bus services fell, and deterioration of services and closures of routes ensued. In 1972, therefore, central government grants were instigated for rural bus companies, to underwrite up to one-third of the companies' losses. Rural railways have also suffered, with the closure of some rural stations and even of whole branch lines, and some stations left in operation are no longer manned.<sup>133</sup>

Moreover, the communications problems suffered by virtually all depopulated districts are exacerbated in regions of deep snowfall. Here, roads are frequently impassable in winter, snow clearance is essential, as are wide pavements and hard shoulders to roads, and underground telephone cables; and there is very rapid deterioration of road surfaces.<sup>134</sup>

From the foregoing paragraphs it is clear that transport and communications were, and are, lagging in depopulated areas, and render such areas relatively inaccessible. The initial investment is expensive, but in addition, once communications and transport links are established, they are almost invariably under-utilized and more expensive to maintain per capita of the population which they serve than those in urban areas.

Table V-7. Level of provision of main public facilities in designated depopulated districts.

	Unit	1971			1975			1980		
		Depop.	Non-depop.	Total	Depop.	Non-depop.	Total	Depop.	Non-depop.	Total
SHICHŌSON ROADS:		9.0	17.4	15.7	14.3	22.7	21.0	21.3	28.5	26.9
	improved	2.7	11.7	9.8	10.7	23.9	21.2	27.8	41.5	38.5
	metalled	39.6	36.2	36.9	34.0	29.9	30.7	30.9	27.3	28.1
	impassable by motor vehicle	46.3	34.3	37.4	36.6	22.2	25.0	26.1	15.7	17.8
	wooden bridges	51.9	64.1	60.9	62.7	77.1	74.3	73.4	83.7	81.6
	permanent bridges									
LENGTH OF FARM ROADS PER HA. ARABLE LAND	m.	42.2	55.5	51.9	45.1	59.2	55.4	48.9	59.3	56.3
LENGTH OF FOREST ROADS PER HA. FOREST		4.3	5.8	5.0	5.4	6.6	6.0	6.2	7.2	6.6
DISTRIBUTION OF PIPED WATER	%	56.6	83.8	81.4	66.5	90.2	88.4	74.7	93.7	92.3
HOSPITAL BEDS	Beds/ 10,000	78.1	126.7	122.4	87.1	129.3	126.0	89.2	137.4	133.9
SCHOOLS: Admission to nursery schools, kindergartens	%	62.3	54.6	55.2	77.7	61.4	62.4	93.0	78.1	79.0
Primary: Proportion of branch schools to total	%	13.1	7.4	8.8	11.3	5.6	6.9	9.4	3.7	5.0
Areal proportion of non-wooden bldgs. to total	%	26.9	48.8	45.6	39.2	67.3	63.8	57.2	84.1	81.1
Areal proportion of dangerous bldgs. to total	%	14.9	10.1	10.8	14.0	7.5	8.3	9.2	3.0	3.7
No. of pupils per class	No.	24.0	34.3	32.9	21.7	34.2	32.9	20.7	35.1	33.7
Pupils commuting long distances	%	6.5	1.0	1.6	7.9	1.1	1.6	8.3	0.9	1.4
Middle: Proportion of branch schools to total	%	3.6	2.6	2.8	2.2	2.1	2.1	1.5	1.2	1.2
Areal proportion of non-wooden bldgs. to total	%	33.7	50.5	48.7	49.6	67.3	64.7	69.1	82.8	81.0
Areal proportion of dangerous bldgs. to total	%	7.7	4.9	5.4	8.6	4.8	5.3	4.7	2.3	2.6
No. of pupils per class	No.	32.0	37.7	36.8	30.2	37.6	36.7	28.5	38.2	37.3
Pupils commuting long distances	%	12.2	2.8	4.0	14.7	2.9	4.0	14.9	2.0	3.0

Source: Kokudo-chō Chihō Shinkō-kyoku Kaso Taisaku-shitsu, 1982, p.35, Table 1-15.

Note: Depop. = Designated depopulated districts  
 Non-depop. = All other districts  
 Total = National average

Like transport and communications, medical facilities are also lagging in areas of rural depopulation. Table V-7 shows that although the number of hospital beds per 10,000 population increased in depopulated areas during the 1970s, it is still substantially below the number for other areas. Table V-8, however, shows that both the number of hospitals and the number of clinics declined in depopulated areas, as did the number of doctors.

According to Imai, there are not enough doctors in depopulated areas of Japan,<sup>135</sup> and Ikegami cites a Ministry of Health and Welfare survey which found that in 1971, whereas there were 166.7 doctors per 10,000<sup>136</sup> population in Japan's urban agglomerations (a higher figure than average for industrialized countries), and 124.8 in smaller urban centres (*shi*), there were only 65.4 in rural districts (*chōson*): only half as many as in even small towns.<sup>137</sup> Indeed, Table V-8 shows that whereas the number of doctors per designated depopulated district fell from 5.0 to 4.9 between 1970 and 1980, the national average rose by nearly one-third, from 36.5 to 48.0: a remarkable disparity.

There are several reasons for this. One, as noted earlier, is the lack of local government finances in depopulated areas<sup>138</sup> with which to pay doctors. A second reason is that it is extremely difficult to entice doctors to go to rural areas and stay there,<sup>139</sup> as the medical world, like that of education, is affected by extreme concentration of central management functions.<sup>140</sup> Doctors in rural areas feel isolated from current developments in medicine, and the long distances involved means that they find difficulty in attending medical conferences. Moreover, they are overworked, must cope with inferior facilities, cannot earn such high incomes as urban counterparts (due to smaller populations to be served), have little or no free time nor privacy, and (for reasons discussed in section (iv) above) feel that their own children's education may suffer.<sup>141</sup> Thus they are not generally enticed to depopulated areas even where local authorities are able to offer a high salary.<sup>142</sup>

A third reason for the differential between urban and rural areas in the relative number of doctors is that approximately only one-quarter of doctors in Japan are publicly employed, and there are few restrictions on the setting up of medical practices. There is a large degree of freedom of choice of location, and so, for the reasons described in the foregoing paragraph, even though there has been an increase in the number of doctors nationally, depopulated areas have not benefited,<sup>143</sup> and are not likely to do so without tighter controls.

Table V-8. Medical facilities.

	1 9 7 0			1 9 8 0			$\frac{1980}{1970} \times 100$			
	Depop.		Japan	Depop.		Japan				
	Total	Average per district	Total	Average per district	Total	Average per district				
Hospitals of which, public	657	0.6	7,974	2.4	648	0.6	9,055	2.8	98.6	113.6
	256	0.2	1,080	0.33	248	0.2	1,075	0.33	96.9	99.5
Clinics of which, public	4,435	4.0	68,977	21.2	4,237	3.8	77,661	23.9	95.5	112.6
	978	0.9	2,715	0.83	1,004	0.9	3,239	0.1	102.7	119.3
No. of beds in clinics and hospitals	67,436	60.3	1,312,199	403.0	75,669	67.6	1,607,241	493.8	112.2	122.5
No. of doctors in clinics and hospitals	5,617	5.0	118,990	36.5	5,479	4.9	156,235	48.0	97.5	131.3
Dental surgeries	1,662	1.5	29,911	9.2	1,677	1.5	38,834	11.9	100.9	129.8
No. of dentists	1,787	1.6	37,859	11.6	1,838	1.6	53,602	16.5	102.9	141.6

Source: Kokudo-chō Chiho Shinkō-kyoku Kaso Taisaku-shitsu, 1982, p.37, Table 1-16.

Note: Depop. = Designated depopulated districts; District = Municipal or rural administrative district.

In 1978, 1,168 sub-districts<sup>144</sup> remained without medical facilities within 555 designated depopulated districts.<sup>145</sup> The distances between remote villages and the nearest medical facilities means that emergency cases - especially in winter in regions of deep snowfall - have a high fatality rate.<sup>146</sup>

In addition, the aged structure of the population in depopulated areas means that they have relatively greater need for good medical facilities. Free annual medical checks have been available since 1966 for those aged 65 or more, and free treatment has been available since 1973 for those aged 70 or more,<sup>147</sup> innovations which are especially beneficial to depopulated areas; but it is likely that such welfare benefits are not used to full advantage<sup>148</sup> on account of low mobility and long distances to hospitals and clinics. Moreover, the high proportion of old people in depopulated areas thus places a greater strain on local government finances.

Rural depopulation has also adversely affected fire brigades. It has been customary for young adult men automatically to become members of the village fire brigade.<sup>149</sup> The outmigration of young people has resulted in both the ageing of fire brigades and reductions in membership.<sup>150</sup> The number of fire brigade members in Japan, as a direct result of rural outmigration, decreased by one-third between 1957 and 1967.<sup>151</sup> Furthermore, in areas of *dekasegi*, which are all more or less depopulated,<sup>152</sup> fire-fighting during the winter months is largely a matter for the women and old people who remain. In Akita Prefecture, for example, one-seventh of the prefecture's fire brigade members were absent during the winter of 1967, and as many as one-half in some villages.<sup>153</sup>

Clearly, some of these problems could be ameliorated by redistribution of settlements and the removal of inhabitants of small, remote villages to local centres. Ikegami views rural depopulation as not merely a decrease in rural population but also as the inability of local government to fulfil its commitments to maintain essential services, and he regards resettlement as the most important countermeasure to depopulation, as this would increase the efficiency of investment in infrastructure.<sup>154</sup>

Indeed, as may be seen from Table V-6, 0.2 per cent of funds under the Depopulation Act programme of the 1970s was invested in the redistribution of settlements, and 1,990 villages and 38,601 households were regarded as in need of resettlement.<sup>155</sup> The regulations concerning this were that all households of a village containing ten households or more had to move to a specified purpose-built housing estate.<sup>156</sup> In

fact, the programme succeeded in resettling only 185 villages, 1,230 households, in 61 housing estates.<sup>157</sup> Resettlement is a voluntary matter, and it is extremely difficult to obtain a unanimous decision by the inhabitants of any given village. The policy failed because there were no powers for the compulsory eviction of residents, which, in any case, could not be carried out within the democratic system.<sup>158</sup> In fact, urging inhabitants to move from remote villages into key settlements will probably only encourage them to leave the region altogether, so that a resettlement policy is pointless without vast improvements in the production base and social regeneration of such depopulated districts.<sup>159</sup>

(vii) Conclusions

Chapter V has focused upon the social and cultural behavioural patterns which have influenced the course of rural depopulation in post-war Japan.

In particular, changes have taken place in value judgements, which have brought about (a) a notable decline in the social functions of the village community, and (b) a thorough permeation of a cash economy and exceptionally high levels of consumption. Strong susceptibility to the influence of mass media has played a major role in accelerating such changes.

These changes have effected a rise in the aspirations of young people especially. Young men, even eldest sons who customarily inherit the family property, began to withdraw from farming as an occupation, and young women to shun marriage to farmers. A high level of academic achievement was typically seen as the means towards the goals of their occupational and marriage aspirations, and since both educational institutions and the non-primary industrial sectors are concentrated heavily in urban areas, outmigration upon graduation from middle or high school was virtually the only course open to such young people.

However, for already mature adults of rural communities who had not received post-compulsory education, the way to occupations within the stable lifetime system of employment was barred, and part-time farming while remaining in the village was often the most rational course of action for them. It was primarily these factors which exerted to "push" young people from, but "pull", that is, detain older people in, the rural areas of the country.

As a result, depopulated villages tend to have a large number of

households with an aged demographic structure, often consisting of old couples or single persons living alone; they are often isolated from their families not only spatially but also emotionally, and sometimes financially, too. The latter is a particular problem, since the current generation of old people are entitled to only very small old age pensions. Furthermore, it is old people in particular - especially those living alone - who have the greatest need for medical attention and public transport facilities.

In remote and depopulated districts it is difficult and expensive to install or maintain public services such as transport and communications links, which remained largely undeveloped until the 1970s. The provision of other infrastructure such as medical facilities, schools, fire brigades, mains sewerage, refuse disposal, and so on in remote, depopulated districts, is seriously lagging behind urban areas of Japan. This fact, too, has undoubtedly contributed to the depopulation of such areas.

Although in theory planned redistribution of settlements would ameliorate some of these problems, in fact such plans have proved to be largely impracticable to implement. A more realistic approach may perhaps be to continue to improve the infrastructure of key settlements and to improve transport and communications links from remote villages to facilitate access to such infrastructure. In that way, the most remote, depopulated and unviable villages are likely to "die naturally" in the foreseeable future, without costly planned intervention.

There is little doubt, therefore, that in post-war Japan a number of cultural and social factors have acted in concert, to exacerbate both rural depopulation itself and its effects on depopulated communities.

### PART THREE: CASE STUDIES

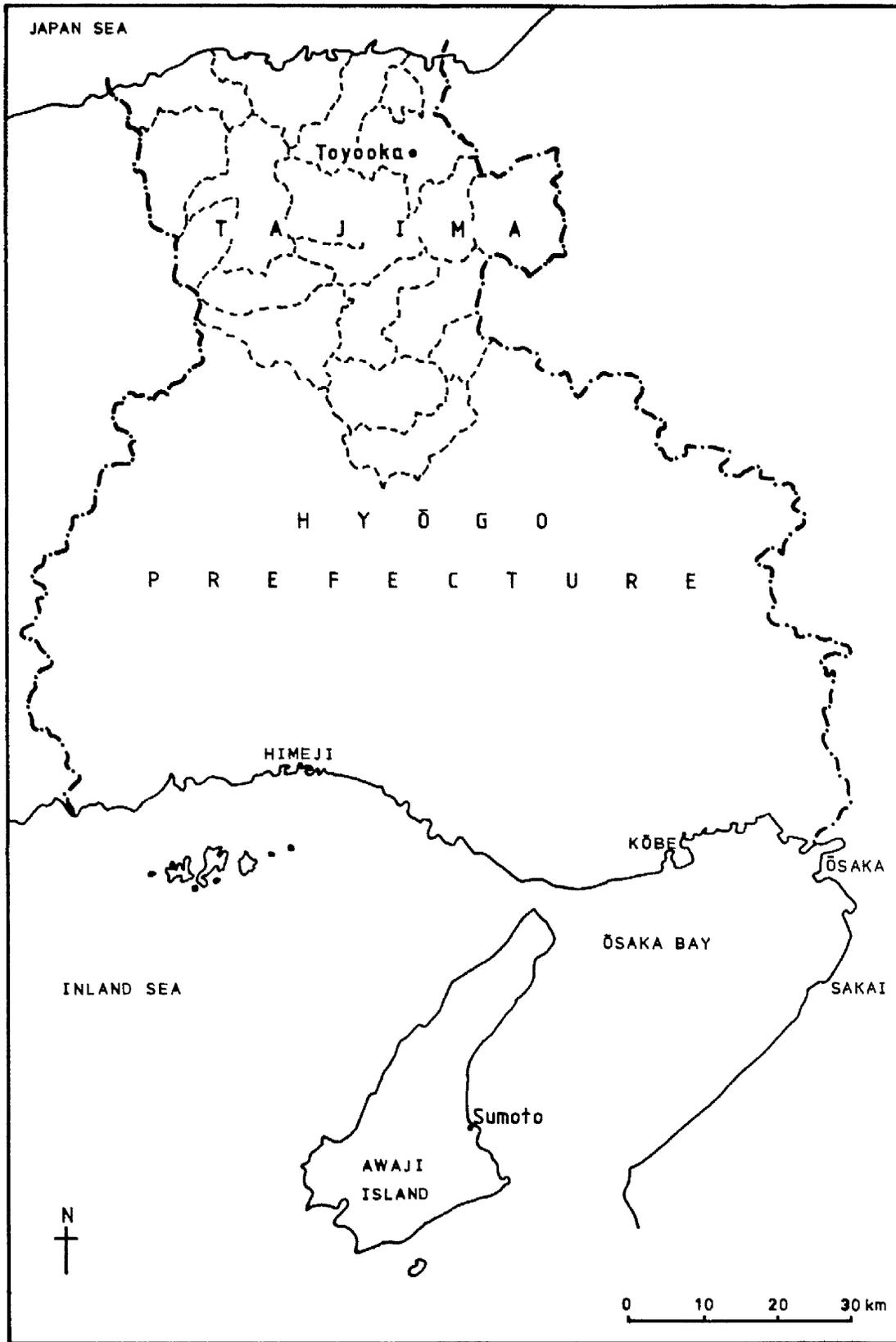
Part Two of the thesis analyzed in general terms the demographic, economic, social, cultural and, to a limited extent, the administrative and political factors which have affected and been affected by rural depopulation in post-war Japan. However, while such discussion is essential for providing the background to the problem, it rests on assumptions which need to be tested against evidence from specific rural communities.

Therefore studies were made of seven villages, all of which are located within the west of the locality known by its ancient provincial name, Tajima. The region consists of nineteen administrative districts: one municipal district (*shi*) and eighteen rural districts (*cho*).

Chapter VI will broadly describe the geographical background of the Tajima region, in order to place the village studies in the local context. Chapter VII will examine in turn and in some detail how the seven selected villages within the Tajima region have been affected by rural depopulation since the war; and Chapter VIII will aim to analyze and interpret the findings of the village surveys. Finally, Chapter IX will draw some conclusions from the thesis as a whole.



Map VI-1. The location of the Tajima region.



## CHAPTER VI: THE TAJIMA REGION: GEOGRAPHICAL BACKGROUND

### (i) Introduction

The villages selected for intensive study are all located in the western, mountainous parts of the region of northern Hyōgo Prefecture which is still known by its ancient provincial name, Tajima (see Map VI-1). In order to place the selected villages within their regional context, it is first necessary to describe briefly the Tajima region, and that will be the aim of this chapter.

For the purposes of studying rural depopulation in post-war Japan, the Tajima region is an interesting case. To begin with, it is one of the depopulated regions which is closest to the early-industrialized Keihanshin region, and as such its history of depopulation is relatively long.<sup>1</sup> Moreover, it displays characteristics which are thought to be more representative of north-eastern Japan, particularly the practice of *dekasegi* (temporary migration) in winter, as well as those of south-western Japan, such as extremely small land holdings.<sup>2</sup>

Tajima remained a *kuni*, a province or local unit of feudal administration, from the Taika Reform<sup>3</sup> of AD 645 until the establishment of prefectures in 1871. From the mid-fourteenth century, Tajima came under the control of the Yamana family of *daimyō* warriors; but after the Meiji Restoration of 1868, administrative functions were rapidly removed from the Tajima region.<sup>4</sup> For example, Yamana Toyokuni was appointed Governor of Shitsumi Gokyō (mainly present-day Muraoka-chō) during the 1620s, and he made Muraoka his headquarters.<sup>5</sup> The village then thrived as a *shukuba-machi* (post town) on the San'indō road, and with the establishment of the prefectural system in 1871, Muraoka Prefecture was instigated. This lasted only a few months before it was incorporated into the larger Toyooka Prefecture, and then this, in turn, was made part of Hyōgo Prefecture in 1896.<sup>6</sup>

While Tajima is no longer officially a unit of local government, inhabitants still strongly identify with the region, and even prefectural authorities still often regard it as a distinct sub-region, especially for planning purposes.

Since local government reorganization in the early 1960s, Tajima has consisted of one municipal district, Toyōoka-shi, containing the main town, Toyooka, and eighteen rural districts (*chō*) (see Map VI-2) in five *gun* (rural administrative sub-districts of a prefecture):

Map VI-2. Tajima: administrative districts.



Kinosaki-gun: Kinosaki, Takeno, Kasumi, Hidaka;  
 Izushi-gun: Izushi, Tantō;  
 Mikata-gun: Muraoka, Hamasaka, Mikata, Onsen;  
 Yabu-gun: Yōka, Yabu, Ōya, Sekinomiya;  
 Asago-gun: Ikuno, Wadayama, Santō, Asago.

Five of the villages studied were located in Muraoka-chō, one in Kasumi-chō and one in Ōya-chō.

While constituting part of the largely industrialized Kinki region, Tajima remains nevertheless relatively remote. In 1980, approximately 29 trains per day left Toyooka for major cities of the Keihanshin region, of which three were "super" express trains to Kyōto (approximately 2½ hours), and four were "super" express trains to Ōsaka (approximately 2 hours 55 minutes). There were four ordinary express trains to Kyōto (3 hours), eight to Ōsaka (3½ hours) and one to Nagoya (5 hours 50 minutes). In addition, two "super" express night trains went directly to Tōkyō, taking respectively 9½ and 10½ hours.

The local Zentan (All Tajima) Bus Company also ran a daily coach service between Tajima and the Hanshin region: two coaches per day each way between Kinosaki and Ōsaka (3 hours 45 minutes), two similarly between Yumura (Onsen-chō) and Ōsaka (3 hours 45 minutes) and two between Kinosaki and Kōbe (3 hours 55 minutes).

Moreover, Tajima covers an area of 2,135.3 km<sup>2</sup>, which is 25.6 per cent of Hyōgo Prefecture's land area,<sup>7</sup> and considerably more travelling time, sometimes one or two hours, may be required between rail stations or main bus stops and outlying villages.

The remoteness of Tajima within the Kinki region is perhaps reflected in the fact that it remains largely neglected by Japanese scholars: those who study the Kinki region tend to focus upon its industrialized, urbanized aspects, while scholars of rural depopulation more frequently look to the Tōhoku or Chūgoku regions for their research. In fact, Tajima adjoins the eastern end of the San'in region (see Map III-2), and has more in common with the remote and backward San'in region than with the early-developed Kinki region.

Tajima is rugged of terrain, poorly endowed with natural resources, and must surely rank as one of the most disadvantaged regions of western Japan. Most of the region consists of an intricate pattern of heavily pressed mountain ridges, and cultivable land is restricted to the small Toyooka Basin in the east and to narrow valley floors of the mountainous west. Tajima contains very few mineral resources with the exception of

small deposits of silver and copper; and the modest elevation of the mountains, to generally less than 1,000 metres above sea level, means that the region has little potential for large-scale hydro-electric power generation. Forests occupy a very substantial portion of the total area of Tajima, but as is the case in many parts of Japan, the timber is of poor quality, forest holdings are small and fragmented, and the forestry industry is not well developed.

As has been the case in nearly all remote regions of Japan, farming traditionally provided the basis for the economy of the Tajima region. In Tajima, however, physical conditions have never been conducive to large-scale commercial production of paddy rice. Farms are small even by the standards of western Japan, holdings are fragmented and often consist of terraced plots as well as valley bottom land, and the growing season is relatively short. These factors all contribute to hinder the successful development of irrigated rice output. Of traditionally greater importance than rice production has been cattle raising and sericulture, supplemented by charcoal burning and *dekasegi* (seasonal migration). Of these, only cattle raising and *dekasegi* remain important economic activities in the region.

Despite the generally "dark" image of depopulated areas in the minds of the Japanese,<sup>8</sup> a passing visitor receives no such gloomy impression of Tajima. In fact, there is very little immediately obvious evidence of depopulation: a drive through Tajima along the main roads in the late 1970s afforded few glimpses of abandoned dwellings; at most, one saw one or two school buildings turned over to uses such as local museums or meeting halls. On the contrary, not only were the main roads in good repair and freshly tarmacked, but almost every village appeared to contain some brand new building or other, such as a new meeting hall or clinic.<sup>9</sup>

However, diversions away from main roads and into the mountains proper showed fewer signs of prosperity and a more frequent incidence of old-fashioned wattle-and-daub or thatched dwellings, abandoned houses, disused primary schools and fallow fields.

(ii) Physiography

Over eighty per cent of Hyōgo Prefecture is mountainous, and formed of two main massifs: the Bantan Mountains in the west and the Tanba Mountains in the east. The Bantan Mountains are further divided into the Hokutan Mountains, north of the Yagi River; the Central

Map VI-3. Tajima: physiography.



Mountains, between the Yagi River and the Yamazaki-Fukuzaki fault; and the Seiban Mountains, south of the fault.<sup>10</sup> The Tajima region corresponds to the Central Mountains north of their watershed, the Hokutan Mountains and the Japan Sea Coast (see Map VI-3).

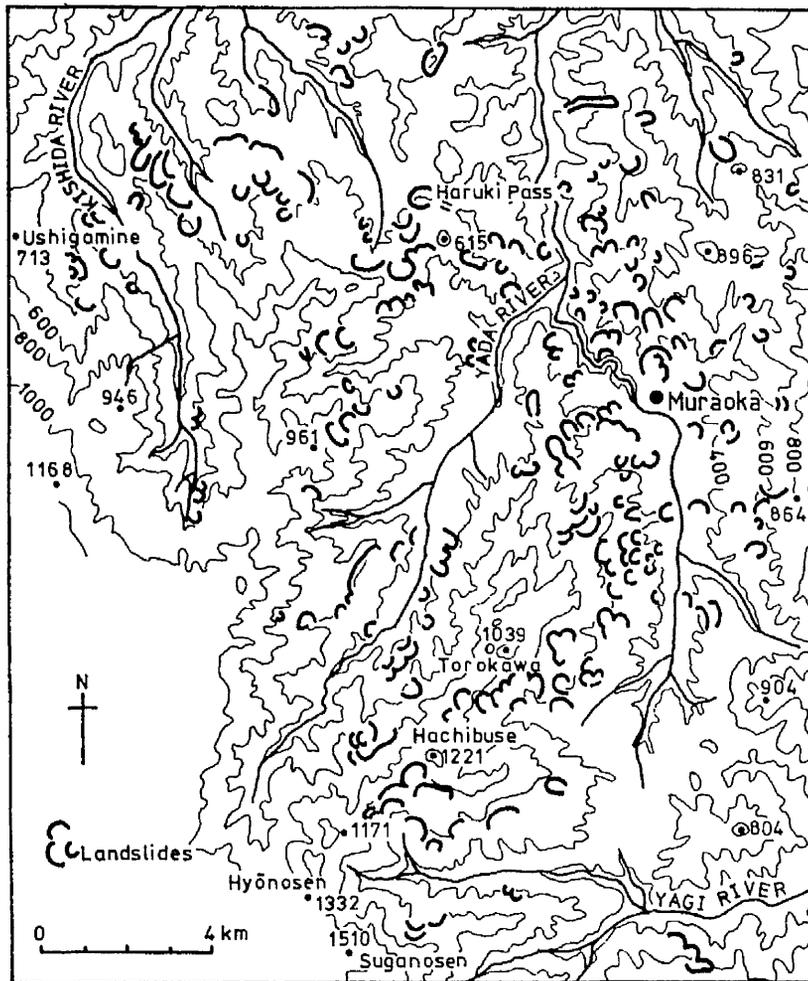
The mountains of Tajima form the eastern end of the Chūgoku Mountain Range, and twelve or thirteen of the peaks are higher than 1,000m. above sea level. Of these Hyōnosen (or Suganosen) is the highest at 1,510m., and this mountain forms the boundary between Hyōgo, Okayama and Tottori Prefectures. The peaks are mainly extinct volcanoes; they are generally rounded and formed by the deposition of volcanic material over an uplifted plateau, typically of Tertiary (Miocene) layers with granite in places.<sup>11</sup>

Four main stages of mountain-building are apparent. The oldest rocks are igneous and volcanic rocks formed in the late Cretaceous period about seventy million years ago. At roughly the same time, granite intrusions occurred throughout the Chūgoku and Kinki regions, which are partially exposed on the Tajima coast. Thereafter the region remained stable until the Miocene period about twenty million years ago, and suffered erosion. It was then disturbed again by volcanic activity, subsidence occurred, and the Hokutan area was covered by a thick layer of volcanic ejecta and debris, known generally as Hokutan strata. A third period of volcanic activity, during the Pliocene period ten to twenty million years ago, laid down the Terugi strata, which consist of acidic volcanic layers overlain by conglomerates, tuffs, volcanic ash, breccia tuffs and lava, with dikes of porphyry.

The present Hokutan Mountains were formed during a final period of recent volcanic activity in the Pleistocene period (one million to 500,000 years ago). This resulted in the andesite Hachibuse volcanic rocks of which Mt. Hachibuse (1,221m.), Mt. Hyōnosen (1,510m.), Mt. Torokawa (1,039m.) and others were formed. The olivestone basalt of the Genbudō Caves was also ejected at this time, and is also visible at Mt. Kannabe (470m.).<sup>12</sup>

The surface geology of the western Tajima region, then, consists mainly of recent volcanic rocks, and this prevalence of volcanic deposits may be regarded as an important constraint on economic activity. In Japan, by contrast with many other parts of the world, volcanic rocks (especially those of recent age) almost always weather into soils which are low in natural fertility. Moreover, soils derived from volcanic material have poor qualities of water retention and being weakly

Map VI-4. Landslides in the vicinity of Muraoka-cho



Source: Nihon Chishi Kenkyūsho, 1973, Vol.IV, p. 266.

consolidated are prone to erosion. In the Tajima region, soils of volcanic origin display all of these disadvantages. What is more, landslides and landslips are common, most notably in western Tajima in the vicinity of Muraoka, in those locations where the Hokutan (Miocene) and Terugi (Pliocene) strata are exposed along steep slopes (see Map VI-4).<sup>13</sup>

The mountains of Tajima are dissected by fast-flowing rivers, often in deeply-cut gorges with waterfalls in places, notably the Kishida, Yada, Satsu and Takeno Rivers, which flow northwards into the Japan Sea (see Map VI-5). There is little lowland other than the lower Maruyama River valley and the Toyooka Basin in the east of Tajima.

The Maruyama River rises in Ikuno-chō in the Central Mountains, flows 67.72 km. northwards into the Japan Sea, and has a catchment area of 1,281.4 km<sup>2</sup>. Its valley opens out into an alluvial plain around Yōka, and in the Toyooka Basin, near the mouth of the main stream, the alluvium reaches to a depth of 30 metres.<sup>14</sup> The Toyooka Basin thus forms the only part of Tajima which is important for arable farming.

The Tajima coastline is a typical submerged coastline of rias, although platforms of marine erosion and caves occur in places as a result of local, small-scale uplift.<sup>15</sup> All the minor rivers - the Takeno, Satsu, Kishida and Yada - have small, alluvial plains in their estuaries, but otherwise beaches may be found in parts along the length of the coastline.<sup>16</sup> Severe wave action and the weathering processes of rain, ice and snow have eroded the faults, joints and dikes of the cliffs into caves, arches and crags.<sup>17</sup> There are several small islands, some of which are accessible at low tide. The coastline provides several small natural harbours and is of great scenic beauty.

To summarize, the Tajima region is a mountainous area which faces the Japan Sea, with many peaks over 1,000m. above sea level. It consists largely of volcanic rocks, and these, together with steep slopes, give rise to poor soil conditions. The mountains are dissected by short, fast, northward-flowing rivers in narrow, deep valleys. Flat land for cultivation is thus limited to the bottoms of these valleys or to small terraced fields on the hill slopes. The only exception is the Toyooka Basin in north-eastern Tajima, the flood plain of the Maruyama River; and this is low-lying and prone to frequent flooding. The coastline is submerged and indented with rias. The physical nature of the region is thus very adverse for both economic activities such as farming and for ease of communications, but advantageous to activities such as fishing and recreational pursuits.

Map VI-5. Tajima: drainage pattern.



(iii) Climate

Hyōgo Prefecture, facing as it does both the Inland Sea-Pacific Coast and the Japan Sea Coast, experiences a wide regional variation in climate, namely of four main types: (i) Pacific, (ii) Inland Sea, (iii) Interior, and (iv) Japan Sea. The latter two types are experienced in the Tajima region.<sup>18</sup>

Tajima experiences typically cold winters, with January temperatures at sea level averaging 2-4°C (see Table VI-1). Apart from mountain observatories such as the one at Mount Rokkō in the south of the prefecture, the average annual lowest temperatures of the Kinki region have been recorded in Tajima, at Muraoka (-18.5°C) and Yōka (-17.2°C), where the effects of continentality are exacerbated by local conditions such as the formation of inversion layers. These temperatures differ greatly from, say, Awaji Island in the Inland Sea, where the average annual lowest temperature is only -8°C.

Table VI-1. Temperatures in the Tajima region, (°C).

	Jan	Feb	Mar	Apr	May	June	July
Kasumi	3.9	3.8	6.2	11.1	18.8	21.0	24.8
Toyooka	2.3	2.6	5.9	11.5	16.4	20.8	25.2
Wadayama	2.6	2.9	6.4	11.9	16.9	21.2	26.0
Muraoka	1.0	2.1	5.1	12.3	16.2	20.4	25.3
Kōbe	4.5	4.8	7.7	13.2	18.0	21.7	26.0
	Aug	Sept	Oct	Nov	Dec	Average	
Kasumi	27.8	21.4	16.3	13.0	6.4	14.5	
Toyooka	26.8	21.6	15.4	10.2	5.4	13.6	
Wadayama	26.7	22.4	15.8	10.5	5.7	14.1	
Muraoka	25.6	21.2	15.1	9.4	4.9	13.2	
Kōbe	27.1	23.5	17.6	12.5	7.4	15.3	

Source: Nihon Chishi Kenkyūsho, 1973, Vol.14, p.521.

In summer, however, regional differences in weather conditions are less marked, and August temperatures at sea level (and in the interior valleys and basins) range from 26 to 28°C. To some extent the effects of continentality in the interior mountains of Tajima are ameliorated by the higher altitudes. Nevertheless, high temperatures

are experienced in the middle reaches of the Maruyama River, where diurnal sea breezes do not penetrate. The highest recorded temperature of Hyōgo Prefecture, 40°C, has been recorded at Muraoka-chō and Wadayama-chō in Tajima, and at Saji in Aogaki-chō; these are associated with Föhn winds.<sup>19</sup>

Large regional variations in the amount of annual precipitation occur within Hyōgo Prefecture, ranging from 1,100-1,200 mm. per annum on the Inland Sea Coast, to 1,500 mm. per annum in the Interior, and 2,600-2,700 mm. per annum on the Japan Sea Coast. The monthly distribution of precipitation also varies regionally: while the Inland Sea Coast receives most of its precipitation in the summer months from monsoon rains and typhoons, the Japan Sea Coast, on the other hand, receives the majority of its annual precipitation in winter, in the form of snow. In winter there is commonly more than two metres of snow in the mountains of Tajima, and the deepest recorded snowfall for Hyōgo Prefecture is 2.7 m., at Muraoka.<sup>20</sup>

Heavy falls of snow, which typically occur between December and March, seriously impede access to the remoter mountain valleys. Local authorities throughout the region must invest heavily in snow-clearing equipment and must spend a sizeable proportion of their income on the maintenance and repair of roads damaged by ice and frost action. Moreover, farming comes to a standstill while the fields are covered by snow. The winter months in Tajima, by contrast with the Pacific coastlands of Japan, constitute a prolonged agricultural slack season. While snow-covered slopes may be utilized as ski runs, slopes suitable for skiing are by no means ubiquitous throughout the Tajima region, and only in the vicinity of Mt. Hachibuse and Mt. Hyōnosen in the extreme west of Tajima has it been possible to develop thriving ski resorts.

It is the strong north-westerly winds in winter which bring the snow to the Japan Sea coast. On the other hand, the barrier of the mountains ameliorates the effects of monsoon winds and typhoons in Tajima. Whereas the average number of days per annum with windspeeds of 10 metres per second<sup>21</sup> or more is 118 in Sumoto (Awaji Island) and 87 in Kōbe, it is only 4 in Toyooka.<sup>22</sup>

Fog and mist are common in Hyōgo Prefecture, but, again, there are considerable variations according to locality. Whereas they occur in the Inland Sea area mainly in spring and early summer and are of the advection type or are smogs caused by atmospheric pollution, on the

Japan Sea coast fogs and mist tend to be produced in summer and autumn, and in the Toyooka Basin they are due to radiation and the evaporation of river water. Indeed, Toyooka is the second most foggy place in Japan, and experiences on average 128 foggy or misty days per year.<sup>23</sup>

Generally speaking, the climate of the Tajima region is typified by hot, sultry summers but very cold winters during which strong north-westerly winds bring heavy snow. This contrasts very strikingly with southern Hyōgo Prefecture, where there are much milder winters, rarely snow except on mountain-tops, and breezes are fresher in summer.

Thus the Tajima region experiences some of the greatest extremes of climatic variation, not only in Hyōgo Prefecture, but also in the whole of the Kinki region.

(iv) Population

Out of a total prefectural population of 5,145,000 in 1980, the Tajima region contained 215,479 people<sup>24</sup> - only 4.18 per cent of Hyōgo Prefecture's population, despite the fact that Tajima occupies some quarter of the prefecture's land area. Thus, whereas the population density for the prefecture as a whole in 1980 was 614.5 persons per square kilometre, for the Tajima region it was only 100.9 persons per square kilometre. But real population density is far higher than this figure would suggest: the Bantan and Tanba Mountains are extremely sparsely populated, but when the area of mountains, plateaux and forests is excluded, the population density for the remaining areas in 1960, for example, was 1,584.2 persons per square kilometre. In other words, there is a very strong concentration of population into the limited area of lowlands in Tajima.<sup>25</sup>

Table VI-2 and Figure VI-1 show the changes in total population in the Tajima region since 1920. The table demonstrates clearly that, despite a marked concentration towards Toyooka-shi in the early 1920s, the total population of Tajima in each intercensal quinquennium until the Second World War fluctuated by less than one per cent. It was thus not suffering depopulation; but that it was a lagging region within Hyōgo Prefecture is apparent from the fact that the total prefectural population was growing steadily, while that of the Tajima region remained stable. The war brought about a rapid increase in population in Tajima with the arrival of evacuees and the post-war "baby boom". The population peaked

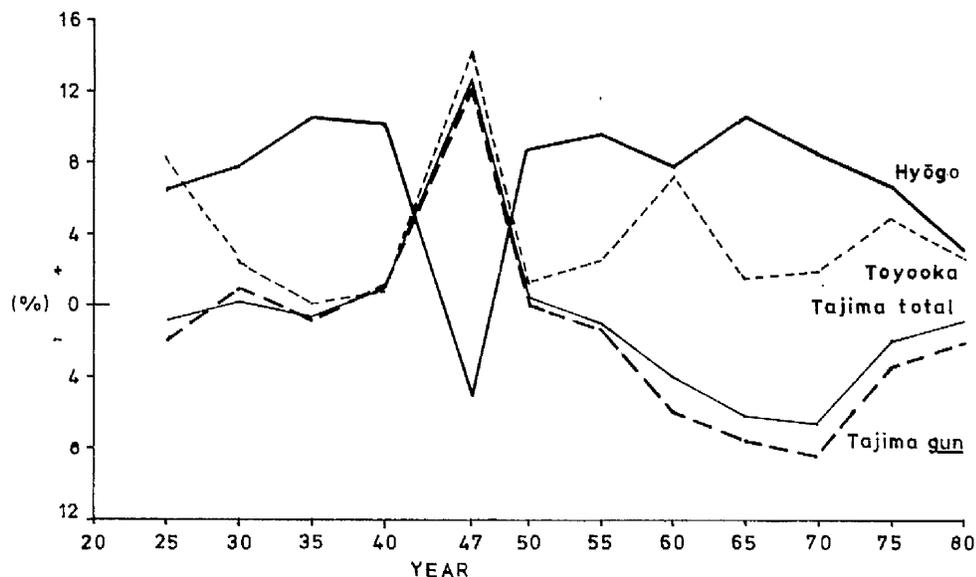
Table VI-2. Tajima: changes in population, by *gun*, 1920-1980.

	1920		1925		1930		1935		1940		1947		1950	
	Pop.	In-crease												
Mikata-gun	46,788		46,125	-1.2	45,463	-1.5	44,701	-1.6	44,988	0.6	50,125	11.4	50,187	0.0
Kinosaki-gun	49,489		47,985	-3.1	48,615	1.3	48,172	-0.6	47,918	-0.6	55,099	14.9	55,196	0.1
Yabu-gun	47,959		47,595	-0.8	48,744	2.6	48,137	-1.3	49,827	3.5	54,797	9.9	54,639	-0.4
Asago-gun	34,002		32,976	-3.1	34,242	3.9	34,332	0.2	34,799	1.3	40,437	16.2	40,873	0.1
Izushi-gun	25,496		25,007	-1.2	24,306	-2.9	24,615	1.2	24,525	-0.6	26,469	3.0	26,198	-1.1
<i>Gun</i> total	203,734		199,688	-2.0	201,370	0.8	199,957	-0.8	202,017	1.0	226,927	12.3	227,093	0.0
Toyooka-shi	29,915		32,352	8.1	33,210	2.6	33,271	0.0	33,534	0.7	38,283	14.1	38,783	1.3
Tajima total	233,649		232,040	-0.7	234,580	0.1	233,228	-0.6	235,551	0.9	265,210	12.5	265,876	0.2
Hyogo total	2,301,799		2,454,679	6.6	2,646,301	7.8	2,932,249	10.5	3,221,232	10.2	3,057,444	-5.1	3,309,935	8.3

	1955		1960		1965		1970		1975		1980	
	Pop.	In-crease										
Mikata-gun	48,940	-2.5	44,077	-10.0	40,128	-9.0	35,714	-11.0	33,843	-5.2	32,688	-3.4
Kinosaki-gun	54,884	-0.6	53,011	-3.4	50,385	-5.0	47,790	-5.2	47,133	-1.4	46,647	-1.0
Yabu-gun	53,802	-1.6	44,884	-16.6	40,740	-9.3	36,716	-9.9	34,919	-4.9	33,974	-2.7
Asago-gun	40,862	-0.1	47,118	15.3	43,637	-7.2	39,506	-9.5	37,763	-4.4	36,850	-2.4
Izushi-gun	25,329	-3.1	21,361	-15.7	19,462	-3.9	18,416	-5.6	17,948	-2.5	17,863	-0.5
<i>Gun</i> total	223,817	-1.5	210,451	-6.0	194,352	-7.7	178,142	-8.4	171,606	-3.7	168,022	-2.1
Toyooka-shi	39,700	2.3	42,569	7.2	43,259	1.6	44,094	1.9	46,210	4.8	47,457	2.7
Tajima total	263,517	-0.9	253,020	-4.0	237,611	-6.1	222,236	-6.5	217,816	-2.0	215,479	-1.1
Hyogo total	3,620,947	9.4	3,906,487	7.9	4,309,944	10.3	4,667,928	8.3	4,992,140	6.9	5,114,896	3.1

Source: Based on Hyogo-ken Shokō-bu Sangyō Ritschi-ka, 1974, p.6.  
 Note: May not be adjusted for boundary changes.

Figure VI-1. Tajima: changes in the population, 1920-1980.



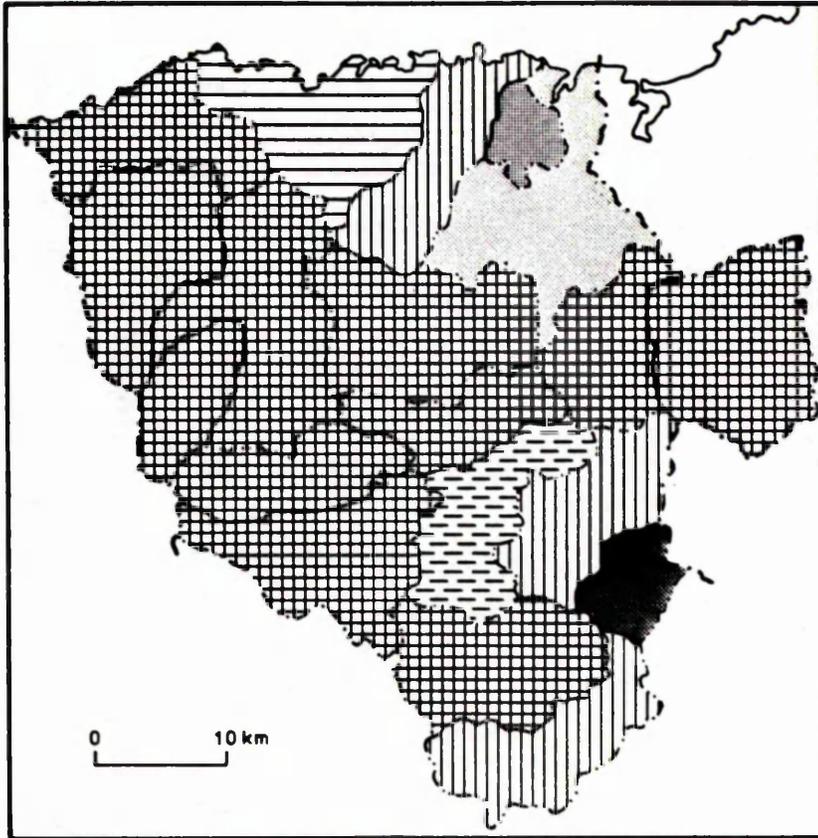
around 1950 and thereafter began to decline as outmigration took place and the birth rate began to fall. However, it is noteworthy that it was not until sometime soon after 1965 that the total population of Tajima fell to its pre-war level. The trends show a clear inverse correlation between growth in the total population of Hyōgo Prefecture and that of Tajima: the early 1960s saw the highest rate of increase in Hyōgo Prefecture's population and the highest rate of decrease in Tajima's population, but both trends have steadily become less marked since then (see Figure VI-1).

The present study is concerned mainly with the post-war period, and Table VI-3 gives the total population and intercensal increase rates for each administrative district (*shichōson*) of Tajima from 1955 to 1980. The highest rates of decrease for any district were recorded between 1965 and 1970, -19.2 per cent, in both Ōya-chō and Ikuno-chō, which both have ore mines that suffered rationalization and closures. Other than those two districts, relatively high rates of population decrease are shown for Tantō, Muraoka, Mikata and Sekinomiya districts, all of which are largely dependent upon agriculture (see Maps VI-6, (a) to (e)).

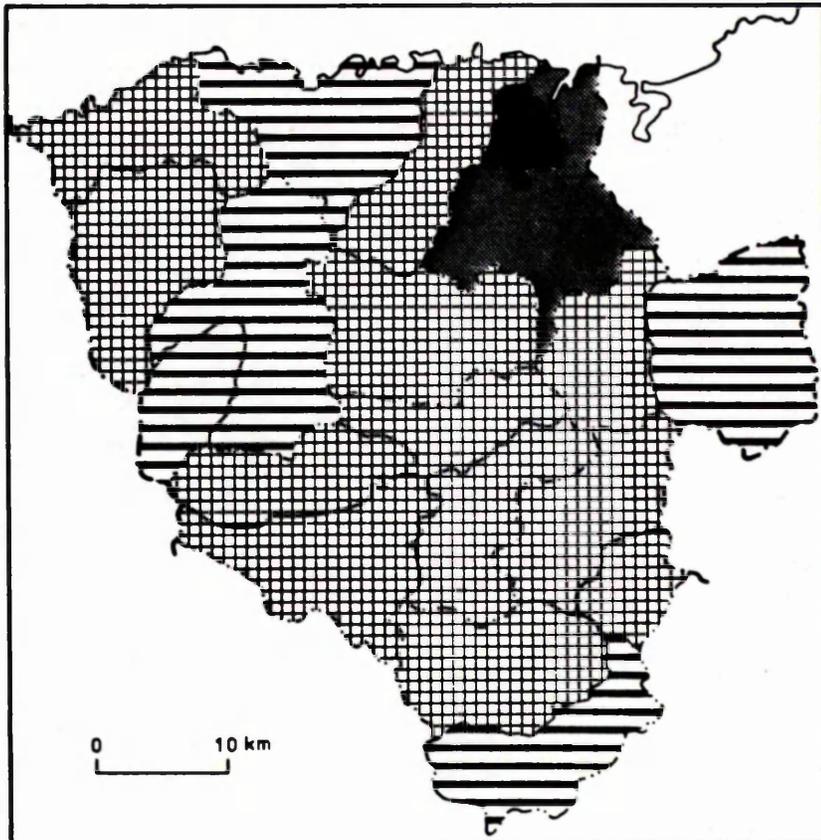
The continued growth of Toyooka shows its increasing importance as the chief regional centre, and Wadayama is emerging as a secondary centre. On the whole, the high decrease rates of the 1960s experienced

Map VI-6. Tajima: intercensal changes in population, 1955-1980.

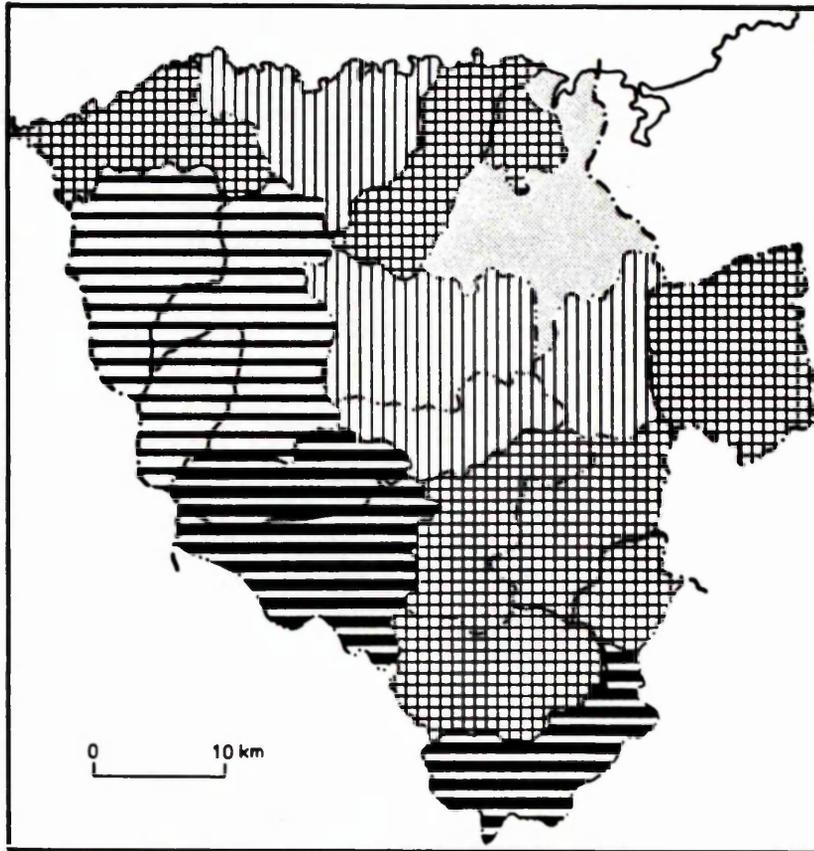
(a) 1955-1960



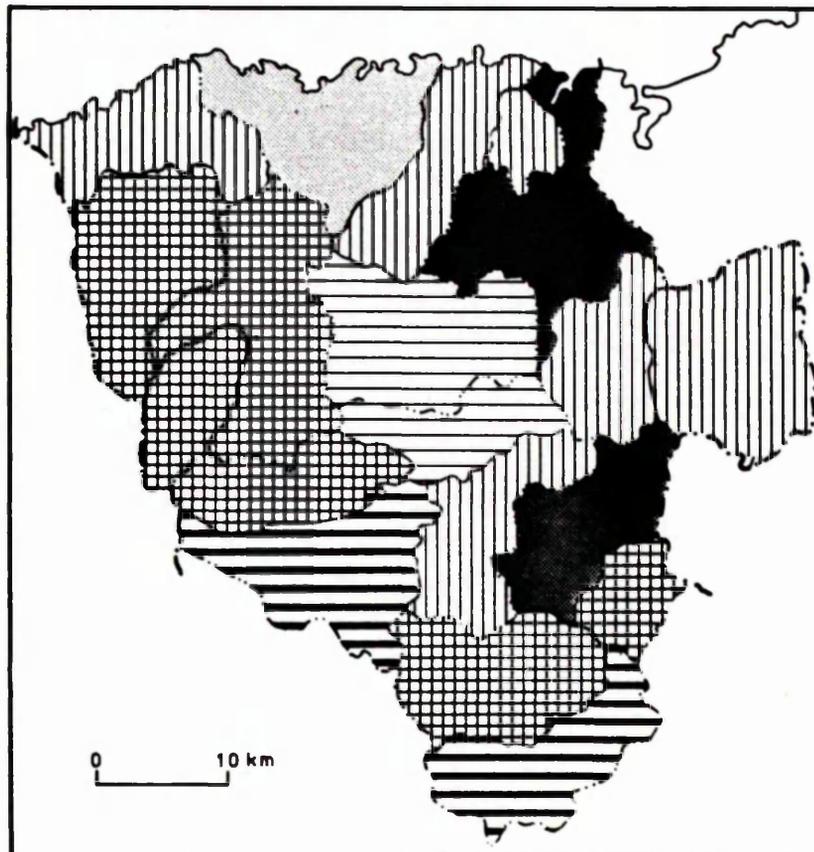
(b) 1960-1965



(c) 1965-1970



(d) 1970-1975



(e) 1975-1980

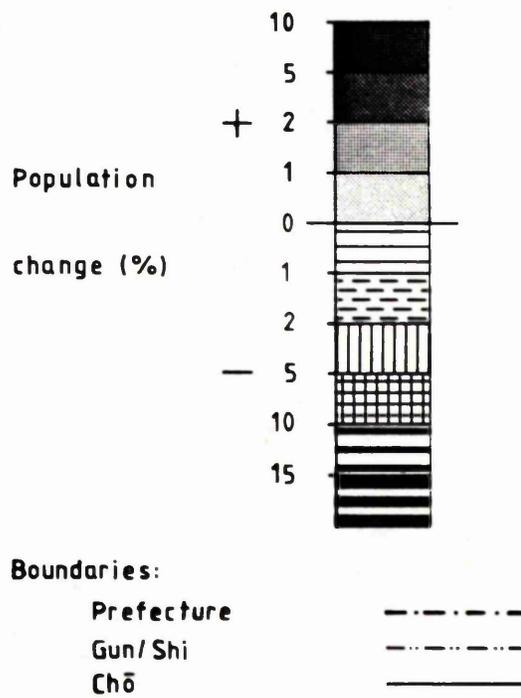
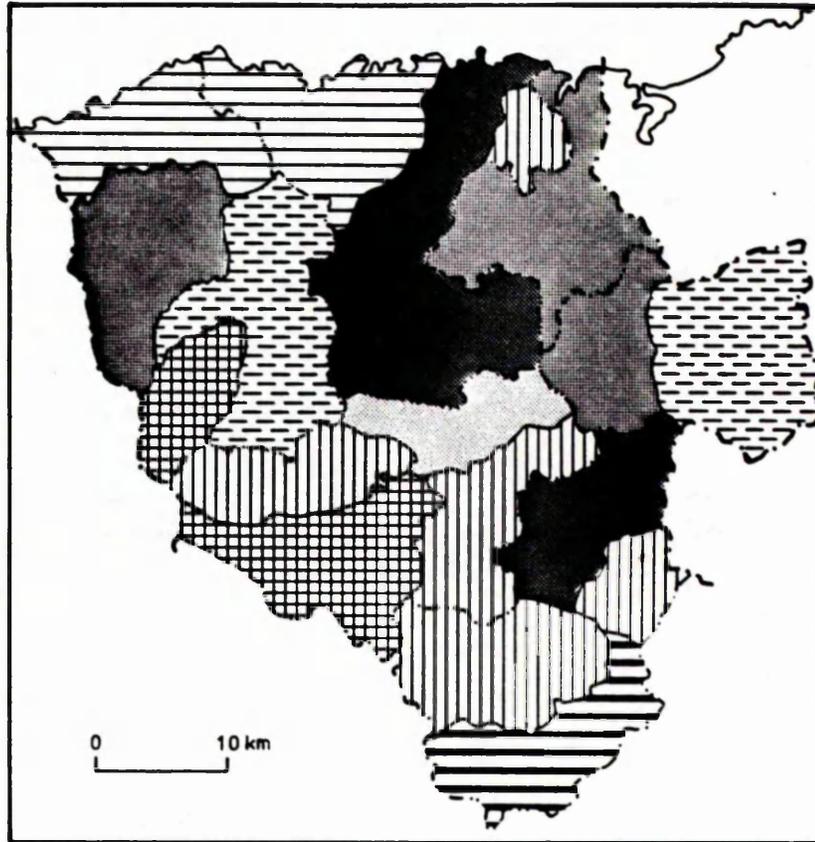


Table VI-3. Tajima: changes in population, by administrative district, 1955-1980.

	1955		1960		1965		1970		1975		1980		1980/ 1955
Hyogo	3,620,947	3,908,127	7.9	10.3	4,309,944	10.3	4,667,928	8.3	4,992,140	6.9	5,144,896	3.1	142.1
Tajima	264,484	253,020	- 4.3	- 6.1	237,611	- 6.1	222,236	- 6.5	217,816	- 2.0	215,479	- 2.0	81.5
Toyooka	42,456	42,569	0.3	1.6	43,259	1.6	44,094	1.9	46,210	4.8	47,457	2.7	111.8
Kinosaki	5,922	6,042	2.0	3.6	6,262	3.6	5,904	- 5.7	5,669	- 4.0	5,303	- 6.5	90.0
Takeno	8,328	7,915	- 5.0	- 8.0	7,278	- 8.0	6,726	- 7.6	6,466	- 3.9	6,409	- 0.9	77.0
Kasumi	17,356	17,369	- 0.1	- 5.0	16,507	- 5.0	15,568	- 5.7	15,604	0.2	15,520	- 0.5	89.4
Hidaka	22,932	21,685	- 5.4	- 6.2	20,338	- 6.2	19,592	- 3.7	19,394	- 1.0	19,415	0.1	84.7
Izushi	13,302	12,557	- 5.6	- 7.2	11,646	- 7.2	11,235	- 3.5	10,926	- 2.8	11,129	1.9	83.7
Tanto	9,617	8,804	- 8.4	- 11.2	7,816	- 11.2	7,181	- 8.1	7,022	- 2.2	6,734	- 4.1	70.2
Muraoka	12,345	11,572	- 6.3	- 11.0	10,293	- 11.0	8,987	- 12.7	8,429	- 6.2	7,930	- 5.9	64.2
Hamasaka	16,553	15,643	- 5.5	- 7.5	14,466	- 7.5	13,328	- 7.9	12,915	- 3.1	12,821	- 0.7	77.4
Mikata	5,154	4,804	- 6.8	- 10.6	4,296	- 10.6	3,766	- 12.3	3,538	- 6.0	3,244	- 8.3	62.9
Onsen	12,716	12,058	- 5.2	- 8.2	11,073	- 8.2	9,633	- 13.0	8,961	- 7.0	8,693	- 3.0	68.4
Yoka	15,435	14,551	- 5.7	- 5.2	13,801	- 5.2	13,155	- 4.7	13,229	- 1.0	13,056	0.2	84.6
Yabu	12,958	11,954	- 7.7	- 8.1	10,987	- 8.1	10,289	- 6.4	9,968	- 3.1	9,611	- 3.6	74.2
Oya	12,086	10,978	- 9.2	- 15.2	9,313	- 15.2	7,527	- 19.2	6,572	- 12.7	6,137	- 6.6	50.8
Sekinomiya	8,099	7,401	- 8.6	- 10.3	6,639	- 10.3	5,745	- 4.7	5,350	- 6.9	5,170	- 3.4	63.8
Ikuno	11,083	10,564	- 4.7	- 10.4	9,466	- 10.4	7,652	- 6.4	6,658	- 13.0	5,988	- 10.1	54.0
Wadayama	18,556	17,592	- 5.2	- 7.4	16,281	- 7.4	15,514	- 10.6	15,697	1.2	16,046	2.2	86.5
Santo	8,689	8,734	0.5	- 4.8	8,317	- 4.8	7,787	- 6.4	7,364	- 5.4	7,029	- 4.5	80.9
Asago	10,897	10,228	- 6.1	- 6.4	9,573	- 6.4	8,553	- 10.6	8,044	- 6.0	7,787	- 3.2	71.5

Source: Hyogo-ken Kikaku-bu, 1978b, p.5, Table 1, and Statistics Bureau, Prime Minister's Office, 1980, p.102-3, Table 2.

in other districts have levelled off somewhat, and 1980 even showed a slight growth also in Hidaka, Izushi and Yōka districts. The most notable exception to the general trend is Kinosaki, which, contrary to other districts, grew during the 1960s, but has suffered a decrease in population since 1966. This district is a hot-spring resort, which no doubt flourished owing to the increasing affluence and mobility of city dwellers in the early 1960s, but has since suffered from competition against exotic package tours and general economic recession in the 1970s.

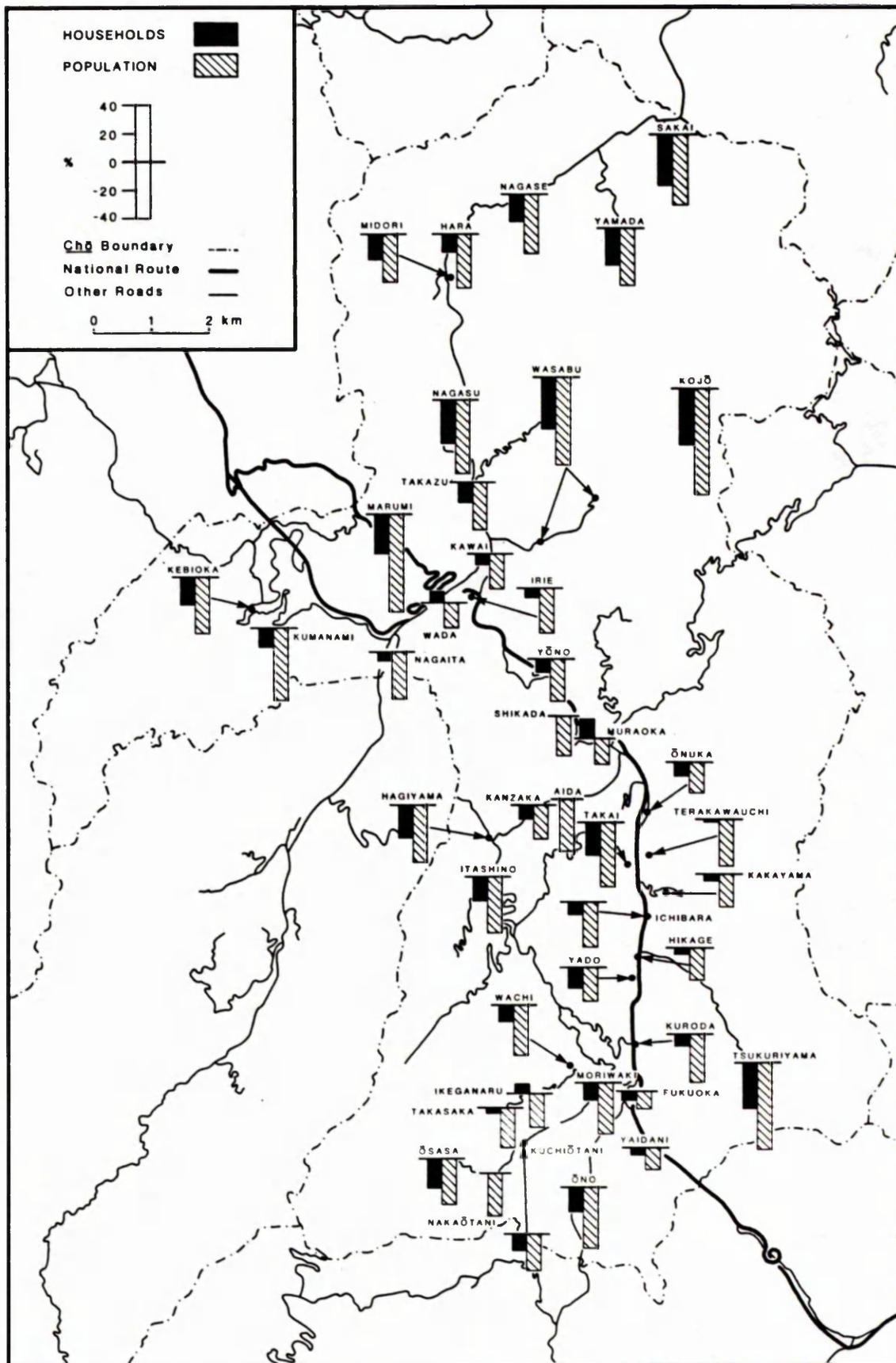
Table VI-3 also shows the population for each district in 1980 as a percentage of its population in 1955. Tajima as a whole contained only 81.5 per cent of its 1955 population, and the only district which had grown was Toyooka-shi. All others had declined: in the case of Ōya and Ikuno, the population was almost halved, but the average for the eighteen *chō* was 74.1, showing a loss of approximately a quarter of their population over twenty-five years.

It is also clear that differential rates of decline have occurred among settlements within the same rural district. Maps VI-7, (a) to (c), show the changes in not only population but also the number of households for each settlement of Kasumi-chō, Muraoka-chō and Ōya-chō for the period 1955 to 1980. In all cases, the settlement which functions as the centre of the rural district has shown increase in its number of households, even though the population may have declined. Indeed, what the maps taken together show is that (a) the decline in the number of households has been generally less severe than the decline in population; (b) that the functional centre has declined little; (c) that it has been the settlements on the peripheries of rural districts which have suffered the greatest retraction in both population and numbers of households; and (d) settlements removed even only a short distance from main roads have suffered markedly greater depopulation than neighbouring settlements situated on the main road (see, for example, Nagasu and Takai in Muraoka-chō, Ōsugi and Miyamoto in Ōya-chō).

In 1975, the number of males in the Tajima region was 103,648, compared with 114,167 females, and the sex ratio was rather low at 90.8, in contrast to 96.6 for Hyōgo Prefecture as a whole.<sup>26</sup> The reason for this is the marked outflow of males from areas of predominantly primary industries to the industrialized Inland Sea and Pacific Coastal regions.<sup>27</sup> By 1980, however, the sex ratios for Tajima and Hyōgo Prefecture had narrowed to 92.0 and 95.4 respectively.

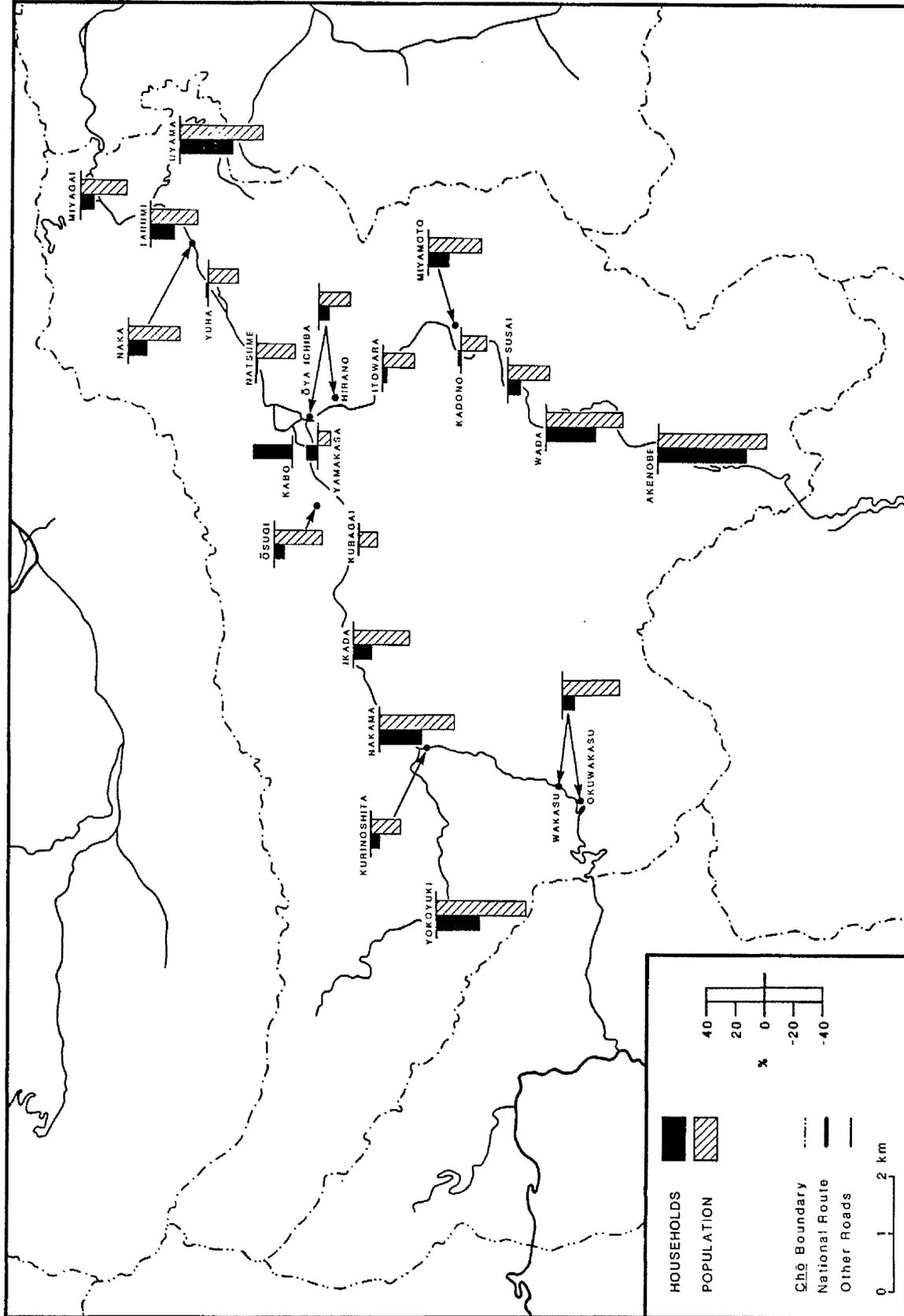
Map VI-7. Changes in population and number of households, 1955-1980.

(a) Muraoka-chō.

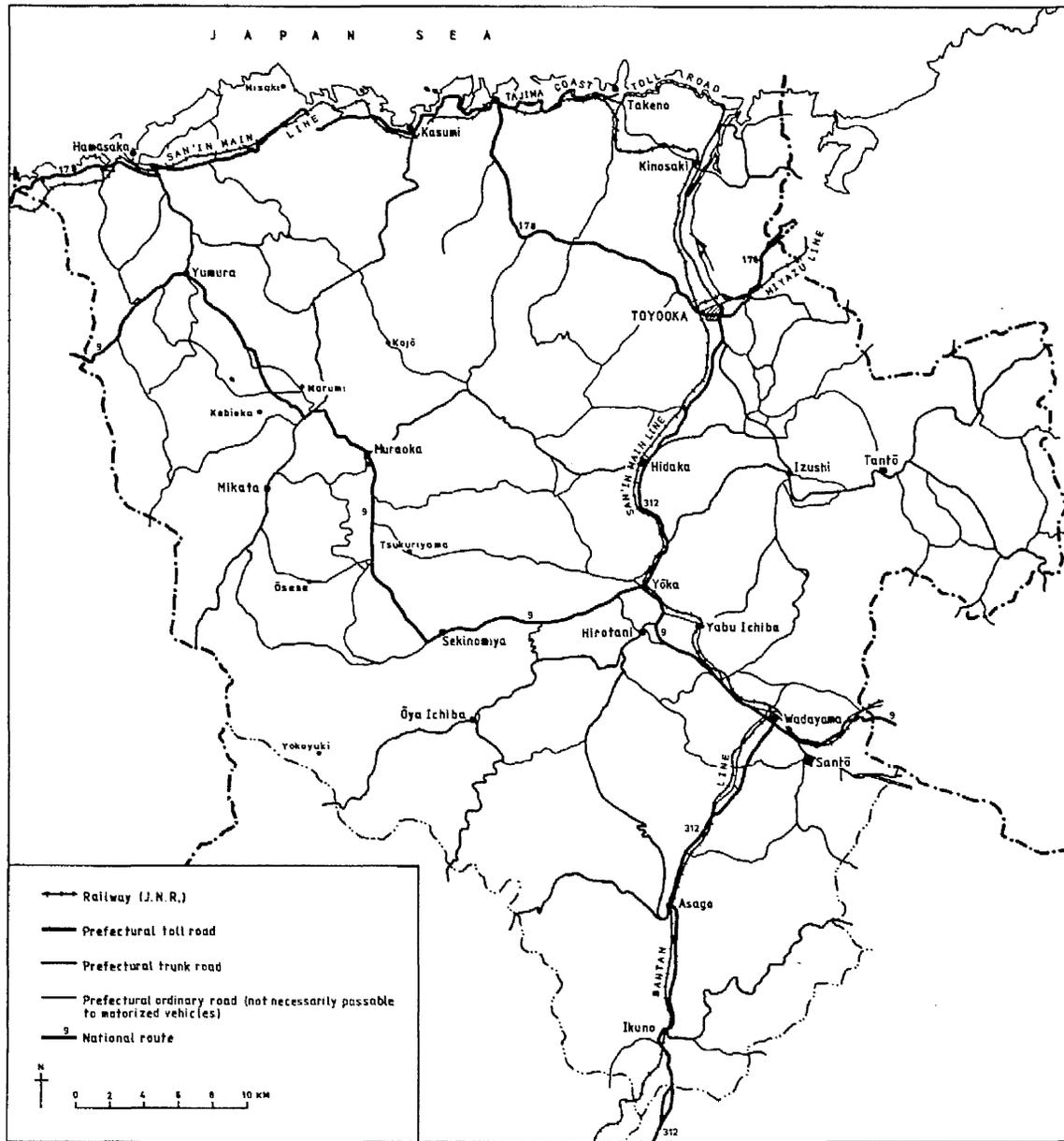




Map VI-7. (Contd.) (c) Ōya-chō.



Map VI-8. Tajima: transportation network



The depopulation of Tajima, like that of other depopulated regions of Japan, has mainly involved young people, especially young males. Rapid and continued outmigration has caused imbalances in the age and sex structure of the population, and unprecedentedly severe ageing of the population. Thus, whereas only 7.9 per cent of the prefectural population in 1975 were aged 65 or over, the corresponding figure for Tajima was 13.0 per cent - nearly double. Similarly, while the dependency ratio was 48.1 for Hyōgo Prefecture as a whole, it was 56.3 in Tajima.<sup>28</sup>

(v) Transport, communications and distribution of settlement

Spatially, the distance between the main town of Tajima, Toyooka, and the main cities of the Kinki region, such as Kyōto, Ōsaka and Kōbe, is not very great: Kōbe, 100km., Ōsaka, 113km., and Kyōto, 105km., as the crow flies. However, the mountainous nature of the terrain and the poorly developed communications result in actual travelling distances being considerably longer: approximately 142km. from Kōbe, 140km. from Kyōto and 160km. from Ōsaka.

At present, the journey to Toyooka by "super" express train from Ōsaka takes approximately two hours fifty minutes, but communications within Tajima are extremely poor, and more than two hours may be required to reach remote settlements from Toyooka. Thus a temporal distance of four to five hours between the remoter villages of Tajima and the urban centres of Kinki is not unusual, and seven to eight hours to Tōkyō. As a result, the villages of Tajima are in some cases beyond reasonable commuting distance from Toyooka, let alone Ōsaka and Kōbe.

Communications were poorly developed in feudal Japan, and coastal sea routes and river valleys were generally more important than roads for transport and communications. Shibayama (Kasumi-chō) was one such port on the Japan Sea Coast of Tajima.<sup>29</sup> All the functional centres of present-day administrative districts such as Hidaka, Wadayama, Yabu, Asago, Izushi, Sekinomiya, Ōya, Muraoka and Onsen, are situated along the main communications lines of the valleys of the Maruyama River and its tributaries<sup>30</sup> (see Map VI-5).

Nevertheless, ill-developed roads did exist, which linked provincial feudal estates with the chief cities. The San'indō, one of the *wakikaidō* (secondary highways), passed through the southern part of Tajima on its way from Kyōto to Tottori and thence along the Japan Sea

Coast to Yamaguchi, and the Tajima Kaidō branched off from it at Yōka. The growth of the functional centres of the present-day administrative districts is mainly attributable to their role as posting stations (*shukuba machi*) along the San'indō and Tajima Kaidō, and they also functioned as collection and distribution centres for commodities from their hinterlands.<sup>31</sup>

However, after the opening of the San'in Main Railway Line in 1909, Sekinomiya, Muraoka and Onsen lost their functions as transportation centres, but others, such as Yōka and Ikuno, were able to expand<sup>32</sup> (see Map VI-8).

The old San'indō developed into what is the present National Route No. 9, but despite its designation as a national highway, it was by no means a first class road. At its narrowest it was, until twenty years ago, no more than three metres wide; there were many hairpin bends through the mountains; the steepest gradient was one in ten; and snow and ice made it frequently impassable in winter. Improvements were urgently required, and work was begun in 1958. The scheme was completed in 1967, and as a result of straightening, the total length of National Route 9 within Tajima was reduced from 84.7 kilometres to 76.7 kilometres. It was widened to a minimum of 7.5 metres, and 9.5 metres where it is joined by National Route 312. The improvements also included the addition of tunnels, such as the Muraoka and Tajima Tunnels, bridges such as the Hirotani and Chiya Bridges and Hebidani Loop Bridge, and by-passes.<sup>33</sup>

National Route 312 from Himeji joins No. 9 at Wadayama, and continues again from Yōka to Toyooka, where it joins No. 178.

The coastline formerly hindered communications, and several settlements were linked only by boat or the San'in Main Line.<sup>34</sup> However, the scenic beauty of the coast was turned to the region's advantage, and the area was designated as the San'in Coast National Park in 1963. The Park covers nearly 9,000 ha. along the coast between Amino in Kyōto Prefecture to the east and the Tottori Sand Dunes to the west, but some seventy per cent of it is in Tajima.<sup>35</sup> As a result, the old second class national highway between Maizuru (Kyōto Prefecture) and Iwami (Tottori Prefecture) was upgraded to National Route 178, and development was planned from 1966. In fact, the work was delayed until 1970, as priority was given to Route No. 9. In particular, the improvements involved enlargement of the tunnel at Kawanashi Pass (180m.), straightening of bends and lessening of the gradient of the road.<sup>36</sup>

In addition, a toll road essentially for tourists, the Tajima Coast Skyline Highway, was completed in 1969 from Tsuiyama to join No. 178 in Kasumi-chō. It was not until the 1970s, therefore, that remote coastal settlements, such as Takuhi and Uhi in Takeno-chō (see Map VI-11) were eventually served by a road: previously there was only a footpath or coastal boats.

Until the latter half of the nineteenth century, it is probably true to say that the Tajima region was equally as accessible as most other provincial regions of Japan; but despite the rapid modernization of the Pacific Coastal Belt from the end of the century, and despite Tajima's proximity to the industrialized Keihanshin region, Tajima's communications links, both with other regions and within the region itself, developed little from the late nineteenth century until the 1960s.<sup>37</sup> This was especially true of main road links, and road building and improvements projects including also minor roads continued apace throughout the 1970s. During the winter months especially, all but the most important roads - and sometimes even these - were impassable to vehicular traffic until as late as the 1970s, and this was a serious impediment to the development of the region.

(vi) Economic activities

The Tajima region traditionally depended on subsistence agriculture, supplemented by some form of cash income, chiefly from the small-scale rearing of cattle, sericulture, charcoal burning, fishing and temporary migration to *sake* breweries. Any one household may have participated in several of these activities for its livelihood, and, indeed, many still do today. The changes which have taken place in the Tajima region since the Second World War have been very similar to those described in Chapter IV for depopulated rural areas of Japan as a whole: decline of mining, charcoal burning and sericulture; increasing specialization in the breeding of Tajima cattle; diversification into commercial vegetable growing; high dependence on temporary migration (*dekasegi*); the development of traditional handicrafts industries; the introduction of new manufacturing industries and the development of tourism. Tables VI-4 and VI-5 show the numbers employed and the net value of production, by type of industry, in 1975.

In 1975, whereas only 6.9 per cent of the active population of Hyōgo Prefecture (total 2,257,640) were engaged in primary industries, the

Table VI-4. Tajima: the active population, by production sector, 1975.

	TOTAL		PRIMARY		SECONDARY		TERTIARY							Proportion (%)					
			Farming	Fishing	Min- ing	Construc- tion	Manu- fact.	Whole- sale Retail	Bank., Ins., Real E	Trans. Comms.	Elec. Gas Water	Ser- vices	Civil servs. Others	Prim	Sec Tert				
Hyogo	2,257,640	155,839	143,907	2,299	9,633	862,533	2,244	189,770	670,519	1,239,268	504,191	91,155	180,599	15,221	363,707	84,395	6.9	38.2	54.9
Tajima	114,166	31,526	28,919	514	2,093	35,668	752	9,765	25,151	46,972	18,126	1,993	5,271	476	17,859	3,247	27.6	31.2	41.2
Toyooka	23,677	4,216	3,809	18	389	6,951	11	1,683	5,257	12,510	5,644	615	1,249	182	4,144	676	17.8	29.4	52.8
Kinosaki	3,158	286	270	10	6	333	4	190	159	2,519	840	50	122	19	1,379	109	9.0	11.2	79.8
Takeno	3,296	1,138	1,003	19	116	855	5	349	501	1,303	392	46	194	6	549	125	34.5	26.0	39.5
Kasumi	7,894	2,566	1,488	33	1,045	2,224	14	588	1,622	3,104	1,161	167	389	21	1,184	182	32.5	28.2	39.3
Hidaka	10,557	3,276	3,217	26	33	3,480	37	871	2,572	3,801	1,505	168	394	53	1,433	284	31.0	33.0	36.0
Izushi	5,844	1,561	1,543	16	2	2,203	6	532	1,665	2,080	848	86	154	20	813	159	26.7	37.7	35.6
Tanto	4,193	1,668	1,651	15	2	1,726	4	285	1,437	799	249	25	83	5	347	90	39.8	41.2	19.0
Muraoka	4,577	2,325	2,306	16	3	1,011	8	261	742	1,241	375	41	129	5	558	133	50.8	22.1	27.1
Hamasaka	6,101	1,887	1,390	20	477	1,652	3	728	921	2,562	946	96	313	12	1,037	158	30.9	27.1	42.0
Nikata	1,876	1,141	1,111	27	3	267	1	96	170	468	126	15	71	2	188	66	60.8	14.2	25.0
Onsen	4,910	2,573	2,533	36	4	681	-	377	304	1,656	456	54	147	11	847	141	52.4	13.9	33.7
Yoka	6,630	1,229	1,197	30	2	2,176	37	601	1,538	3,225	1,334	134	384	28	1,118	227	18.5	32.8	48.7
Yabu	5,136	1,477	1,448	24	5	1,794	31	579	1,184	1,865	727	80	300	3	609	146	28.8	34.9	36.3
Oya	3,699	857	799	58	-	1,851	455	352	1,044	991	325	38	72	6	446	104	23.2	50.0	26.8
Sekinomiya	2,981	1,228	1,217	9	2	865	-	225	640	888	322	32	92	6	355	81	41.2	29.0	29.8
Ikuno	3,074	286	219	65	2	1,382	31	326	1,025	1,406	477	94	192	20	533	90	9.3	45.0	45.7
Wadayama	8,335	1,822	1,799	23	-	2,758	16	652	2,090	3,755	1,510	141	561	22	1,267	254	21.9	33.1	45.0
Santo	4,221	1,167	1,161	6	-	1,738	-	433	1,305	1,316	442	40	170	7	535	122	27.6	41.2	31.2
Asago	4,007	823	758	63	2	1,701	89	637	975	1,483	447	71	255	48	526	136	20.5	42.5	37.0

Source: Hyogo-ken Kikaku-bu, 1978b, p.21-22, Table 7.

Table VI-5. Net value of production, by administrative district, 1975.

	TOTAL		PRIMARY INDUSTRIES			SECONDARY INDUSTRIES			TERTIARY INDUSTRIES						
			Total	Farm- ing	Fore- stry	Fish- ing	Total	Mining	Con- struc- tion	Manu- facturing	Total	Wholesale, Retail sales	Banking, insur- ance, real estate	Trans- port, Comms., Other Public Services	Service indus- tries
Hyogo Prefecture	5,565,540	137,549	97,130	21,354	18,660	2,372,293	15,666	396,947	1,959,680	3,056,103	887,779	558,784	518,921	765,506	325,113
Tajima	220,841	28,549	13,685	6,356	8,508	79,552	6,001	30,556	42,995	112,740	30,986	14,571	7,440	42,602	17,069
Toyouka	48,196	3,308	1,873	345	1,090	13,739	166	5,388	8,185	31,149	11,667	5,313	1,517	7,751	4,901
Kinosaki	10,505	218	101	107	10	923	66	711	146	9,364	879	687	652	6,602	544
Takeno	4,683	924	443	280	201	1,215	33	775	407	2,544	334	111	4	1,784	311
Kasumi	19,531	6,453	705	332	5,416	5,377	33	2,000	3,344	7,701	1,435	1,713	642	2,859	1,052
Hidaka	18,265	2,547	1,997	332	218	8,165	232	2,072	5,861	7,553	1,891	964	479	3,309	910
Izushi	8,557	1,261	1,053	208	0	4,360	0	2,089	2,271	2,936	887	347	88	1,155	459
Tanto	4,974	1,143	722	421	0	2,433	100	851	1,482	1,398	299	90	7	676	326
Muraoka	6,042	1,061	555	506	0	1,382	66	795	521	3,599	603	229	531	1,619	617
Hamasaka	12,207	2,395	561	286	1,548	3,902	33	2,569	1,300	5,910	1,408	888	181	2,198	1,235
Mikata	1,918	559	229	330	0	699	0	508	191	660	134	0	45	283	198
Onsen	7,236	1,123	690	433	0	1,718	0	1,355	363	4,395	639	291	375	2,517	573
Yoka	16,883	974	722	237	15	5,121	299	2,145	2,677	10,788	4,480	1,339	1,048	2,493	1,428
Yabu	7,234	1,333	948	375	10	2,898	133	1,420	1,345	3,003	1,097	222	194	981	509
Oya	8,387	1,005	421	584	0	6,098	3,877	973	1,248	1,284	407	55	15	431	376
Sekinomiya	6,549	718	485	233	0	2,228	0	530	1,698	3,603	337	55	375	2,525	311
Ikuno	8,592	543	83	460	0	5,193	199	1,383	3,611	2,856	470	555	85	1,391	355
Wadayama	15,505	1,342	985	357	0	4,786	133	1,420	3,233	9,377	2,952	1,144	652	2,455	2,174
Santo	8,038	813	643	170	0	5,327	0	1,118	4,209	1,898	482	187	86	802	341
Asago	7,539	829	469	360	0	3,988	631	2,454	903	2,722	585	381	464	843	449

Source: Hyogo-ken Kikaku-bu, 1978b, pp.27-28, Table III-1.

corresponding figure for Tajima was 27.6 per cent (total 114,166) (see Table VI-4). Nevertheless, as Table VI-4 shows, considerable differences in the occupational structure for the active population exist within the region, with a range of only 9.0 per cent for primary industries in Kinosaki-chō (a hot-spring resort) to 60.8 per cent for Mikata-chō, a remote agricultural district.

From the tables it is clear that fishing is important in coastal districts such as Kasumi and Hamasaka, but elsewhere agriculture is the chief primary industrial activity. Despite the large area of forest in Tajima, 177,555 ha. in 1976 (83 per cent of the total land area), forestry plays a relatively unimportant role in economic activity.<sup>38</sup>

Mining is still important in Ōya-chō, but has declined considerably in Ikuno-chō. As far as secondary industries are concerned, Toyooka is by far the most important centre for manufacturing, which is based on its *jiba sangyō*<sup>39</sup> of bag making (see p.183).

However, tertiary industries have become the most important in the region, since they employ the largest proportion of the population and produce the greatest net value of production. Wholesaling, retailing and "service" industries are by far the most important tertiary activities, the latter no doubt reflecting the importance of tourism to the regional economy.

(a) Agriculture

The mountainous terrain of the Tajima region and scarcity of flat land have meant that arable farming has always been limited to the growing of crops mainly for farm household subsistence only. Map VI-9 shows the region as it was categorized by the Ministry of Agriculture and Forestry (see Glossary for definitions), and by comparing this map with Map VI-3, it can be seen that the categorization does in fact largely follow the physical features of the Tajima region.

Table VI-6 shows the number of farm households by size of holding in 1975. Some three-quarters of farm holdings in both Tajima and Hyōgo Prefecture as a whole were less than 0.7 ha., and in only two districts - Toyooka-shi and Izushi-chō, in the Toyooka Basin - was the proportion substantially lower. In the more mountainous districts, particularly Yōka, Yabu, Ōya, Ikuno and Asago, as much as over 80 per cent of farm households held less than 0.7 ha.<sup>40</sup>

Map VI-9. Tajima: administrative districts, by classification as plain, farming mountain or mountain villages.

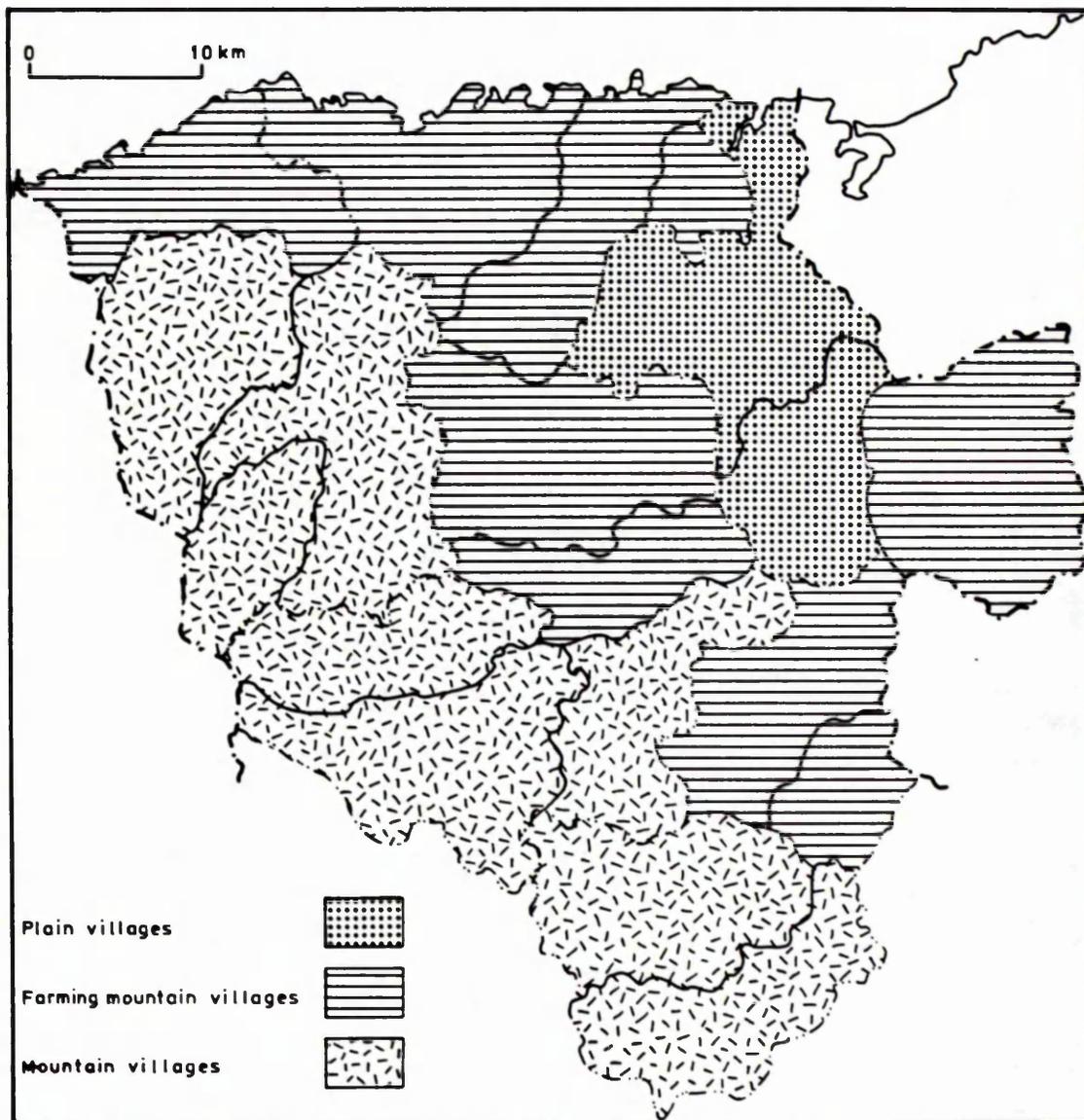


Table VI-6. Tajima: no. of farm households, by size of farm holdings, 1975.

	0.05 to less than 0.3 ha.	0.3 to less than 0.5 ha.	0.5 to less than 0.7 ha.	0.7 to less than 1.0 ha.	1.0 to less than 1.5 ha.	1.5 to less than 2.0 ha.	2.0 to less than 2.5 ha.	2.5 to less than 3.0 ha.	3.0 ha. or more	Excep- tional farm hh.	Total
Hyogo	52,512	41,487	30,152	25,043	14,292	3,109	616	177	123	381	167,892
Tajima	7,216	6,580	4,863	3,720	1,922	422	132	42	36	50	24,983
Toyooka	575	576	500	579	464	162	38	15	16	4	2,929
Kinosaki	67	71	43	48	17	4	5	2	2	1	260
Takeno	253	218	189	112	40	3	2	0	1	1	819
Kasumi	339	304	202	150	88	15	8	0	1	2	1,109
Hidaka	604	663	511	474	268	48	19	6	6	3	2,602
Izushi	229	220	184	289	268	62	20	3	3	2	1,280
Tanto	304	376	353	283	85	20	5	1	1	1	1,429
Muraoka	389	359	316	240	100	18	8	4	1	3	1,438
Hamasaka	357	243	256	194	84	7	2	0	0	10	1,153
Mikata	147	189	140	108	47	3	2	1	0	2	639
Onsen	333	395	378	266	88	8	1	0	1	3	1,473
Yoka	619	466	249	116	27	8	0	1	1	1	1,488
Yabu	621	515	248	124	54	19	6	4	1	3	1,595
Oya	551	330	99	21	3	0	1	1	0	5	1,011
Sekinomiya	346	282	215	103	52	9	3	0	0	1	1,011
Ikuno	127	94	50	27	3	0	0	0	0	0	301
Wadayama	662	577	428	261	131	22	8	3	0	3	2,095
Santo	268	287	258	219	69	13	3	0	1	3	1,121
Asago	425	415	244	106	34	1	1	1	1	2	1,230

Source: based on Hyogo-ken Kikaku-bu, 1978b, p.31, Table III-3; and Hyogo-ken Kikaku-bu Tokei-ka, 1978b, pp.26-29, Table 10.

Table VI-7. Tajima: changes in part-time farming, 1955-1980.

	1955				1960				1965			
	Total	Sengyō	Kengyō I	Kengyō II	Total	Sengyō	Kengyō I	Kengyō II	Total	Sengyō	Kengyō I	Kengyō II
	Toyooka	3,511				3,631	1,008	1,352	1,271	3,339	441	1,452
Kinosaki	330				318	62	180	76	290	17	131	142
Takeno	1,049				1,054	165	476	413	966	74	294	598
Kasumi	1,594				1,576	181	520	875	1,434	58	429	947
Hidaka	3,050				3,023	846	1,310	867	2,877	218	1,205	1,454
Izushi	1,545				1,523	498	744	281	1,438	171	666	601
Tanto	1,605				1,618	265	1,034	319	1,543	61	836	646
Muraoka	1,167				1,150	152	762	236	1,672	83	1,067	522
Hamasaka	1,452				1,471	295	575	601	1,418	113	512	793
Mikata	1,476				1,468	133	984	351	682	32	497	153
Onsen	1,810				1,809	191	917	701	1,695	97	1,114	484
Yoka	1,754				1,769	272	799	698	1,664	148	554	962
Yabu	1,793				1,857	347	1,035	475	1,759	108	674	977
Oya	1,266				1,245	176	591	478	1,149	95	331	723
Sekinomiya	1,151				1,143	188	606	349	1,078	60	460	558
Ikuno	415				452	28	111	313	416	16	83	317
Wadayama	2,552				2,506	649	1,063	794	2,330	215	955	1,160
Santo	1,293				1,289	245	718	326	1,220	91	583	546
Asago	1,310				1,336	168	701	467	1,282	84	423	775
Tajima	30,123				30,238	5,869	14,478	9,891	28,252	2,182	12,266	13,804
Hyogo Prefecture	200,295	48,540	86,550	65,205	197,445	42,981	72,601	81,863	186,470	20,085	56,216	110,169

(Contd.)

Table VI-7. (Contd.)

	1970				1975				1980			
	Total	Sengyō	Kengyō I	Kengyō II	Total	Sengyō	Kengyō I	Kengyō II	Total	Sengyō	Kengyō I	Kengyō II
Toyooka	3,137	243	1,174	1,720	2,929	179	583	2,167	2,777	195	393	2,189
Kinosaki	279	6	80	193	260	4	38	218	241	8	22	211
Takeno	900	65	224	611	819	67	146	606	777	63	93	621
Kasumi	1,270	46	317	907	1,109	32	130	947	1,065	43	158	864
Hidaka	2,753	196	1,005	1,552	2,602	150	581	1,871	2,525	159	386	1,980
Izushi	1,550	93	534	1,552	1,280	64	221	995	1,214	57	75	1,082
Tanto	1,498	116	474	908	1,429	99	204	1,126	1,375	94	146	1,135
Murooka	1,592	79	742	771	1,438	56	379	1,003	1,388	80	234	1,074
Hamasaka	1,313	74	394	845	1,153	49	292	812	1,071	57	73	941
Mikata	668	32	317	319	639	35	271	333	637	47	120	470
Onsen	1,602	75	799	728	1,473	62	361	1,050	1,422	78	275	1,069
Yoka	1,573	115	243	1,215	1,488	99	110	1,279	1,442	118	83	1,241
Yabu	1,699	113	364	1,222	1,595	109	215	1,271	1,537	107	105	1,325
Oya	1,077	71	238	768	1,011	64	101	846	978	69	56	853
Sekinomiya	1,053	41	254	758	1,011	41	154	816	985	57	81	847
Ikuno	392	20	35	337	301	15	26	260	279	18	10	251
Wadayama	2,207	108	496	1,603	2,095	115	187	1,793	2,036	143	117	1,776
Santo	1,180	77	285	818	1,121	58	50	1,013	1,087	76	72	939
Asago	1,274	55	174	1,045	1,230	44	76	1,110	1,211	63	59	1,089
Tajima	26,817	1,625	8,149	17,043	24,983	1,342	4,125	19,516	24,047	1,532	2,558	19,957
Hyogo Prefecture	178,519	12,902	37,856	127,761	167,892	10,176	21,276	136,440	161,773	11,563	14,292	135,918

Source: Hyogo Prefectural Office (unpublished data).

Holdings are too small to support a family, with the result that the number of farm households declined by 20.2 per cent between 1955 and 1980<sup>41</sup> (see Table VI-7). Moreover, of those households which have continued to farm, there has been a steady fall in the proportion who obtain their total income from farming alone (*sengyō*), from 19.4 per cent in 1955 to 6.4 per cent in 1980, and a great rise in the proportion who obtain their main income from non-farm jobs (*kengyō II*), from 32.7 per cent in 1960 to 83.0 per cent in 1980<sup>42</sup> (cf. Chapter IV, Table IV-7). In 1975, whereas 51.8 per cent of the total farm household population was female, women formed 65.0 per cent of the agricultural labour force.<sup>43</sup>

Table VI-8. Tajima: acreages and yields of agricultural produce.

(a) Rice (1976)

	Cropped area (ha)	Yield (t)	Yield per ha.
Hyōgo	75,300	283,100	3.76
Tajima	10,589	39,019	3.68
Toyooka	1,880	6,640	3.53
Kinosaki	106	358	3.38
Takeno	295	1,030	3.49
Kasumi	398	1,410	3.54
Hidaka	1,170	4,410	3.77
Izushi	823	3,080	3.74
Tantō	675	2,490	3.69
Muraoka	637	2,240	3.51
Hamasaka	496	1,880	3.79
Mikata	227	792	3.49
Onsen	600	2,220	3.70
Yōka	453	1,780	3.93
Yabu	460	1,740	3.78
Ōya	223	830	3.72
Sekinomiya	306	1,070	3.50
Ikuno	91	279	3.07
Wadayama	826	3,210	3.89
Santō	521	2,010	3.86
Asago	402	1,550	3.86

## (b) Other crops (1976)

	Hyōgo Prefecture		Tajima	
	Cropped area (ha)	Yield (t)	Cropped area (ha)	Yield (t)
Other cereals	491	1,130	12	27
Sweet potatoes	455	6,230	66	805
Irish potatoes	1,040	13,200	225	2,883
Soya beans	1,560	1,700	469	470
Red beans	402	253	206	117
Cucumbers	309	7,600	69	1,375
Tomatoes	413	18,900	49	1,561
Eggplants	417	13,000	69	1,650
Watermelons	417	8,380	103	3,116
Cabbage	1,070	41,600	126	4,400
Chinese cabbage	1,100	55,800	108	2,355
Spinach	383	6,000	35	456
Spring onions	425	10,500	63	967
Onions	2,900	147,900	60	1,697
Lettuces	594	12,100	19	312
Giant white radishes	955	32,800	311	10,637
Strawberries	519	5,070	71	918

## (c) Livestock (1977)

	Cattle		Pigs	Chickens (100s)	
	Dairy	Beef		Layers	Broilers
Hyōgo	58,000	47,800	97,100	61,430	58,150
Tajima	3,408	7,988	19,457	6,863	40,030
Toyooka	190	372	1,830	1,075	2,044
Kinosaki	-	x	-	-	x
Takeno	56	163	-	90	3,277
Kasumi	37	85	380	315	657
Hidaka	345	425	2,400	479	9,810
Izushi	372	339	510	722	4,857
Tantō	427	817	360	934	520
Muraoka	-	613	x	61	346
Hamasaka	51	341	1,520	216	1,059
Mikata	-	435	x	154	x
Onsen	-	1,137	1,660	185	-
Yōka	316	251	2,404	244	3,123
Yabu	178	450	4,273	194	7,240
Ōya	43	241	2,564	670	1,575
Sekinomiya	136	276	731	31	1,612
Ikuno	-	40	x	42	-
Wadayama	622	574	432	346	1,521
Santō	326	810	393	709	2,043
Asago	309	619	x	396	346

Source: Hyōgo-ken Kikaku-bu, 1978b, pp.33-40, Table III-5.

Table VI-8 shows the acreage and yields of various crops for each district of Tajima in 1976. It is to be noted that 44.4 per cent of Tajima's rice acreage was contained within the four districts of Toyooka, Hidaka, Wadayama and Izushi, which more or less correspond with the Maruyama River valley and the Toyooka Basin. By contrast, the eight rural districts designated as "mountain villages" (see Map VI-9) in the west of Tajima together accounted for only 27.8 per cent of the total rice acreage. Overall, the output of arable crops remains small due to disadvantageous physical conditions. Table VI-9 shows the value of agricultural produce and agricultural productivity in 1976. Rice alone accounted for 66.9 per cent of the value of arable crop production.

Table VI-9. Value of agricultural production and agricultural productivity, 1976.

	Value of Agricultural Production (¥ millions)			Productivity (¥ thousands)		
	Total	Rice	Live- stock	Farm income per farm household	Farm income per 10 ha. arable land	Farm income per full-time member mainstay agri- cultural labour force
Hyōgo Prefecture	209,926	79,627	81,683	601	99	1,298
Tajima	36,235	11,476	18,690	603	94	1,005
Toyooka	3,990	1,960	1,379	625	77	874
Kinosaki	178	106	13	388	61	716
Takeno	1,468	304	966	662	114	821
Kasumi	1,512	416	383	720	112	1,491
Hidaka	5,587	1,303	3,331	857	119	1,043
Izushi	2,788	910	1,570	859	102	1,401
Tantō	1,784	735	808	537	78	865
Muraoka	1,164	649	274	399	45	485
Hamasaka	1,347	545	595	507	83	758
Mikata	608	229	218	446	63	430
Onsen	1,631	644	500	545	69	533
Yōka	2,277	524	1,536	555	126	1,167
Yabu	3,733	514	2,863	776	173	1,455
Ōya	1,439	244	982	501	129	1,099
Sekinomiya	1,278	314	716	526	109	844
Ikuno	152	82	38	249	62	1,315
Wadayama	2,357	947	1,016	528	92	1,436
Santō	1,830	593	1,005	653	108	2,742
Asago	1,112	457	497	410	86	1,683

Source: Hyōgo-ken Kikaku-bu, 1978b, Table III-6, pp.41-42.

Clearly there is a wide spatial variation in productivity, but in only Yabu and Santō districts does the agricultural income per person for the mainstay labour force exceed the prefectural average; in Mikata, Muraoka and Onsen districts it is respectively only 33.1, 37.4 and 41.1 per cent of the prefectural average.

(b) Animal husbandry

It is known that the people of Tajima looked to cattle rearing as an important source of cash income from early times: Tajima cattle are mentioned in the Harima-guni Fudoki and the Nihon Shoki, both written in the early eighth century.<sup>44</sup>

The cattle were bred primarily for draught purposes; renown as suppliers of "Kōbe" and also "Matsuzaka" beef came after the development of the port of Kōbe from 1868, but both this and cattle-breeding itself continued to be of secondary importance until the late 1950s.<sup>45</sup>

In the early twentieth century there were calls for improvements in the stock, and a system of registration of thoroughbreds was introduced. There was some experimentation with cross-breeding, particularly with foreign breeds such as Shorthorns, Devonshire and Brown Swiss, but the results were not favourable, and there was a reversion to the ancient Japanese black Tsuru breed, which has since been improved. These cattle are small and thin-boned, very dark brown or black, and very sturdy.<sup>46</sup>

Traditionally, cattle raising in Tajima has been carried out on an extremely small scale, with only one or two beasts per household, for not only were labour resources generally limited to those available within the household, but the mountainous environment restricted the land available for pasture and for the growing of fodder crops.

Typically, the cow was, and indeed still is, housed in a stall within the farmhouse, on the opposite side of the *dōma* (entrance hall) to the kitchen and living quarters. The cattle are kept indoors throughout the long winter months of deep snow. In villages where there is some common grazing land - often at some distance from the settlement - the cattle are taken up to graze every morning during the summer months and are returned to their stalls in the mid-afternoon. Where there is no such pasture, the cow has to be taken for a walk for exercise at least once a day in the summer. Even where there is some pasture, this has been consistently overgrazed, and supplementary feed has traditionally been used, in the form of straw, and grass and weeds gathered from field path verges and from the mountainsides. This has also been the traditional source of

fodder for animals which had no grazing land at all. Rice, straw, hay and *daikon* (giant white radish) are used in winter.<sup>47</sup>

The number of cattle in Tajima peaked in 1952, at 131,000, after which the numbers halved rapidly, to 62,000 in 1965; and they fell to a combined total of beef and dairy cattle of 9,500 in 1970.<sup>48</sup> However, it would appear that specialization is increasing, with fewer households keeping on average larger numbers of cattle, and by 1977 the numbers had risen again, to 11,400 (8,000 beef and 3,400 dairy cattle),<sup>49</sup> centred especially on Onsen-chō<sup>50</sup> (see Table VI-8c).

The decline in the numbers of cattle was most rapid between 1960 and 1965.<sup>51</sup> Several reasons for this may be suggested: (a) mechanization, which reduced the demand for draught cattle;<sup>52</sup> (b) a slump in the market price for calves, as a result of mechanization;<sup>53</sup> (c) the high labour-intensiveness of cattle rearing and the lack of permanent pasture: experimental herding to reduce these problems failed, and the results were well-publicized among Tajima farmers;<sup>54</sup> (d) the introduction of more lucrative forms of farming, such as tobacco-growing and *shitake* culture;<sup>55</sup> (e) increased opportunities for off-farm employment, particularly day labour on road construction sites;<sup>56</sup> (f) wide fluctuation in the market price for calves - not only annually but also according to the sex of the calf;<sup>57</sup> and (g) the decline in the total number of farm households.

In 1963 in Mikata-chō, for example, 86.5 per cent of households which kept a cow had only one animal;<sup>58</sup> and in Tajima as a whole in 1968, 72.3 per cent kept only one cow and only 1.3 per cent kept five or more.<sup>59</sup> This indicates the persistence of the small scale of cattle rearing in the Tajima region.<sup>60</sup> Even so, the income from the sale of calves, together with that from the sale of rice and *dekasegi*, has continued to be a mainstay for the majority of such farm households<sup>61</sup> and the failure of a cow to calve may be disastrous for the household accounts.<sup>62</sup>

(c) Forestry

In 1976, the area of forest land in Tajima amounted to 177,555 ha., or 30.7 per cent of the forest land of Hyōgo Prefecture. Table VI-10 shows that in only Toyooka-shi was the proportion of land under forest near that of Hyōgo Prefecture, at 69.7 per cent. The average for Tajima was 83.2 per cent, and many districts had considerably more - Ikuno having the most, with over 90 per cent of its land area under forest.<sup>63</sup>

Table VI-10. Tajima: forest ownership, by administrative district.

	Total		National forest	Private forest	% of which re-afforested	Households with forest holdings					Households with forest holdings			Lumber jacks	
	ha	%				Less than 1 ha %	1-5	5-10	10-20	20 ha or more	Total	Farm households	Non-farm households		
Hyogo	577,947	69.1	32,632	545,315	34.5	19,654	43.4	43.1	8.6	3.4	1.5	19,654	18,097	1,557	191
Tajima	177,555	83.2	6,654	170,898	42.0	1,943	43.9	47.2	6.1	1.8	1.0	1,943	1,846	97	11
Toyooka	11,296	69.7		11,296	24.5	332	32.5	43.1	15.1	7.5	1.8	332	236	96	9
Kinosaki	2,541	81.6		2,541	38.4	820	23.0	44.5	18.8	9.4	4.3	820	751	69	9
Takeno	9,137	88.2		9,137	35.1	1,165	37.6	47.8	8.8	4.5	1.3	1,165	1,036	129	10
Kasumi	11,768	85.9	771	10,997	27.4	1,889	46.0	41.1	11.0	1.5	0.4	1,889	1,777	112	21
Hidaka	11,387	75.2		11,387	34.1	995	43.2	46.0	7.7	2.0	1.1	995	913	82	1
Izushi	6,963	77.5		6,963	41.6	1,356	30.2	50.1	13.1	5.3	1.5	1,356	1,302	54	6
Tanto	14,244	88.0	815	13,492	37.9	1,324	41.9	42.8	9.6	3.7	1.9	1,324	1,201	123	6
Muraoka	14,444	87.6	812	13,632	45.4	1,121	46.7	43.5	7.0	2.2	0.6	1,121	973	148	7
Hamasaka	8,737	84.1	741	7,996	34.2	519	49.9	40.7	5.6	2.1	1.7	519	493	26	10
Nikata	5,574	82.4	594	4,980	41.6	1,332	49.7	41.0	5.6	3.0	0.8	1,332	1,238	94	15
Onsen	11,539	83.5	964	10,575	36.4	1,097	49.0	42.9	6.1	1.6	0.4	1,097	1,024	73	10
Yoka	5,850	75.0		5,850	45.0	1,083	40.6	46.4	8.6	3.6	0.8	1,083	1,021	62	10
Yabu	9,206	86.0	129	9,077	50.8	882	40.5	40.4	9.5	5.7	3.9	882	765	117	12
Oya	12,626	89.8	1,151	11,475	53.9	808	41.2	43.7	9.2	4.7	1.2	808	757	51	8
Sekinomiya	8,363	86.7	10	8,353	39.6	283	18.7	41.7	17.0	12.0	10.6	283	212	71	13
Ikuno	10,217	91.1	362	9,855	64.8	1,394	56.1	37.1	4.5	1.6	0.7	1,394	1,300	94	17
Wadayama	8,511	76.2	146	8,365	39.8	610	65.1	30.5	3.0	1.0	0.4	610	601	9	5
Santo	3,558	73.0	102	3,456	53.8	701	46.5	37.8	7.6	4.7	3.4	701	651	50	11
Asago	11,594	89.6	60	11,534	59.1										

Source: Hyogo-ken Kikaku-bu, 1978b, pp.43-44, Table 7.

Source: Tajima Chiiki Shicho-betsu Shuyō Tokai Shihyō, p.8, based on 1970 data.

Note: 1976 figures.

Over 96 per cent of Tajima's forest was in private ownership in 1976. As many as 19,654 households in Tajima in 1970 (approximately 36 per cent of the total) held forest land. Of these, 92.1 per cent were farm households, and 67.5 per cent of farm households owned some forest land. However, as Table VI-10 shows, 86.5 per cent of forest holdings were smaller than five hectares,<sup>64</sup> and only 191 persons in Tajima were employed as lumberjacks. Only 42.0 per cent of private forest land had been reafforested by 1976, and net production from forestry amounted to ¥6,356 million, or only 2.9 per cent of Tajima's total production for 1975.<sup>65</sup>

In other words, while over 80 per cent of Tajima's land area is covered with forest, it contributes an insignificant amount to the economy of the region.<sup>66</sup> In effect, this means that most of Tajima's land area is lying idle.

(d) Fishing

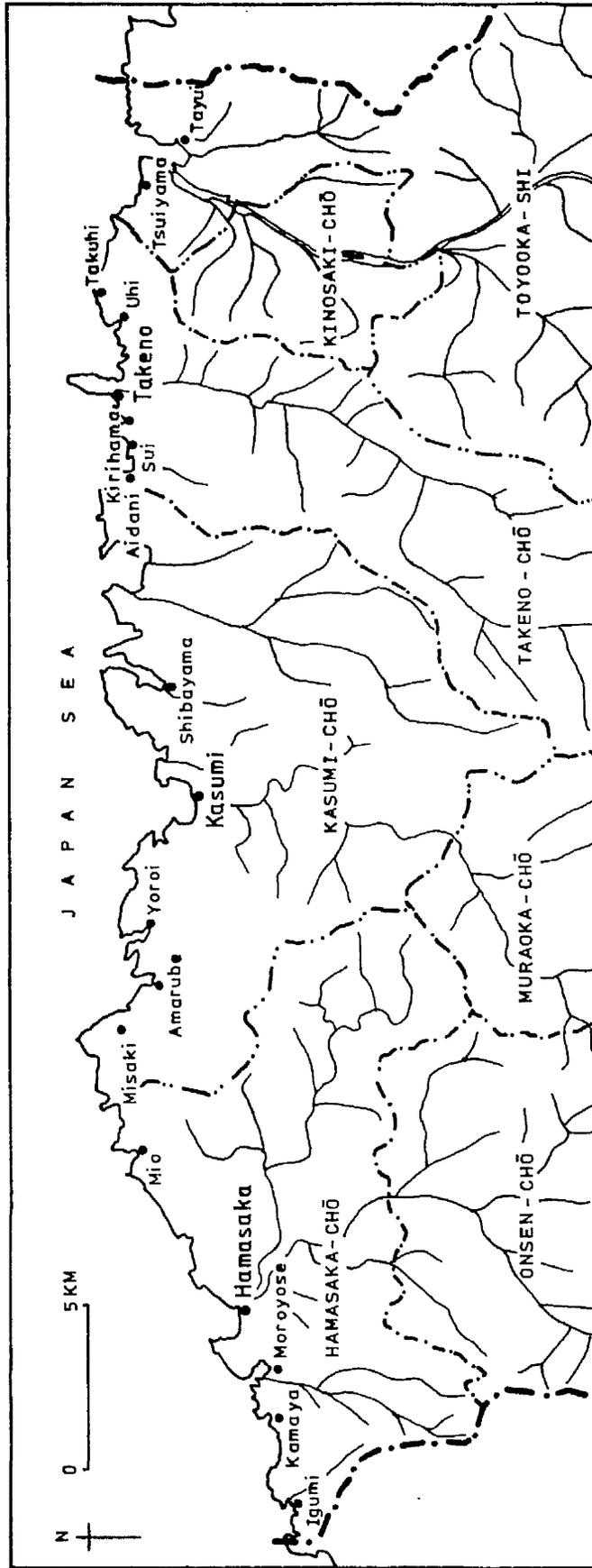
In Hyōgo Prefecture, the coastline of the Japan Sea is some 43 km. long, and being a ria type coastline, it has many small, sheltered, natural harbours.<sup>67</sup> From east to west these are Tayui, Takuhi, Uhi, Kirihamma, Sui, Aidani, Kasumi, Yoroi, Amarube, Misaki, Mio, Hamasaka, Moroyose, Kamaya and Igumi, in addition to the larger, general ports of Tsuiyama, Takeno and Shibayama (see Map VI-10). Kasumi is by far the most active fishing port, followed by Shibayama, Tsuiyama, Hamasaka, Moroyose, Igumi and Takeno (see Table VI-11).

Table VI-11. Tajima: fishing operations, by type of vessel, 1977.

	No. of fishing operations	Nos. engaged in fishing at peak periods	No. of fishing vessels							
			Total	Engine-powered fishing vessels					Outboard motors	Non-powered
				Total	Less than 5 tonnes	5t to less than 10t	10t to less than 20t	20 tonnes or more		
Hyōgo	5,886	13,726	8,130	6,700	5,954	480	58	208	1,256	174
Tajima	793	2,597	1,276	854	542	78	33	201	418	4
Toyooka	144	407	181	162	114	2	0	46	19	0
Takeno	100	165	190	108	96	1	5	6	82	0
Kasumi	335	1,421	584	410	233	46	24	107	171	3
Hamasaka	214	604	321	174	99	29	4	42	146	1

Source: Hyōgo-ken Kikaku-bu, 1978b, p.45, Table III-8.

Map VI-10. Tajima: fishing ports.



Map VI-11. Location of Yamato-tai Shallows.

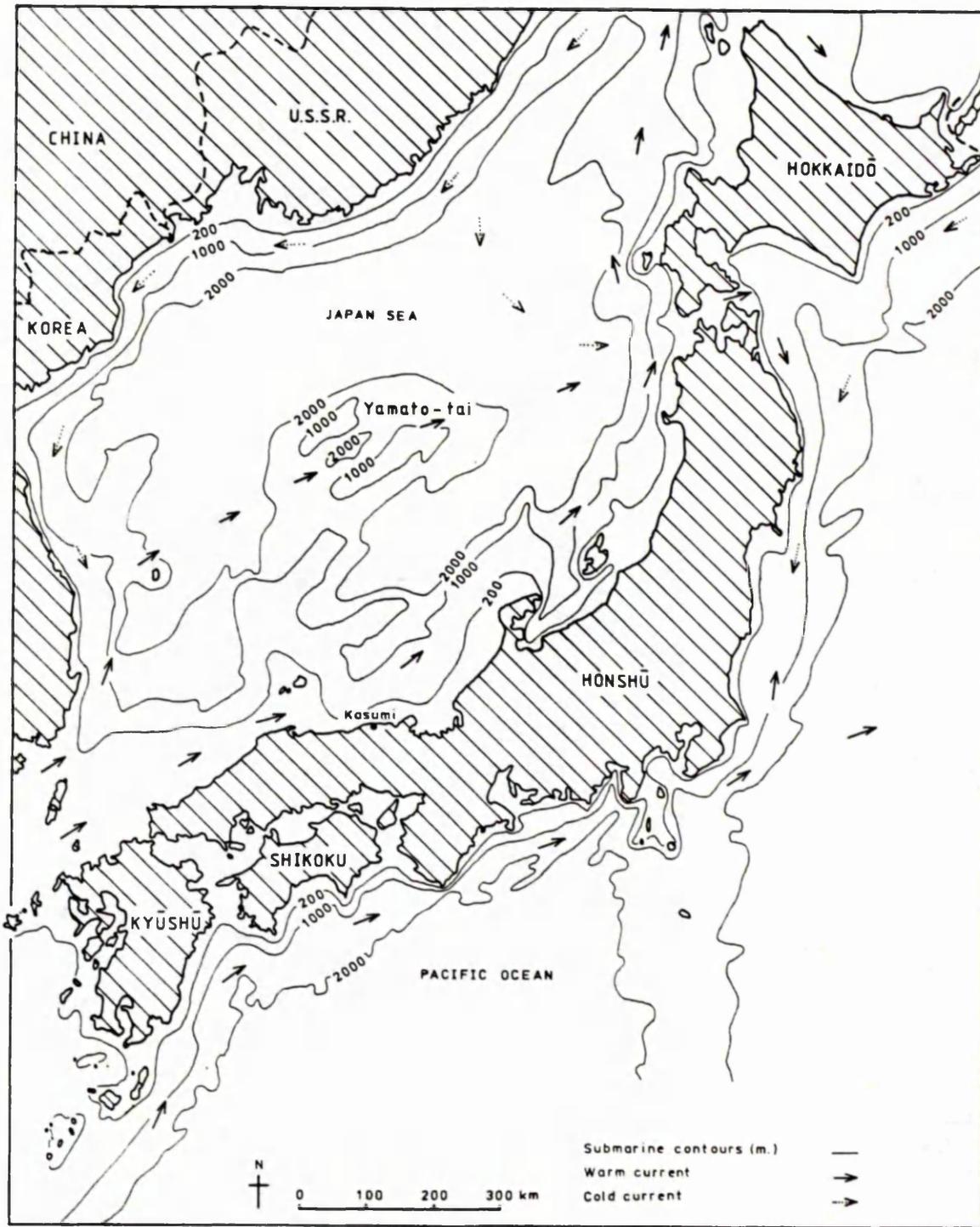


Table VI-12. Tajima: marine products, by administrative district, 1976.

(tonnes)

	Total	Fish	Shellfish	Marine Animals	Marine Animals				Seaweed	
					Squid	Octopus	Prawns	Crabs		Wakame*
Hyōgo	110,259.7	77,365.0	1,958.5	30,133.1	19,923.9	3,402.4	2,644.8	2,788.9	803.1	576.5
Tajima	40,929.3	18,084.1	516.8	21,993.6	18,540.8	80.6	820.8	2,548.7	334.8	322.1
Tsuiyama	4,825.4	1,555.7	43.9	3,166.7	2,869.0	10.8	93.2	193.7	59.1	57.2
Takeno	1,010.3	193.0	17.0	742.9	709.2	7.7	9.6	16.3	57.4	54.2
Shibayama	5,488.8	1,900.9	124.7	3,421.1	2,675.1	9.0	302.0	435.0	2.1	2.1
Kasumi	22,233.3	13,079.8	93.9	9,040.2	7,332.1	34.9	125.5	1,547.7	19.4	19.4
Hamasaka	3,125.8	393.4	73.1	2,517.1	2,222.9	8.8	117.6	166.5	142.2	139.3
Moroyose	2,730.9	423.0	50.9	2,213.6	2,068.4	3.3	43.9	97.5	43.4	38.7
Igumi	1,554.8	538.3	113.3	892.0	664.1	6.1	129.0	92.0	11.2	11.2

Source: Hyōgo-ken Kikaku-bu, 1978b, pp.47-51, Table III-10.

Note: \* Undaria pinnatifida

The fishing grounds of the Tajima fishing industry consist of both coastal and offshore waters. Within 15 km. of the coast, the waters reach to a depth of 200 metres, and since the warm Tsushima Current flows on the surface with a cold current flowing underneath, it is known as the San'in Wakasa cold water area. Consequently, it is possible to catch both warm-water fish, such as horse mackerel, sardines and young yellow-tail, and cold-water fish, such as mackerel, plaice, sole, turbot and crabs. Crabs, in particular the large brown Zuwai crabs, known locally as Matsubagani, have been a traditional catch, and despite a decline since 1964, Tajima still hauled in over 90 per cent of the crab tonnage of Hyōgo Prefecture in 1976 (see Table VI-12). Crabbing is carried out mainly between November and March.<sup>68</sup>

However, in response to the decline in the crab catch and in order to provide employment all year round for fishermen, new fishing grounds and new fishing methods were sought. Thus offshore squid fishing has been developed since 1966. Waters with abundant squid had been discovered by Hyōgo Prefecture in 1961 at Yamato-tai, shallows in the Japan Sea, approximately midway between the Nōtō peninsula and the boundary between North Korea and the USSR (see Map VI-11). With official aid from prefectural authorities, fishermen were encouraged to convert trawlers so that they could also be used for squid fishing, and in 1968 squid overtook crabs in importance. Before long, it became clear that resources in Yamato-tai were so great that it was more profitable for many to convert their boats to solely squid boats. Nevertheless, there are many problems concerning the small harbours and small size of vessel for undertaking the relatively long journey, refrigeration and marketing, and, in recent years, a decline in the catch due to over-fishing<sup>69</sup> (see Table VI-13).

Table VI-13. Volume of catch, 1971-1976.

	(t)					
	1971	1972	1973	1974	1975	1976
Tajima	48,508.3	41,875.0	45,397.1	40,793.4	40,132.0	40,929.3
Tsuiyama	7,033.6	6,032.7	6,272.6	4,830.2	5,192.5	4,825.4
Takeno	1,555.6	1,278.4	1,446.8	1,159.9	981.0	1,010.3
Shibayama	8,112.0	7,426.2	9,199.5	7,352.8	6,054.0	5,448.8
Kasumi	25,922.0	21,562.3	20,972.4	20,501.2	20,356.4	22,233.3
Hamasaka	2,407.9	2,593.1	3,164.0	3,094.8	3,320.4	3,125.8
Moroyose	1,883.0	1,964.2	2,689.2	2,384.0	2,668.5	2,730.9
Igumi	1,593.2	1,017.7	1,652.6	1,470.5	1,559.2	1,554.8

Source: Kinki Nōsei-kyoku Hyōgo Tōkei Jimusho, 1978, p.258, Table 6.

Table VI-14. Tajima: fishing, by type of operations, 1977.

	Total	Private operations			Part-time fishing			Other operations	Nos. engaged at peak periods		
		Fishing only	Fishing		Fishing main income	Fishing sub-sidiary	Total		Family	Employees	
			Fishing	sub-sidiary							
Hyōgo	5,886	1,843	1,953	1,478	612	13,726	10,269	3,457			
Tajima	793	120	346	246	81	2,597	931	1,666			
Tsuiyama	144	23	39	75	7	407	174	233			
Takeno	100	0	41	58	1	165	112	53			
Shibayama	93	16	45	25	7	413	111	302			
Kasumi	242	12	117	63	50	1,008	245	763			
Hamasaka	113	38	54	18	3	303	169	134			
Moroyose	67	24	30	4	9	175	76	99			
Igumi	34	7	20	3	4	126	44	82			

Source: Kinki Nōsei-kyoku Hyōgo Tōkei Jimusho, 1978, p.238, Table 6.

Table VI-15. Tajima: production and productivity of mining, 1945-82.

	Volume of output (t)		No. of employees		Productivity per annum (t/man/p.a.)	
	Akenobe	Ikuno	Akenobe	Ikuno	Akenobe	Ikuno
1945	148,406	65,910	1,079	1,283	138	51
1946	68,866	56,324	603	1,291	114	44
1947	92,277	73,907	785	1,443	118	51
1948	94,488	102,369	1,117	1,595	85	64
1949	159,521	163,023	1,231	1,591	130	102
1950	260,354	202,888	1,584	1,714	164	118
1951	263,096	189,467	1,655	1,750	159	108
1952	310,347	215,148	1,794	1,743	173	123
1953	317,645	222,841	1,806	1,778	176	125
1954	322,089	246,688	1,785	1,755	180	141
1955	310,119	239,288	1,753	1,713	177	141
1956	321,641	246,980	1,726	1,694	186	146
1957	315,515	234,804	1,666	1,675	189	140
1958	261,619	201,495	1,596	1,654	164	122
1959	251,977	227,565	1,584	1,633	159	139
1960	261,338	249,751	1,569	1,576	167	158
1961	293,588	263,089	1,528	1,497	192	176
1962	292,778	304,975	1,491	1,453	196	210
1963	301,510	302,646	1,411	1,292	214	234
1964	337,857	273,012	1,330	1,219	254	224
1965	329,324	257,864	1,325	1,148	249	225
1966	358,044	269,916	1,306	1,079	274	250
1967	371,335	165,886	1,283	604	289	275
1968	348,501	141,644	1,113	544	313	260
1969	313,525	155,771	868	576	361	270
1970	359,477	155,557	844	594	426	262
1971	354,942	182,464	766	578	463	316
1972	399,273	151,036	737	477	542	317
1973	369,253		571		647	
1974	333,940		565		591	
1975	324,803		542		599	
1976	299,893		457		656	
1977	290,835		438		664	
1978	303,451		437		694	
1979	301,260		408		738	
1980	304,680		406		750	
1981	294,518		413		713	
1982	316,408		406		779	

Source: Hyogo Prefectural Office (unpublished data)

Table VI-14 shows that as of 1977, some 90 per cent of fishing operations in Tajima were privately-run (as opposed to cooperatives), but of those households participating, fishing was the sole source of income for only 16.8 per cent. Fishing did, however, provide the main source of income for 48.6 per cent of households. From the fact that the population of fishing settlements is in most cases stable or growing, it may be inferred that fishing provides an acceptable lifestyle and standard of living.

(e) Mining

The mountains of Tajima, being composed mainly of igneous rocks, contain various metals and metal ores, such as gold, silver, copper, lead, zinc, tin, nickel, antimony, manganese and iron.<sup>70</sup> They have been mined since ancient times, and the Ikuno silver mines are mentioned in the Engishiki records of AD 901.

Ikuno and Ōya have been the chief mining districts of Tajima, mainly for silver and copper, respectively, but they have both suffered a severe post-war decline. From their post-war peaks in 1953 of employing 1,778 in Ikuno and 1,806 in Ōya, the figures fell to 477 in Ikuno in 1972 just before its closure and to 406 in Ōya in 1980 (see Table VI-15).<sup>71</sup>

(f) Dekasegi (temporary migration for employment)

The Tajima region suffers a long period of deep snowfall in winter which precludes the possibility of winter cropping. Instead, a cash income has long been sought by Tajima farmers during the winter months, in the form of *dekasegi*. The practice is known to have been established already by the mid-Tokugawa period (1603-1867),<sup>72</sup> most commonly to *sake* breweries - a source of temporary employment which remains important even to this day. Migration takes place mainly in November and migrants return in March or April.

The numbers of migrants vary considerably according to the rural district (see Table VI-16 and Map VI-12), but *dekasegi* is especially common in the mountainous districts where there are inadequate opportunities for supplementing farm income by other means. In 1965, in three rural districts of western Tajima, more than half of the total number of farm households sent out migrants: Mikata-chō, 70.8 per cent; Muraoka-chō, 65.4 per cent; and Onsen-chō, 54.9 per cent; Muraoka-chō sent out the most migrants in terms of absolute numbers.<sup>73</sup> In 1980, those same three rural districts together accounted for 60.6 per cent of the total for Tajima.

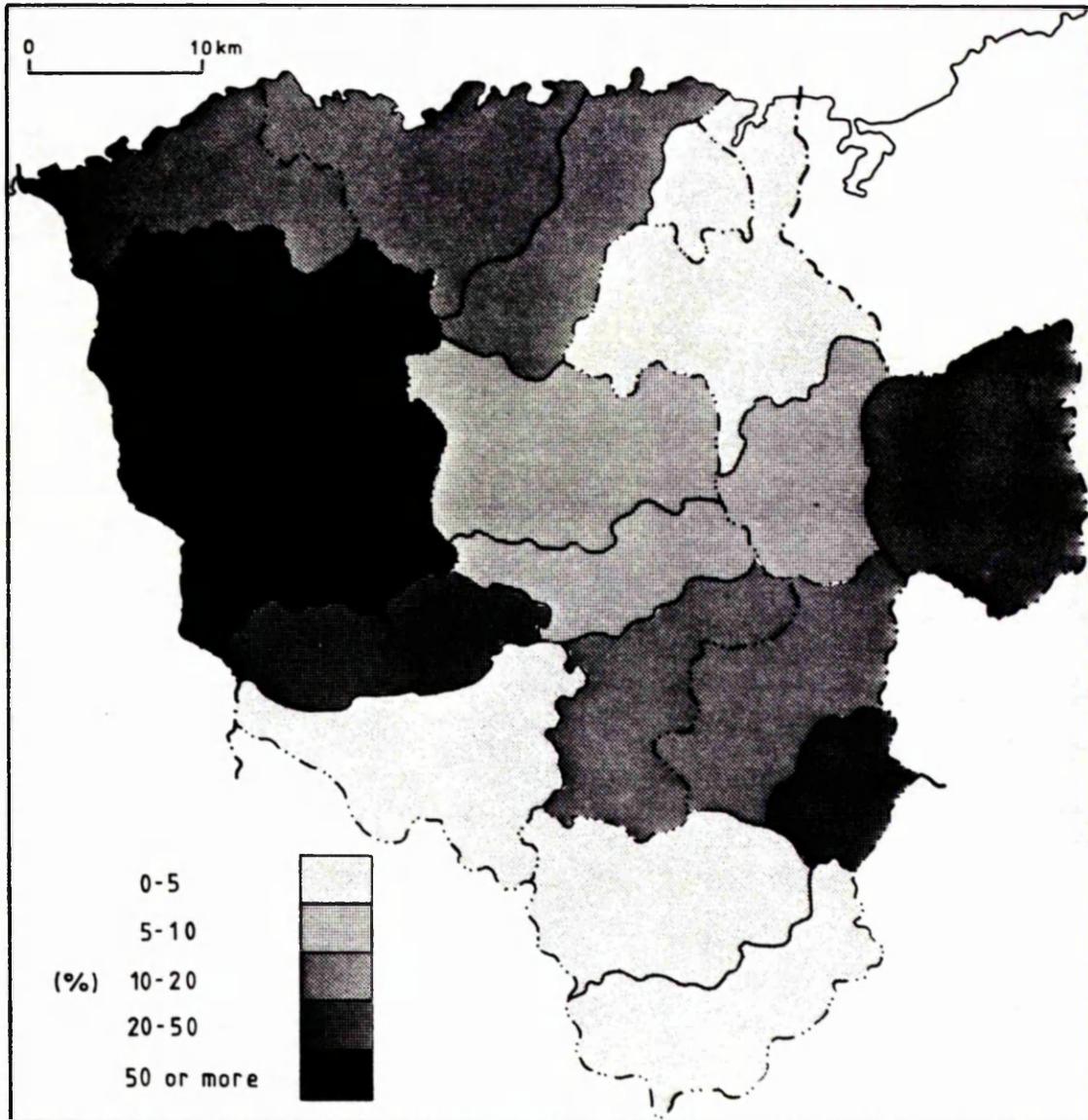
Table VI-16. Tajima: *dekasegi* migrants, 1968-1980.

		1966	1968	1970	1975	1980
Toyooka	Sake		16	13	18	10
	Other		26	48	25	11
	Total		42	61	43	21
Kinosaki	Sake		0	0	0	2
	Other		0	1	0	0
	Total		0	1	0	2
Takeno	Sake		78	74	78	64
	Other		49	60	104	12
	Total		127	134	182	76
Hidaka	Sake		64	41	52	37
	Other		83	68	89	14
	Total		147	109	141	51
Izushi	Sake		30	32	22	14
	Other		90	96	64	12
	Total		120	128	86	26
Tantō	Sake		164	126	152	125
	Other		156	191	223	20
	Total		320	317	375	145
Kasumi	Sake		312	258	218	150
	Other		85	67	24	19
	Total		397	325	242	169
Muraoka	Sake		1,323	1,098	937	728
	Other		165	269	123	173
	Total		1,488	1,367	1,060	901
Hamasaka	Sake		125	131	127	100
	Other		178	169	43	52
	Total		303	300	170	152
Mikata	Sake		603	542	417	314
	Other		110	159	23	38
	Total		713	701	440	352
Onsen	Sake		979	817	716	580
	Other		341	442	181	130
	Total		1,320	1,259	897	710
Yōka	Sake		80	66	68	36
	Other		22	50	55	14
	Total		102	116	123	50
Yabu	Sake		276	271	164	66
	Other		114	180	137	11
	Total		390	451	301	77
Sekinomiya	Sake		236	171	240	125
	Other		90	139	269	131
	Total		326	310	509	256
Ōya	Sake		72	35	36	16
	Other		14	40	56	18
	Total		86	75	92	34
Wadayama	Sake		323	279	213	92
	Other		63	179	154	14
	Total		386	476	367	106
Santō	Sake		285	211	137	77
	Other		54	204	153	21
	Total		339	415	290	98
Asago	Sake		37	37	30	5
	Other		7	19	16	2
	Total		44	56	46	7
Ikuno	Sake		0	1	2	2
	Other		0	2	0	0
	Total		0	3	2	2
Total	Sake		4,765	4,022	3,372	2,543
	Other		2,114	2,410	1,218	692
	Total		6,879	6,432	4,590	3,235

Source: Toyooka and Yōka Employment Exchanges.

Note: As not all seasonal migrants find their employment through the exchanges, the above figures are underestimates of the true figures, but they indicate current trends.

Map VI-12. Tajima: the proportion of farm households sending out *dekasegi* migrants, 1965.



Source: Watanabe, 1970, p. 89, Map 1.

Some migrants used to go to make *kōridōfu*, particularly in the Yoshino area of Nara Prefecture,<sup>74</sup> but this has virtually died out since the 1960s. Studies in 1962 and 1968 both found that small-scale breweries in Wakayama, Ōsaka, Kyōto and Nara Prefectures were the most frequent destinations (in that order) of *dekasegi* migrants from Muraoka-chō.<sup>75</sup>

Small breweries usually recruit a *tōji* (master brewer), who then recruits a small team of assistants (average size eight men) from among relatives and acquaintances, which in practice means that men from the same village go to a variety of destinations.

In 1965 in Muraoka-chō, it was found that 69 per cent of *dekasegi* migrants were either head of their household or were *atotsugi* (successors).<sup>76</sup> In general, few farmers with arable land holdings of 30 ares or less practised *dekasegi*, and the larger the arable land holding, the higher the proportion of farmers in Muraoka-chō who participated in *dekasegi*: approximately 80 per cent of farm households with 50 ares or more practised *dekasegi* in 1965.<sup>77</sup> In settlements with relatively little arable land, there were generally fewer households practising *dekasegi* - especially the villages along National Route 9 in which there were higher proportions of non-farm households, such as shopkeepers.<sup>78</sup>

The income from *dekasegi* is often the main source of cash income, and may amount to as much as 30-50 per cent of the total farm household income.<sup>79</sup>

Table VI-16 shows only those migrants who sought *dekasegi* employment through the two employment exchanges of Tajima, and many migrants secure their position through informal links with employers. It is known, for example, that in 1975 in Muraoka-chō, there were in fact 1,300 *dekasegi* migrants, accounting for as much as 55.9 per cent of those engaged in primary industries and 28.4 per cent of the total labour force in that rural district.<sup>80</sup>

It is likely, however, that Table VI-16 indicates the general trend, which was towards rapid decline in seasonal migration, by as much as 53.0 per cent in Tajima as a whole between 1968 and 1980. Nevertheless, the decline has been less marked in the traditional source areas of *dekasegi* migrants such as Muraoka-chō, and more marked in the districts where *dekasegi* was previously less common.

The recent decline in temporary migration in Tajima may be explained by a combination of factors: (a) *dekasegi* migrants are typically farmers, and the agricultural labour force has also declined; (b) high rates of permanent outmigration; (c) increased opportunities for commuting

jobs in manufacturing and service industries;<sup>81</sup> (d) automation and permanent rather than seasonal operations in *kōridōfu* factories and *sake* breweries;<sup>82</sup> (e) the repudiation of seasonal migration on the part of young people, particularly on account of a "feudalistic" hierarchy of employment with low pay and poor conditions for the less experienced brewing hands (though conditions have improved a little);<sup>83</sup> and (f) the rapid ageing, retirement and death of the older generation of *dekasegi* migrants.

(g) Manufacturing

Traditionally, manufacturing in Tajima was limited to small-scale handicrafts production, such as Tajima crepe silk fabric and pottery (Izushi-chō), needles (Hamasaka-chō), basketry (Toyooka-shi), household furniture and metal springs (Wadayama-chō).

The basketry of Toyooka grew up on account of the Toyooka Basin's suitability for the growing of cane willow (*Salix koriyanagi* Kimura), since the general dampness of the Basin<sup>84</sup> makes the cane very pliable for weaving. Out of this handicrafts industry has grown a *jiba sangyō*,<sup>85</sup> for Toyooka is the largest manufacturing centre for vinyl bags in the country. In fact, Toyooka alone produces some 90 per cent of Japan's domestic consumption of vinyl bags, ranging from small handbags, through sports holdalls to suitcases and travelling trunks. There were 200 factories, employing 1,749 persons, with output valued at ¥23,103 million, in 1977.

The needle industry of Hamasaka has also developed considerably, into the production of gemstone needles and record styli, of which approximately 10 per cent of the former was being exported in 1970.<sup>86</sup>

Such traditional crafts are at present being promoted and developed in order to modernize them and increase employment opportunities in the area.

Furthermore, with both the improvements to main roads in the late 1960s,<sup>87</sup> and with the Act for the Introduction and Development of Manufacturing Industries in Rural Areas of 1971,<sup>88</sup> several firms were established in the region, such as bookbinding at Ōya and the making of sportswear at Muraoka. In general, though, these firms tend to be concentrated in the Maruyama River Basin.<sup>89</sup> Table VI-17 shows that 99 firms of 1,000 sq. m. or more were set up in the Tajima region during the decade 1970-80, creating a total of 4,011 jobs. However, from Table VI-18 it can be seen that in 1975, when there was a total of 2,670 firms in the region, the average number of employees per firm was less than nine and less than half of the

Table VI-17. Tajima: industrial location, 1970-80.

	(No. of firms/No. of employees)											Total
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	
Food/tobacco		2 90	1 50	3 132	1 25	1 3	1 25	2 36	3 145	2 54		16 560
Textiles	2 142	1 23		3 86	1 2	2 33		1 -				10 286
Clothing	1 80			1 50				1 20		1 7		4 157
Wood/Wood products				1 25	1 12	1 69			1 95	2 68		5 174
Pulp/paper	1 9											2 104
Printing/publishing			1 160		2 25							3 185
Chemicals									1 16			1 16
Oil/coal products							1 5	1 5		1 17		3 27
Pottery/ceramics				1 15	1 22			3 31	1 25			6 93
Iron/steel				1 60								1 60
Non-ferrous metals	2 98			2 90								6 558
Metal products		2 26	1 23	6 146	2 31	3 164	1 8	1 7	1 6		1 5	18 416
General machinery		1 25				1 15					1 30	3 70
Electrical machinery	1 176			2 112	1 25		1 500				1 -	6 813
Transport machinery	1 35			1 80	1 8							3 123
Others	3 180			4 70	1 5	1 10				2 69	1 35	12 369
Total	11 720	6 164	5 603	23 736	12 277	10 302	4 538	9 99	7 287	8 215	4 70	99 4,011

Source: Hyogo Prefectural Office

Note: For firms of 1,000 m<sup>2</sup> or more, established in accordance with the Industrial Location Act (1973) and the regulations relating to industrial location of 1971.

Table VI-18. Tajima: manufacturing industries, 1976.

(#10,000s)

	No. of firms	No. of employees	Av. no. employees per firm	Value of shipments	Value of shipments per firm	Value of shipments per employee	Salaries	Salary per employee
Toyooka	557	4,498	8.1	2,901,094	5,208.4	645.0	504,901	112.3
Kinosaki	26	94	3.6	27,464	1,056.3	292.2	5,010	53.3
Takeno	36	376	10.4	198,968	5,526.9	529.2	31,367	83.4
Kasumi	181	2,045	11.3	1,708,605	9,439.8	835.5	185,620	90.8
Hidaka	148	2,482	16.8	3,151,762	21,295.7	1,269.8	349,672	140.9
Izushi	293	1,462	5.0	1,005,326	3,431.1	687.6	167,977	114.9
Tanto	676	1,417	2.1	616,053	911.3	434.8	33,248	23.5
Muraoka	35	679	19.4	387,299	11,065.7	570.4	72,070	106.1
Hamasaka	107	1,156	10.8	590,672	5,520.3	511.0	104,865	90.7
Mikata	19	228	12.0	46,583	2,451.7	204.3	11,153	48.9
Onsen	38	428	11.3	86,031	2,264.0	201.0	26,622	62.2
Yoka	139	1,471	10.6	1,430,891	10,294.2	927.7	181,856	123.6
Yabu	68	1,003	14.8	370,768	5,452.5	369.7	99,868	99.6
Oya	73	811	11.1	285,792	3,915.0	352.4	68,974	84.8
Sekinomiya	14	516	36.9	414,537	29,609.8	803.4	74,953	145.3
Ikuno	33	935	28.3	2,143,001	64,939.4	2,292.0	177,509	189.8
Wadayama	153	1,932	12.6	1,318,438	8,617.2	682.4	222,003	114.9
Santo	22	1,305	59.3	1,534,530	69,751.4	1,175.9	169,500	129.9
Asago	52	803	15.4	313,394	6,026.8	390.3	93,035	115.9
Tajima total	2,670	23,641	8.9	18,531,108	6,940.5	783.9	2,580,203	109.1
Hyōgo Pref.	30,286	556,347	18.4	833,983,280	27,536.9	1,499.0	118,382,057	212.8

Source: Hyōgo-ken Kikakū-bu, 1978b, pp.55-56, Table 12.

average for Hyōgo Prefecture. The value of goods produced amounted to ¥185,311 million; and although this as a proportion of the prefectural total had shown a steady increase,<sup>90</sup> it was still as little as 2.2 per cent. The average value of shipments per firm was as little as 25 per cent of the prefectural average, and the average salary per employee was only half that of the prefectural average. In short, manufacturing in the Tajima region was characterized by very small firms with very low-paid workers producing low value goods, and since they were centred mainly in the Maruyama River Basin of eastern Tajima (see Map VI-3), many of the remoter settlements of the mountainous west received little direct benefit from them in terms of job opportunities.

(h) Trade and commerce

In Japan since the 1950s, there has been a rapid diffusion of consumer goods and services, and Tajima is no exception. However, the trend is for the increasing concentration of trade and commerce, for despite closures of village stores in remote villages, and despite the decrease in population generally, the number of shops in Tajima has in fact increased, and stood at 5,947 in 1976. They provided employment for 20,529 people and had a turnover of ¥254,300 million; 42 per cent of the latter was in Toyooka-shi. The value of retail sales per head of population was highest in the hot-spring resort of Kinosaki, followed by the transportation centre of Yōka.

However, the purchasing power of peripheral districts such as Tantō and Mikata is directed mainly outside the region, to Fukuchiyama (Kyōto-fu) and Tottori (Tottori-ken). Even despite the contribution of Toyooka's bag manufacture, the value of wholesales per head of population in 1976 was only 56 per cent of the prefectural average.<sup>91</sup>

(i) Tourism and recreational activities

The scenic beauty of the San'in Coast National Park, the Hyōnosenshiroyama-Nagisen Quasi-National Park and the Tajima Mountains Prefectural Nature Park endows the Tajima region with abundant resources for recreational activities and tourist attractions.<sup>92</sup> There are natural hot-springs at Kinosaki, Yumura (Onsen-chō) and Hamasaka, bathing beaches in Takeno, Kasumi and Hamasaka districts, ski slopes at Mts. Kannabe and Sobu, Mts. Hachibuse and Hyōnosenshi, attractive basalt formations at Genbudō, and the remains of a castle at Izushi. The villages which have built ski

lodges and hotels for winter sports are attempting to expand their appeal to meet the needs of summer visitors for hiking, camping and tennis, especially around Mts. Kannabe and Hachibuse. The opening of private hotels and related services in ski resort villages since the increase in the popularity of skiing and the development of the ski slopes in the 1960s has virtually eradicated the necessity for winter out-migration in those villages.<sup>93</sup>

Table VI-19 shows the number of visitors to each district of Tajima between 1971 and 1976. Considerable annual fluctuations are apparent, reflecting perhaps the general recession after the Oil Crisis of 1973, as well as the close dependence of recreational activities upon somewhat unreliable weather conditions. In particular, the ski resorts suffer in years of late or insufficient snowfall. Nevertheless, the overall trend shows an increase of 25.4 per cent over the six year period.

Table VI-19. Tajima: annual fluctuations in the number of visitors, 1971-1976.

	(1,000s)					
	1971	1972	1973	1974	1975	1976
Toyooka	1,367	1,281	1,601	1,404	1,685	1,532
Kinosaki	1,600	1,600	1,500	1,323	1,204	1,215
Takeno	737	832	850	860	925	885
Kasumi	300	455	581	632	610	631
Hidaka	340	268	358	567	552	596
Izushi	9	90	130	180	200	400
Muraoka	242	242	270	308	308	312
Hamasaka	239	350	450	608	542	485
Mikata	100	71	69	79	63	67
Onsen	216	254	293	262	251	242
Yōka	26	21	23	24	39	40
Yabu	3	5	20	22	25	26
Ōya	13	17	3	5	19	10
Sekinomiya	325	262	325	288	412	476
Ikuno	71	66	71	141	178	196
Wadayama	109	84	85	69	57	58
Santō	12	15	110	85	68	12
Asago	26	39	40	42	10	16
Total	5,740	5,971	6,786	6,912	7,160	7,200

Source: Tajima Chiiki Shichōson-betsu Shuyō Tōkei Shihyō, p.12.

Table VI-20. Number of visitors, by purpose of visit, 1976.

	Natural beauty spots	Shrines, temples, festivals	Historic remains	Hot springs	Parks	Hiking, camping	Skiing, skating	Bathing, yachting	Fishing, shellfish	Holiday farms	Other events, sports, others	TOTAL
Tajima	1,415	411	409	1,556	51	357	1,008	1,298	238	20	437	7,200
Toyooka	1,146	157			5	15		194	15			1,532
Hidaka	32			5		37	424		19		79	596
Kinosaki		7		1,197		4				7		1,215
Takeno	30					60		650	145			885
Kasumi	3	75			5	2		271	5	3	267	631
Izushi		120	277			3						400
Tantō			1									1
Hamasaka	29	26		155	40	22		183	30			485
Onsen	3			199		2	38					242
Mikata	13	7				10	20		2	5	10	67
Muraoka	70					56	183		3			312
Yōka	5	6	3			1			3			40
Yabu	2	4	3		1	2			2	4	8	26
Ōya	4	1							5			10
Sekinomiya	3		1			127	343		2			476
Wadayama	43		14			1					4	58
Santō	1	2				5					12	12
Asago		2				1			1	1	12	16
Ikuno	31	4	110			9			6	1	35	196

Source: Tajima Chiiki Shichōson-betsu Shūyō Tōkei Shihyō, p.13, Table 2.

Table VI-20 shows the breakdown by purpose of visit for fiscal year 1976, from which it is clear that the chief attractions of the Tajima region were hot springs, natural beauty spots, swimming and sailing, and skiing and skating, in that order, which together accounted for 73.2 per cent of visits. Toyooka, Kinosaki and Takeno received the most visitors, together accounting for 50.5 per cent of the total.

(j) Summary

From the foregoing sections, it is apparent that the economic base of the Tajima region lies in primary industrial activities - chiefly farming and fishing - with traditional forms of supplementing income, such as seasonal migration and the making of handicrafts products, and, especially since the 1960s, tertiary industrial activities such as tourism and commerce. Thus the changes which have taken place since the Second World War have mainly involved the modification of the existing economy, rather than any radical conversions.

(vii) Chief services and infrastructure

The importance of a sound local tax base for the provision and maintenance of infrastructural and service provisions in remote rural areas was discussed earlier.<sup>94</sup> Table VI-21 shows the fiscal index for administrative districts of the Tajima region. Consistently, the most impoverished rural district was Mikata-chō, the index of which fell as low as 0.104 in 1975. (The average fiscal index for designated depopulated districts in all Japan from 1973 to 1975 was 0.17.)<sup>95</sup> The general decline in the fiscal index for all districts of Tajima, which indicates a reduction in self-sufficiency of local finances, showed some moderate upturn in the latter half of the 1970s.

Table VI-22 shows the number of kindergartens, primary, middle and high schools in Tajima in 1977. In most districts, the pupil-teacher ratio was considerably lower than the prefectural average, as reduced birth rates and chronic outmigration have brought about a reduction in the numbers of school-age children, even in spite of the closures and amalgamations of small schools, especially branch schools. Over ninety per cent of middle school leavers go on to high school, the majority of whom remain in their home area. However, as elsewhere in rural areas of Japan, the majority of outmigrants from the region are high school leavers, for approximately two-thirds leave the Tajima region every year upon graduation from high school.<sup>96</sup>

Table VI-21. Tajima: fiscal indexes, by administrative district, 1966-1979.

District	Date of designation as depopulated district	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Toyooka-shi		0.552	0.570	0.572	0.553	0.501	0.470	0.452	0.466	0.467	0.481	0.495	0.518	0.513	0.518
Kinosaki-cho		0.773	0.775	0.759	0.718	0.642	0.590	0.325	0.527	0.500	0.481	0.483	0.489	0.481	0.463
Takeno-cho		0.189	0.192	0.192	0.183	0.176	0.170	0.169	0.173	0.182	0.188	0.202	0.207	0.213	0.207
Kasumi-cho		0.387	0.396	0.394	0.366	0.333	0.320	0.309	0.321	0.326	0.328	0.331	0.332	0.333	0.333
Hidaka-cho		0.448	0.458	0.445	0.425	0.389	0.350	0.323	0.318	0.332	0.350	0.363	0.373	0.369	0.363
Izushi-cho		0.307	0.311	0.316	0.311	0.299	0.290	0.277	0.271	0.268	0.263	0.266	0.289	0.298	0.303
Tanto-cho	1.5.1970	0.200	0.198	0.197	0.192	0.184	0.180	0.179	0.179	0.181	0.181	0.180	0.179	0.177	0.180
Muraoka-cho	1.5.1970	0.245	0.234	0.218	0.209	0.201	0.200	0.183	0.183	0.185	0.183	0.184	0.192	0.198	0.204
Hamasaka-cho		0.258	0.266	0.269	0.263	0.243	0.230	0.220	0.228	0.236	0.237	0.241	0.253	0.269	0.279
Mikata-cho	1.5.1970	0.146	0.144	0.142	0.135	0.127	0.130	0.112	0.106	0.107	0.104	0.108	0.112	0.116	0.115
Onsen-cho	30.4.1971	0.226	0.219	0.211	0.194	0.186	0.170	0.168	0.169	0.178	0.183	0.191	0.196	0.202	0.205
Yoka-cho		0.436	0.441	0.431	0.406	0.376	0.352	0.338	0.325	0.330	0.337	0.353	0.372	0.370	0.367
Yabu-cho		0.255	0.256	0.255	0.246	0.239	0.228	0.224	0.217	0.216	0.211	0.215	0.225	0.233	0.234
Oya-cho	1.5.1970	0.344	0.344	0.331	0.312	0.282	0.248	0.220	0.199	0.196	0.196	0.199	0.203	0.200	0.197
Sekinomiya-cho	1.5.1970	0.231	0.221	0.213	0.199	0.209	0.206	0.199	0.176	0.168	0.167	0.174	0.183	0.193	0.205
Ikuno-cho		0.523	0.511	0.486	0.449	0.417	0.376	0.367	0.375	0.383	0.445	0.467	0.497	0.442	0.418
Wadayama-cho		0.403	0.414	0.416	0.394	0.360	0.326	0.310	0.301	0.310	0.319	0.328	0.334	0.333	0.341
Santo-cho		0.412	0.415	0.414	0.373	0.351	0.326	0.330	0.313	0.315	0.317	0.331	0.346	0.350	0.343
Asago-cho	30.4.1971	0.358	0.347	0.334	0.307	0.288	0.262	0.264	0.274	0.288	0.428	0.602	0.741	0.707	0.610

Source: Hyogo Prefectural Office (unpublished data).

Notes: For designation as depopulated district, fiscal index must average less than 0.4, 1966-1968, and population decline 1960-65 must exceed 10%.

Asago-cho lost designation in 1980.

Approximately half of Tajima high school leavers seek employment, of whom only about 30 per cent find it within the Tajima region.<sup>97</sup> Some 44 per cent of high school leavers go on to higher education, but as there is only one college in the region, at Toyooka, 42 per cent are obliged to enter higher educational establishments outside the region.<sup>98</sup>

Table VI-22. Tajima: schools, 1977.

	Hyōgo Prefecture	Tajima
<u>Kindergartens</u>		
Total	797	77
No. of pupils	117,285	3,496
No. of teachers	4,477	158
Pupil-teacher ratio	26.2	22.1
<u>Primary schools</u>		
Total	784	101
No. of pupils	482,904	19,274
No. of teachers	17,896	1,128
Pupil-teacher ratio	27.0	16.6
<u>Middle schools</u>		
Total	863	35
No. of pupils	215,970	10,358
No. of teachers	10,224	658
Pupil-teacher ratio	21.1	15.7
<u>High schools</u>		
Total	213	17
No. of pupils	183,808	10,286
No. of teachers	9,878	605
Pupil-teacher ratio	18.6	17.0

Source: Hyōgo-ken Kikaku-bu, 1978b, pp.61-62, Table IV-1.

From Table VI-23, it is evident that the Tajima region in general is somewhat less well served for medical facilities in terms of the numbers of patients per doctor or dentist and the numbers served by pharmacies, compared with the prefectural average.

Although in 1978 Tajima's aged population was only 7.2 per cent of the prefectural population of people aged 65 years and over, the Tajima

Table VI-23. Tajima: medical facilities

	No. of hospitals	No. of hospital beds	No. of doctors	No. of doctors per 1000 population	No. of dentists	No. of dentists per 1000 population	No. of pharmacists	No. of pharmacies	Population per pharmacy
	1976		1976		1976		1977		
Hyogo Prefecture	291	46,513	7,304	1.4	2,221	0.4	2,385	1,214	4,153
Tajima	14	2,010	212	1.0	59	0.3	98	45	4,818
Toyooka			64	1.4	13	0.3	21	10	4,698
Kinosaki			3	0.5	1	0.2	4	3	1,868
Hidaka	4	894	20	1.0	6	0.3	10	5	3,855
Izushi			8	0.7	6	0.5	4	3	3,622
Tanto			4	0.6	1	0.1	1	0	0
Takeno	1	121	5	0.8	1	0.2	2	0	0
Kasumi			13	0.8	3	0.2	8	4	3,894
Muraoka			7	0.8	3	0.4	4	1	8,248
Hamasaka			12	0.9	4	0.3	3	3	4,287
Mikata	4	282	1	0.3	0	0	1	1	3,449
Onsen			6	0.7	2	0.2	3	1	8,878
Yōka			24	1.8	6	0.5	8	2	6,481
Yabu			4	0.4	1	0.1	5	2	4,880
Oya			4	0.6	2	0.3	4	0	0
Sekinomiya	5	713	4	0.8	1	0.2	2	0	0
Ikuno			7	1.1	1	0.2	3	1	6,350
Wadayama			16	1.0	5	0.3	10	7	2,257
Santo			5	0.7	1	0.1	3	1	7,249
Asago			5	0.6	2	0.3	2	1	7,854

Source: Hyōgo-ken Kikaku-bu, 1978b, pp. 85-86, Table VI-1; and p. 88, Table VI-3.

region accounted for 8.7 per cent of senior citizens in Hyōgo who were receiving welfare pension,<sup>99</sup> reflecting perhaps the generally lower standard of living in the region, greater dependence on pensions as a source of income, and the more aged population structure.

A total of 440 places were available in the six old people's homes in Tajima, in addition to the three Senior Citizens' Welfare Centres.<sup>100</sup> Nevertheless, 1,255 people aged 65 or more were living alone in Tajima in 1978, or 4.1 per cent, a slightly lower proportion than the 4.7 per cent for Hyōgo Prefecture. There were 884 bedridden old people, or 2.9 per cent in Tajima, in contrast to only 2.0 per cent for Hyōgo Prefecture as a whole. However, Tajima was served by 44 full-time home helps, 16.1 per cent of the prefectural total, and five part-time workers, out of only fifteen in Hyōgo Prefecture.

(viii) Conclusion

The Tajima region, in its topography, economic base and experience of change since the Second World War, is remarkably similar to other depopulated rural areas of Japan.<sup>101</sup>

The general character of Tajima is that of a sparsely populated, mountainous region, which has only one regional centre, Toyooka-shi. Although relatively close to the industrialized Keihanshin region, Tajima developed little until after the Second World War, from its traditional reliance upon subsistence arable farming, supplemented by cash income from fishing on the coast and cattle-raising, seasonal migration, charcoal burning or sericulture inland. This lifestyle has remained basically unchanged, but since the 1960s and the improvement of accessibility into the region by road, it has been somewhat modified and diversified.

Winter cropping is virtually impossible on account of heavy snow-fall in the region, and seasonal migration continues to be a major source of income for many farmers. The social and emotional disturbances which this practice tends to cause have no doubt been important contributory factors to the continued depopulation of the region since the war. Nevertheless, in recent years, as attempts have been made to create alternative job opportunities and as the supply of young outmigrants has steadily declined, depopulation has become less of a problem for the region as a whole, but it is still a cause for concern in remote villages.

The creation of job opportunities has included the development of recreational activities, the development of traditional handicrafts

industries such as bag-making, and the introduction of new industries such as clothing and light electrical goods manufacture. The increasing availability of such forms of employment has resulted in increasingly high rates of part-time farming. Increased spending power and consumption has allowed retail shops to flourish as never before. Perhaps the major impact in both economic and social terms has come from the development of recreational activities, for the influx of both summer and winter visitors even to many remote settlements has not only brought higher incomes, a higher standard of living and decreased dependence on seasonal migration to the inhabitants of such villages, but it has also opened up their hitherto rather closed society and widened their world view.

CHAPTER VII: THE TAJIMA REGION: CASE STUDIES OF SELECTED  
DEPOPULATED SETTLEMENTS

(1) Introduction

All too often, Japanese research in the field of rural depopulation has been preoccupied with nation-wide trends or with comparisons between very large regions of the country. The studies tend to assume that variations in the appearance or effects of rural depopulation are the result of economic or social conditions on the larger regional, or even national, scale.

On prima facie grounds, it may seem reasonable to deduce that the effects of rural depopulation upon villages of any given smaller region are likely to be rather similar. But are such assumptions supported by evidence derived from local case studies?

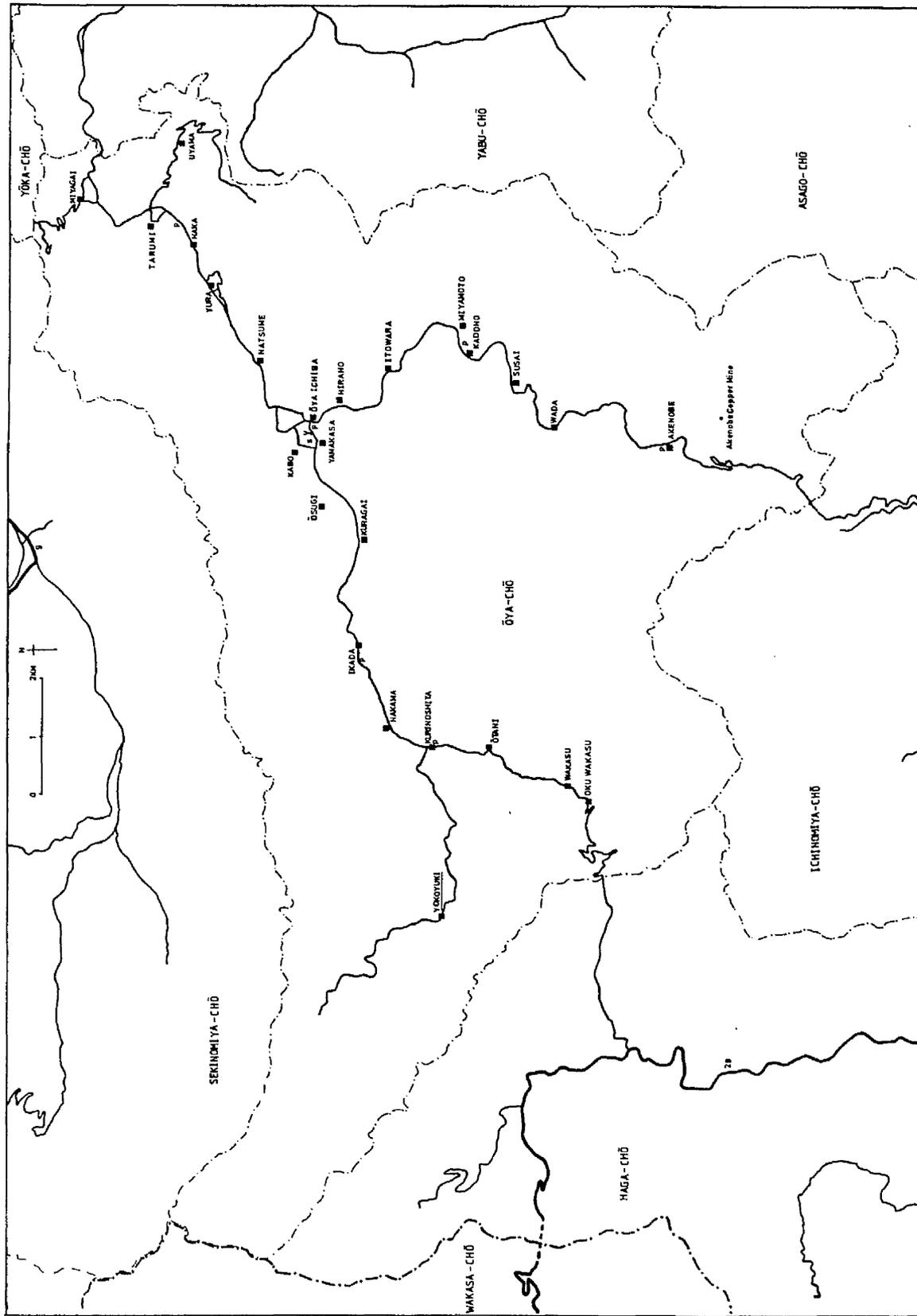
This and the following chapter will demonstrate that contrary to what such generalized studies imply, there is in fact a wide variation at even the local level in the effects of rural depopulation upon remote settlements.

While it would be foolhardy to claim that the region, Tajima, or the specific villages within it chosen for analysis in this thesis, are in every respect typical of conditions in depopulated areas throughout Japan, they nevertheless display very many of the characteristics discussed in Part Two, and may therefore be considered as valid examples.

Five of the selected villages<sup>1</sup> are within one rural district, Muraoka-chō, and the other two are in Ōya-chō and Kasumi-chō (see Map VI-6). In all cases, the villages were selected primarily for their high rates of population decrease between 1960 and 1970.

First, preliminary discussions were held with officials of each of the three Rural District Offices, and the final selection of the villages decided upon in consultation with them. The aim was to select villages which had not only suffered from severe depopulation but also - at least at first sight - appeared to differ each from the other in so far as was possible. Thus Ōsasa was selected for having apparently halted its depopulation problem; Kebioka for being a very large settlement; Kojō for being small and scattered; Marumi for having specialized in livestock rearing; Tsukuriyama for having no immediately apparent distinguishing features; Misaki for being a fishing village; and Yokoyuki for being one of the most depopulated farming villages of a rural district which was dependent upon metal ore mining. Had such

Map VII-1. Ōya-chō



villages, seemingly different from each other in several respects, always been so different? Had they responded to depopulation in a similar or a different fashion? If different, in what way or ways, and why?

In all cases, the officials of the Rural District Office in question contacted the village headman, requested his cooperation, and requested that the inhabitants be acquainted with the purpose of my visit and that they cooperate with the survey. Initial interviews were conducted in each case with the village headman himself to gain information concerning the traditional lifestyle of the inhabitants and how it may have changed since the war. Then a household questionnaire survey was conducted in each of the villages (see Table A1). The survey covered aspects of household structure, level of education, land ownership, occupations, agricultural production, income, and family members who had left the village.

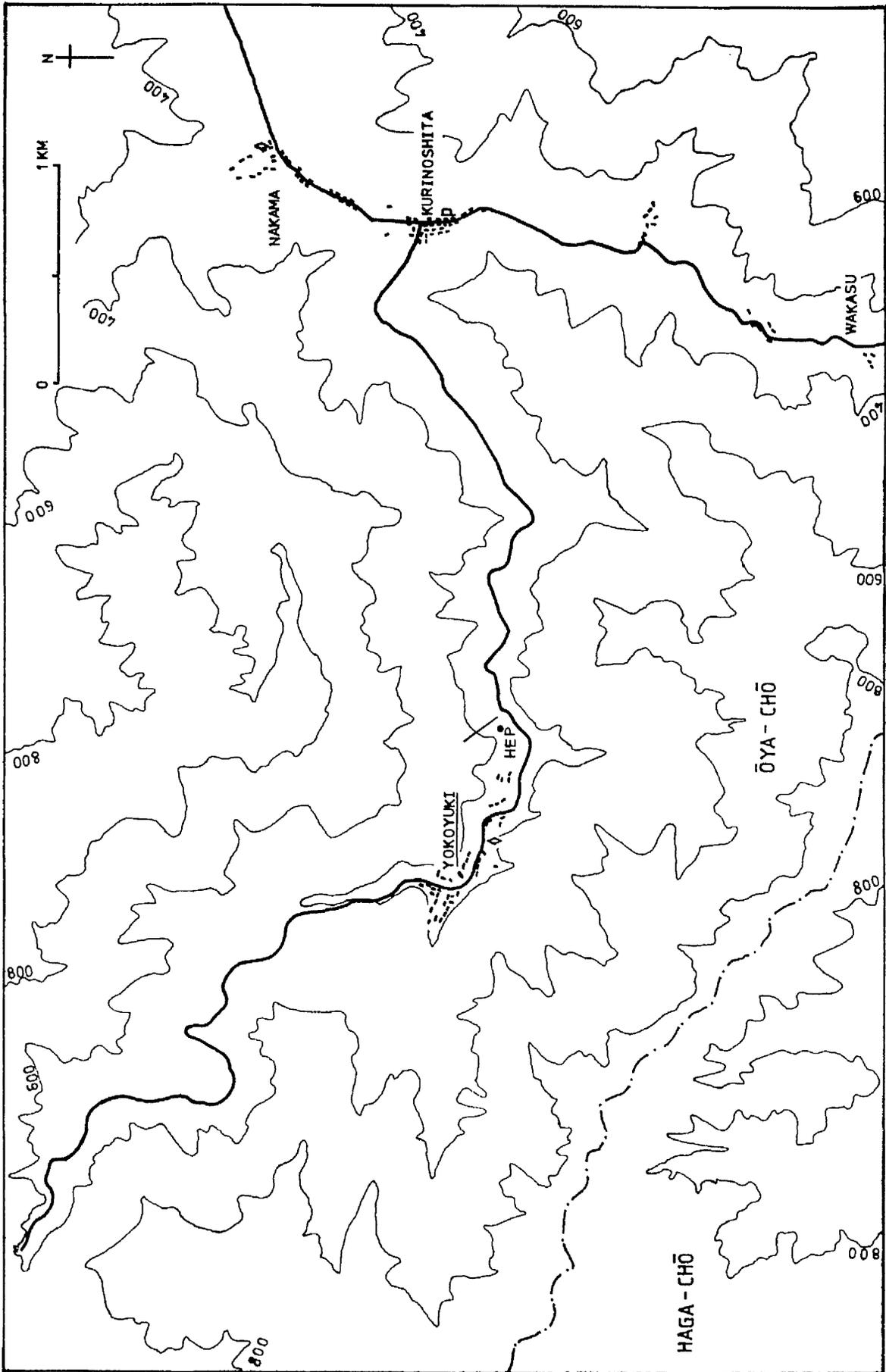
In this chapter the findings of each of the village surveys will be discussed in turn; the villages are described in no particular order. The tables referred to in the text for this and the following chapter are to be found in the Appendix at the end of the thesis.

(ii) Yokoyuki

Unlike Muraoka-chō and Kasumi-chō, Ōya-chō is not served by a major through-route, for the rural district is, so to speak, contained within the catchment area of the Ōya River and its tributary, the Akenobe (see Map VII-1). Thus it is bounded on all sides but one by high mountain ridges, and there is only one relatively easy access route. This is a prefectural road which departs south-westwards from National Route 9 in Yabu-chō (see Map VI-6), and follows the course of the Ōya River upstream. The road winds along through small villages for some sixteen kilometres before reaching Ōya Ichiba, the functional centre of Ōya-chō. It then follows the Ōya River valley upstream for seven kilometres to Kurinoshita, where it turns sharply southwards up a tributary, the Wakasu, and crosses the mountain ridge into neighbouring Haga-chō, eventually to join National Route 29 some eighteen kilometres from Ōya Ichiba. The whole rural district has poor accessibility, and Yokoyuki is one of the most remote settlements within it.

Yokoyuki is the furthest village up the Ōya River valley, sited at 340 metres above sea level, and is the only settlement beyond

Map VII-2. Yokoyuki.



Kurinoshita. It is four kilometres from Kurinoshita, along a *chō* road which was not cut through until 1963 and was first metalled around 1971 (see Maps VII-1 and 2).

There are terraced paddy fields along the roadside, and the steep mountainside is a rich dark green with cryptomeria plantations. At a point one kilometre below the village, the steepness of the slope is utilized for hydro-electric power generation, and a small generating station stands on the north side of the road. It was built in the mid-1920s.

The first houses of Yokoyuki are seen to the north of the road, across the stream, beyond a few terraced paddy fields. They are reached by crossing a narrow, planked, unparapeted footbridge and following a dirt path. Further on along the road, there are more houses on both sides, some next to the road and others clustered above them, and on the north side is an old unmodernized village hall and the deserted schoolhouse. The latter is a large weatherboard building, with peeling paint and many window panes broken or missing, although the ground floor front windows are partially protected by a long wooden lattice (see Plate 1). It ceased to be used as a school around 1975, by which time there were only two primary school children in the village. These buildings are reached from a low-parapeted road-bridge over the river. On the south side by this bridge there is a deserted village shop, built of wattle-and-daub, with old curtains still hanging at the windows.

The road climbs on up through the village and there is a cluster of dwellings to the west, up a narrow footpath beside a small tributary stream. One of these is a new house, hardly lived in, but already abandoned, its ground floor frontage being boarded up. Neighbours said the family had moved out for the sake of their children's education.<sup>2</sup> Another of the houses in this group, an old one, has been abandoned and turned into a cattle-shed by a near neighbour (see Plate 2). The mountains close in steeply all around, making it dark and shady, and the black Tajima cattle peer out from the gloom of their improvised shelter.

Yokoyuki is a linear settlement, but only approximately one half of the households have direct access from the road by motor vehicle. Most of the dwellings are in the old style; and in 1979 only one or two had been substantially renovated inside or out.



Plate 1. Yokoyuki: deserted schoolhouse (1979)

Plate 2.  
Yokoyuki:  
abandoned house,  
turned into a  
cowshed by a  
neighbour (1979)



In many places there are paddy fields among the houses or by the road. Even those only slightly removed from habitation are bordered on their mountainward side by rough corrugated iron fences, partially rusting, and said to be necessary for preventing wild boars from penetrating the fields and devastating the crops. Elsewhere within the village there are neatly kept vegetable plots and a few fields of basket willow some one metre tall; and in one patch of flat stony ground, no doubt once the site of a house, there are several low, box-like wooden beehives. These are placed there every spring by an itinerant apiarist, who then returns in autumn to collect the honey. The villagers complained that the honey attracted bears from the mountain, which they regarded as a serious problem.

The *chō* road continues unmetalled up the valley for several kilometres past the village, and terminates in the forest at a collection point for logs.

If local oral tradition is to be believed, Yokoyuki's very remoteness and inaccessibility were the prime motive for the founding of the settlement, for it is said that this is a "Heike refugee village".<sup>3</sup> Given the problems of accessibility even with modern forms of transport, and given the lack of arable land on which to subsist, the legend certainly has plausibility.

In 1980 there were 44 households in Yokoyuki and a total population of 122. According to the village headman, before the war there were about 80 households in Yokoyuki, and he could remember at least seven households leaving for Manchuria during the 1930s. One other whole family moved to Ashiya, a city in the Hanshin conurbation (see Map VI-1). By 1955, the earliest census year for which accurate statistics exist, the number of households had declined to 63, but showed no further decline until 1965 (see Table A2). The table shows that the largest decrease took place in the late 1960s and the number of households has continued to decline by about 8 per cent during each subsequent intercensal period.

Population decrease, however, has tended to fluctuate rather, with a smaller decrease in the early 1960s than thereafter. Overall, though, while the number of households declined by nearly one-third between 1955 and 1980, the population decreased by nearly two-thirds.<sup>4</sup>

From Table A4, it is clear that the great majority of migrants from sample households of Yokoyuki were school-leavers, and Table A5

Figure VII-1. Population pyramids: sample population of sample villages.

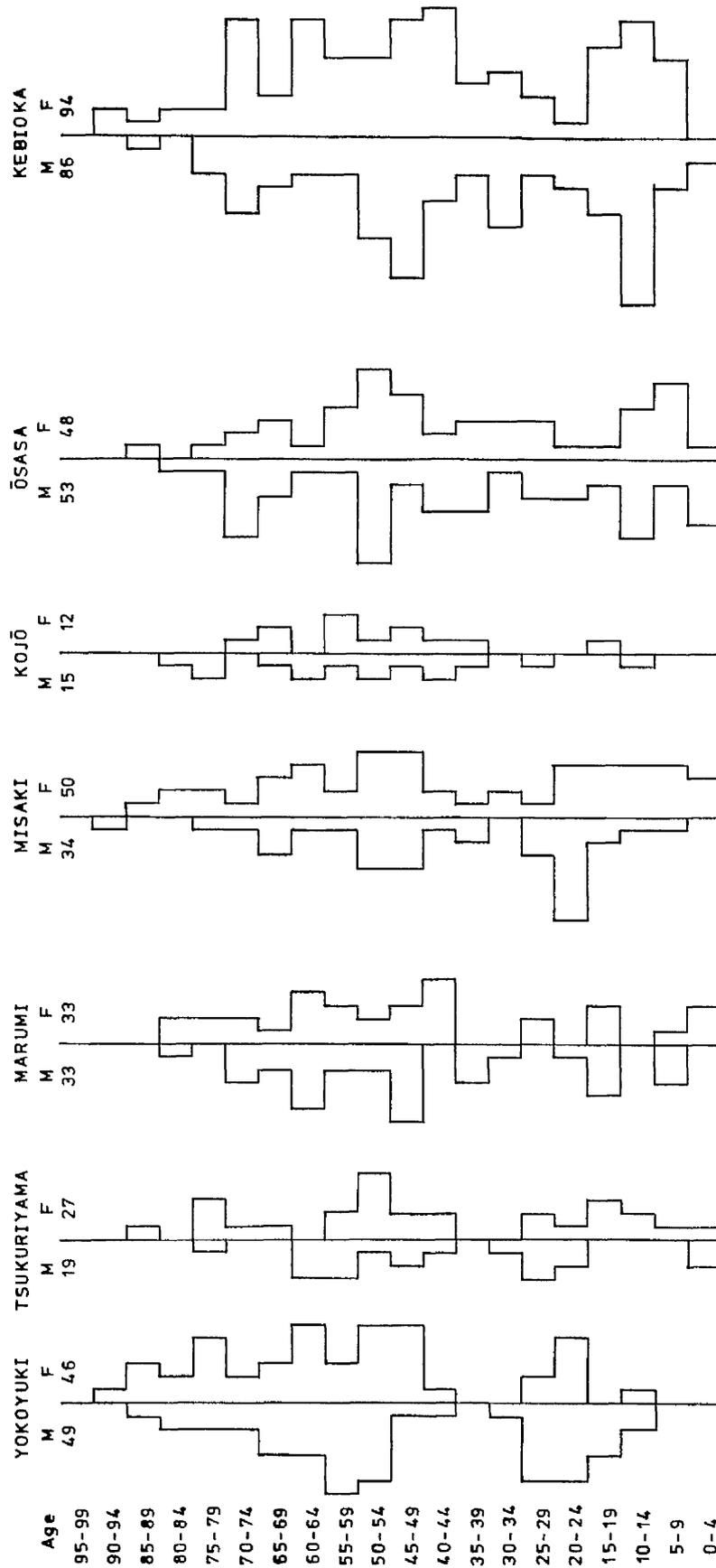
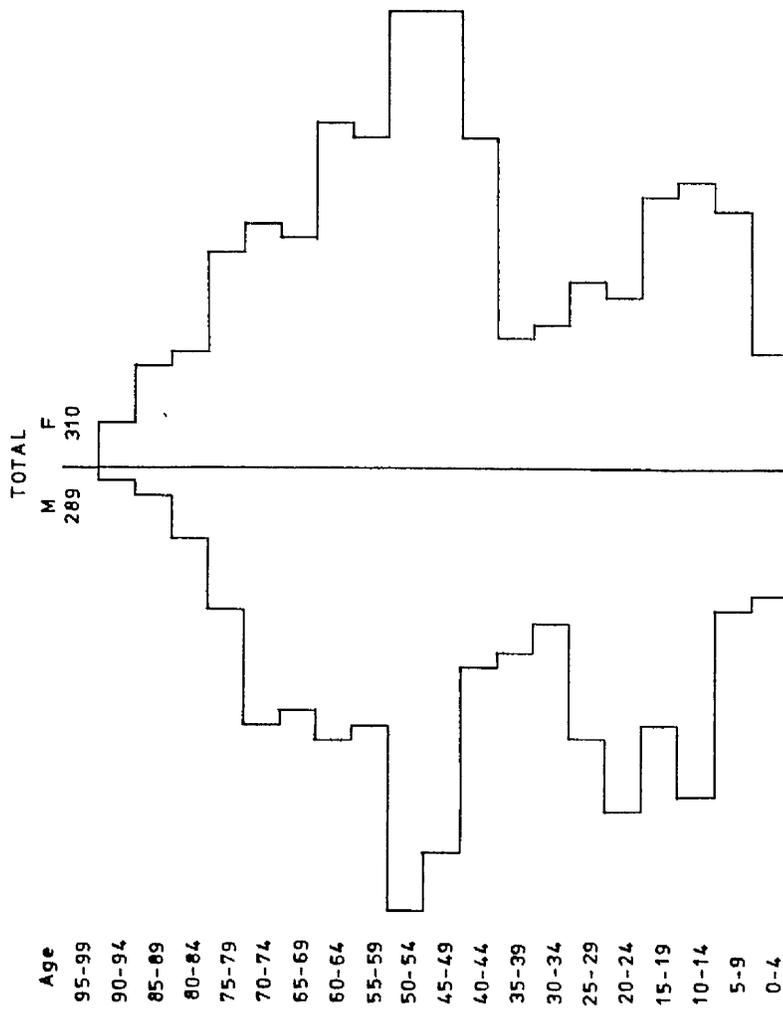


Figure VII-1. (Contd.)



shows that they left primarily to take up employment elsewhere. In fact, a very high proportion of Yokoyuki households, nearly 90 per cent, had sent out migrants, and they had sent, on average, three migrants (see Table A3), in particular eldest daughters (see Table A7). This suggests that "pull" factors were operating from outside the village, such as more varied and lucrative occupational opportunities.

A total of ten return migrants were recorded in Yokoyuki (see Tables A9-A15), of whom four had left the village again. Of those four, two had gone to the Keihanshin region, while two had remained locally, within Ōya-chō: one, a male, worked in an ironmongery in Ōya Ichiba and lived there, and the other, a female, had married into a household in Kuragai. Of the six return migrants who remained in Yokoyuki, only one had found full-time employment within commuting distance; one did casual day labour on road construction sites and one combined this with some farming and forestry; the other three were all unemployed.

The demographic effect of the continued outmigration of young people upon Yokoyuki had therefore been extreme ageing (see Tables A16 and A18 and Figure VII-1), even to the point where there were only two primary school children but thirty-two members of the *Rōjin-kai* (Senior Citizens' Association) (see Plate 3). This imbalanced age structure has also affected fertility, since the ten members of the *Fujin-kai* (Housewives' Association) were all middle-aged. There were only two young wives among the sample households, both in their early twenties, of whom other villagers expressed hopes for the appearance of small children again in Yokoyuki. A total of fifteen - i.e., nearly half - of the thirty-three sample households were either one- or two-person households; the youngest of the single-person households was a 47-year-old woman, and all but one of the two-person households comprised married couples aged over 50 years.

However, what the tables do not reveal is that the population is weakened, so to speak, not only by age but also in other respects. One 73-year-old male had been injured at work while road building several years previously, and was still partially disabled from the effects of a fractured skull; one 62-year-old male had been deaf and dumb since childhood; one 20-year-old female was apparently mentally ill, and possibly her 60-year-old father too; and according to an informer from a nearby village, two inhabitants of Yokoyuki were thought to have died of leukemia, at least one of tuberculosis, and at least two of leprosy. One of the lepers had



Plate 3. Yokoyuki: elderly inhabitant in now disused old-fashioned scullery (1979)

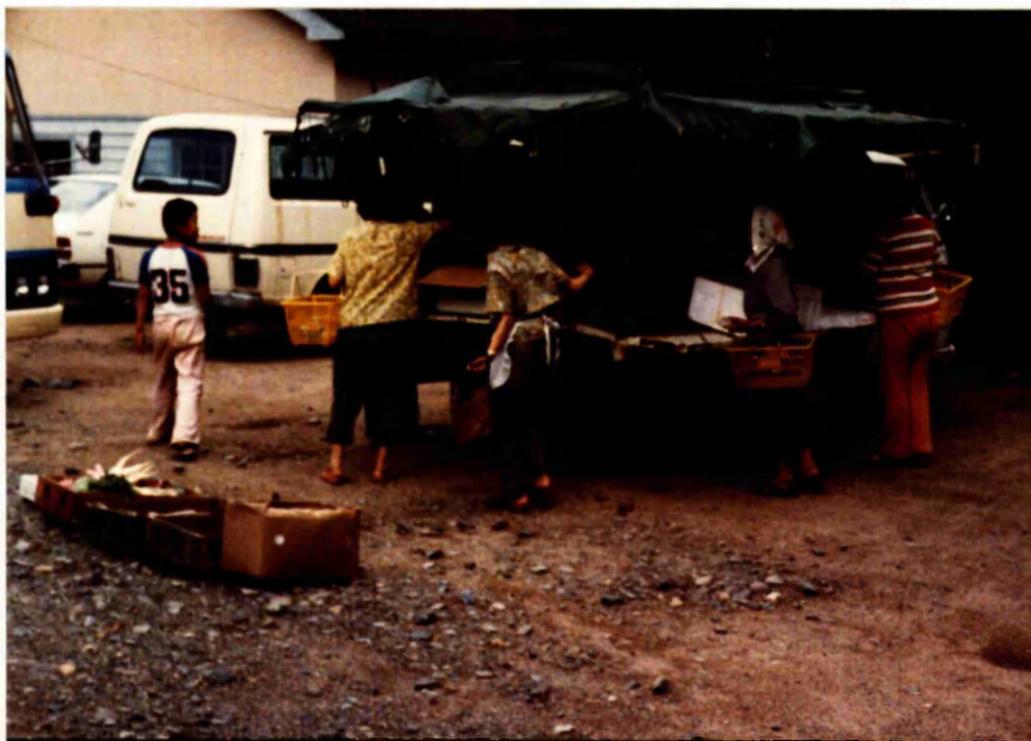


Plate 4. Yokoyuki: the greengroceries van - one of two vans which form the mobile shop (1979)

been the wife of an elderly male still resident in the village, and she had died in the mid-1970s. The other, also a female, had been thought long dead by other inhabitants, so carefully had her existence been concealed by her family, until her funeral in the mid-1970s. It was said that the village inhabitants believed that leprosy is a hereditary disease, as it had appeared in earlier generations. So strong are the social stigmas attached to mental illness and physical illnesses such as leprosy, leukemia and deaf-muteness in Japan that their manifestations in Yokoyuki are likely to have contributed to its depopulation problem: other members of such households were likely to wish to leave the village to "cover their tracks" to some extent and increase their marriage prospects, and it would have been especially difficult to induce brides to enter the village. At any rate, the residual population of Yokoyuki is to a very considerable extent either old, or suffering from a disability, or both.

In addition to the likely sociological "push" factors described above, there is a combination of economic factors also involved in the decline of Yokoyuki. Since Yokoyuki is almost completely forested with very little arable land, there is little doubt that the decline in the demand for charcoal played an important role in the initial stages of depopulation.<sup>5</sup> (In 1978, Yokoyuki shipped out only fifty 15-kilogram bags of charcoal, valued at ¥100,000.) In 1980, the 44 households held a total of 107 hectares of forest land, all of which were holdings of less than 20 ha. The average forest holding was only 2.43 ha. (see Table A28).

According to the agricultural censuses, in 1960 there was a total of 19.7 ha. of arable land in Yokoyuki, an average of 0.42 ha. per farm household at that time (see Table A23). By 1970, this acreage had declined to 14.1 ha. (average 0.36 ha. per farm household) and to 6.7 ha. (average 0.20 ha. per farm household) in 1975. This meant that the total area of arable land in 1975 was less than half of what it had been in 1960. By 1980, however, it had risen again slightly to 7.56 ha., or 0.21 ha. per farm household on average.

Of the above totals of arable land, the amount given over to rice cultivation was 9.0 ha. in 1960 and 8.9 ha. (average 0.23 ha. per farm household) in 1970 (see Table A24). By 1975, this had been halved to only 4.74 ha., or only 0.18 ha. per household which owned paddy land; and in 1980, 28 households planted a total of 4.0 ha. of rice, or 0.14 ha. per household on average. The yield was 3.15 tonnes per hectare, the third lowest of the villages studied (see Table A25).

Paddy land which had ceased to be cultivated had been planted mainly to cryptomeria (see Table A26). In addition to the government's rice production reduction policy since 1968, Yokoyuki had been suffering from increasing crop damage by wild animals, chiefly wild boars,<sup>6</sup> but also bears. One explanation of this was that in former times there had been a rota system for burning bonfires at night around distant paddy fields to ward off the animals, but there were now no young people to undertake such duties (see Table A27).

Virtually all households used to grow basket willow to supply the Toyooka wickerwork industry,<sup>7</sup> but like sericulture this has suffered competition from man-made fibres, in addition to affliction of the crop by disease, and these two factors together brought about a steady decline in the price. The acreage declined from 2.8 ha. in 1970 to 0.04 ha. in 1975 and 0.25 ha. in 1980, by which time only a few households were continuing to grow it.

Likewise, virtually all households used to engage in sericulture, but by 1960 only one household did, two in 1970 and none by 1975. The acreage under mulberry declined from 0.2 ha. in 1960 and the same in 1970 to 0.18 ha. in 1975, and there was none by 1980. Bamboo was introduced into the former mulberry fields for edible bamboo shoots, but they rapidly spread, went wild, and are now no longer used for anything.<sup>8</sup>

Many of the households in Yokoyuki kept one or two draught cows, but with the introduction of small machinery, this practice virtually died out during the late 1950s. Two households kept a total of 34 cows in 1970, and two kept 19 in 1975. In 1979, one of the two households consisted of a couple in their early fifties, who had 9 cows for breeding purposes, and it was they who were using the abandoned house mentioned earlier for their cattle. In 1980 the two households had a total of only 11 animals.

In 1960, 31 households kept a total of 200 chickens (egg-layers). By 1970, there was only one household continuing to keep poultry; it had specialized in egg production and had 1,300 birds at that time. The numbers declined to 250 birds in 1975, and the household had ceased keeping poultry altogether by 1979. One reason given for the decline in poultry keeping in Yokoyuki was that the eggs attracted snakes from the surrounding mountains, especially in May.

Thus Yokoyuki suffered from economic "push" factors in traditional primary production, such as the decline in charcoal burning, sericulture,

basket willow and egg production and, later, rice cultivation.

*Dekasegi* migration in winter does not seem to have been a common practice in Yokoyuki;<sup>9</sup> instead, the inhabitants spent their winters indoors from November to April making high class chopsticks, which were a local "famous product" (*meibutsu*). The chopsticks were made from local *mizuki* wood (table dogwood: *Cornus controversa* Hemsl.). This practice has now ceased. In 1979, there were no *dekasegi* migrants in Yokoyuki (see Table A36). One 50-year-old household head, however, worked for six months of the year during the winter in the neighbouring village of Nakama (see Map VII-2), making Indian ink blocks for calligraphy. He had worked there since the factory was set up in 1974, prior to which he had gone to the main factory in Nara Prefecture as a *dekasegi* migrant since around 1960.

How, then, do the people who have chosen to remain in Yokoyuki make a living? A total of only seven, five of whom were females, were engaged in farming only, and all were over 50 years (see Table A30). Thirteen combined farming with forestry, and again, more of these were female than male, and all were aged over 45 years (see Table A31). Traditional primary production such as charcoal burning, sericulture and the cultivation of basket willow had been chiefly replaced by the cultivation of *shitake* mushrooms. Five households reported deriving a cash income from dried *shitake*, which accounted for as much as 42.8 per cent of the gross incomes from farming in the sample households (see Table A32).

However, as is shown in Table A50, some type of full-time employment outside the primary sector was an important employer of the population of 15- to 64-year-olds, the majority of whom were blue-collar workers in local manufacturing firms within commuting distance of the village (see Table A35). In particular, four of them worked in a metal parts factory where wages were extremely low. Such workers were predominantly either young males in their twenties or middle-aged males (see Table A34). A total of twenty engaged in casual day labour, twelve of whom were employed as day labourers whilst also practising farming or farming with forestry. They were mostly males (see Table A42), and were primarily heads of households (see Table A43). Seventeen of the twenty were employed in construction: that is to say, mainly road and riparian construction and repairs. As is shown in Table A52, such day labour accounted for approximately 33.4 per cent of gross incomes in Yokoyuki, and was the chief source of income among the sample households.

One other noteworthy source of supplementary income in Yokoyuki was home piecework, stitching or glueing parts for bags for the Toyooka bag industry.<sup>10</sup> The necessary materials were supplied not directly from Toyooka but from jobbers - mainly one jobbing firm called Araki Sangyō based in Ōya Ichiba. The sewing machines required for this work were either rented out or sold by the firm to the workers. There were seven such workers, in five households; three of them were in one household and were the head, who was reported to be ill, his wife, and their mentally retarded daughter; the others were all wives of household heads (see Table A45). The remuneration for the work was extremely low, as is illustrated by the fact that whereas it was a source of income for 15 per cent of sample households, it provided only 1.8 per cent of the total income (see Table A52). It thus appears to be regarded as either a convenient source of small supplementary income for wives with home commitments or as a "last resort" occupation for those with low levels of aptitude and mobility.

The economic base of Yokoyuki has thus changed since the Second World War from chiefly charcoal burning, sericulture, basket willow cultivation and some cattle-rearing to mainly *shitake* cultivation, blue-collar work in manufacturing outside the village, day labour - especially road construction - and home piecework. The wages for all of the latter, particularly metal parts manufacture and home piecework, were extremely low. While males in the former reported earning ¥3,200 and ¥3,300 per day, the females reported earning ¥1,600 per day and less; and those engaged in home piecework reported earnings of only ¥100,000 to ¥240,000 per annum from that source (the equivalent of many white-collar workers' monthly salary<sup>11</sup>). Table A52 shows that the average total income per sample household was ¥1,823,000 per annum in 1978/9.

Although virtually all households possessed consumer goods such as colour televisions, electric rice cookers, refrigerators and gas-ring hobs, the village was clearly not prosperous by contemporary Japanese standards. The great majority of the houses were furnished in the old-fashioned style, and there was little evidence of the Western-style acquisitions such as carpets, sofas or modern kitchen units so commonplace in cities and in the more prosperous rural settlements of Japan.

It is difficult to assess precisely the impact of rural depopulation on social life in the village, but there is little doubt that great changes have occurred in that respect, too. The increase in

commuting to jobs outside the village, particularly for the young and middle-aged men, has greatly increased the direct contact of Yokoyuki with the outside world. Nevertheless, only one household reported owning a car, two had a car and a motorcycle, and three had a car and light truck. This is a very low rate of vehicle ownership for contemporary rural Japan, even for Ōya-chō,<sup>12</sup> and may be attributed to the combination of there being a high proportion of aged households and a low average income. Some of those who worked in factories, notably the metal parts factory, were picked up and taken home by a company minibus. Old people and housewives who were not employed elsewhere were relatively immobile, as the nearest bus stop was in Kurinoshita. Buses from there made nine to ten return journeys per day between the hours of 06.46 and 18.34 (i.e., a one to two hourly service). One healthy 51-year-old housewife, for example, said that she left Yokoyuki only about once a month, for shopping. The closure of the village school meant that the nearest one was Nishiya Primary in Ikada.

Yokoyuki used to have two village shops, but one was closed down around 1961. Since the closure of the remaining shop in 1978, the Agricultural Cooperative had taken on the responsibility of supplying the village, and a mobile shop consisting of two vans served Yokoyuki twice a week, on Mondays and Thursdays. The shop served a total of six villages on those days, and Yokoyuki was the remotest. Thus, for fairness' sake, it was given priority on Thursdays, and enjoyed the first choice of products available on the two full-loaded vans; but it was served last on Mondays, and villagers had to make do with what was left. The vans supplied most daily food necessities, one carrying fresh fruit and vegetables (see Plate 4), the other groceries such as eggs, sugar, pickles, tea and sweets. The shop's arrival was marked by a siren, which could be heard in the paddy fields. The villagers complained, however, that the mobile shop was not always reliable in winter. Household hardware goods such as soap powder, brooms and fly-swatters were obtainable from another mobile shop, which called once a month.

To sum up, Yokoyuki may be described as a village community which has reached the final stages of demographic decline. It has not enjoyed the same degree of material prosperity of modern Japan as much as even most other rural settlements, and it is inhabited largely by the aged and the infirm. Outmigration of young people has been the chief cause of the ageing of the population structure, for while outmigration of whole

families took place both before the war and shortly after it, only one such case - that of the abandoned new house - has occurred in recent years.

Moreover, of those young people who had returned to Yokoyuki in recent years, at least three admitted to job loss as being the reason for their return. The few young people in the village were clearly demonstrating little ability or initiative, and there appeared to be no question of cooperative enterprise among them.

Although respondents were polite and helpful, they were at the same time reserved and perhaps more openly embarrassed than in the other villages studied. This is not surprising, as life has not been easy for those who have remained, subsisting on home-grown vegetables, and seeking whatever cash incomes were available, from *shiitake* cultivation, from blue-collar work in manufacturing, from day labouring and from home piece-work. The community not only looks run down, with its abandoned shop, school and houses, but feels run down, too, and the villagers themselves are pessimistic about the future of their village.

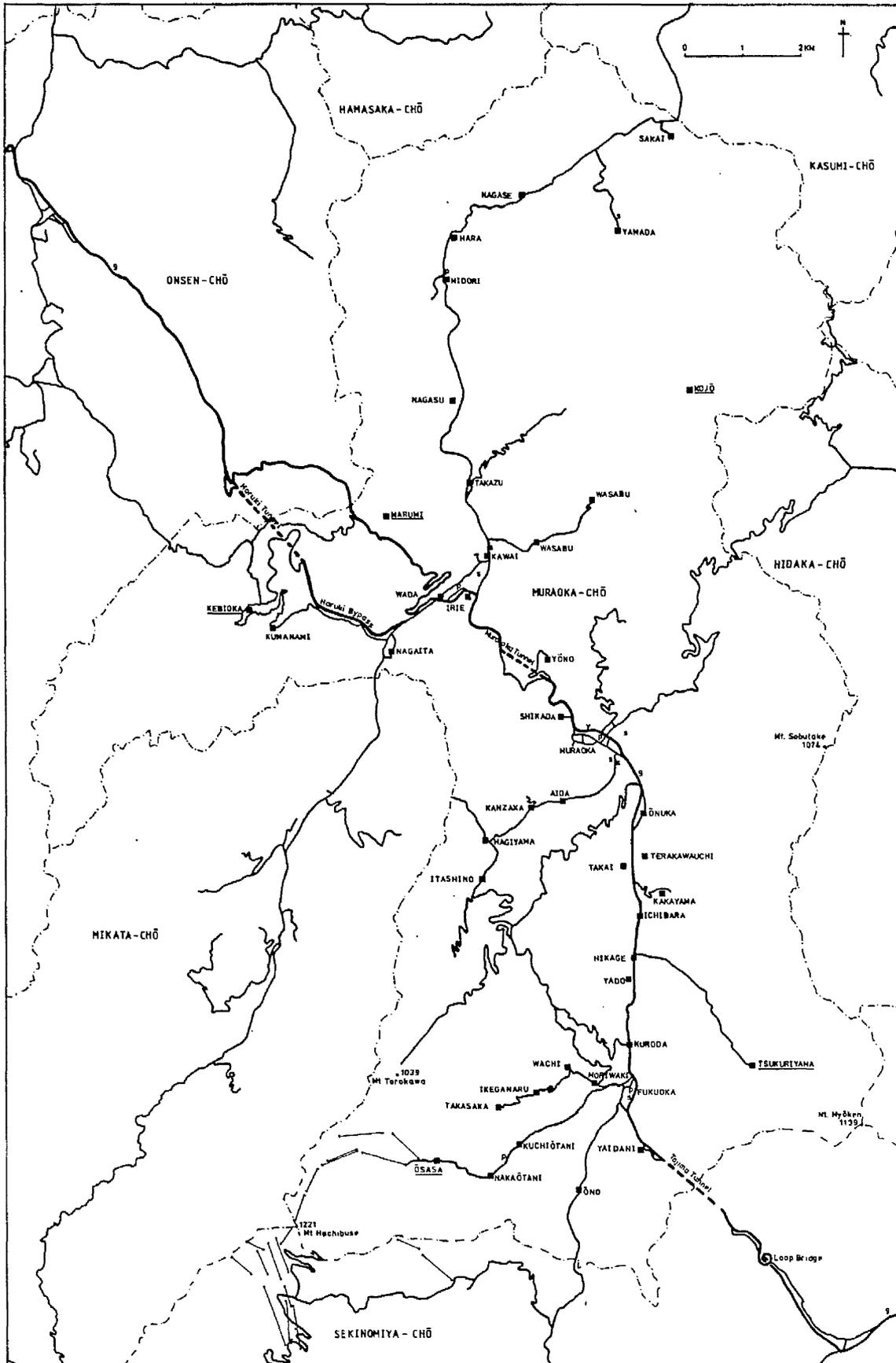
(iii) Tsukuriyama

Tsukuriyama is reached by travelling southwards along National Route 9 from Muraoka Rural District Office for a little over four kilometres to Hikage (see Map VII-3). From this point, a prefectural road follows the narrow gorge of the Tsukuriyama River south-eastwards. At approximately 1.25 kilometres from Hikage a tributary joins the river, at a place renowned as a local beauty spot due to the presence there of the Saruodaki Waterfall, 60 metres high, and visible in the tributary on the north-east side of the road (see Map VII-4).

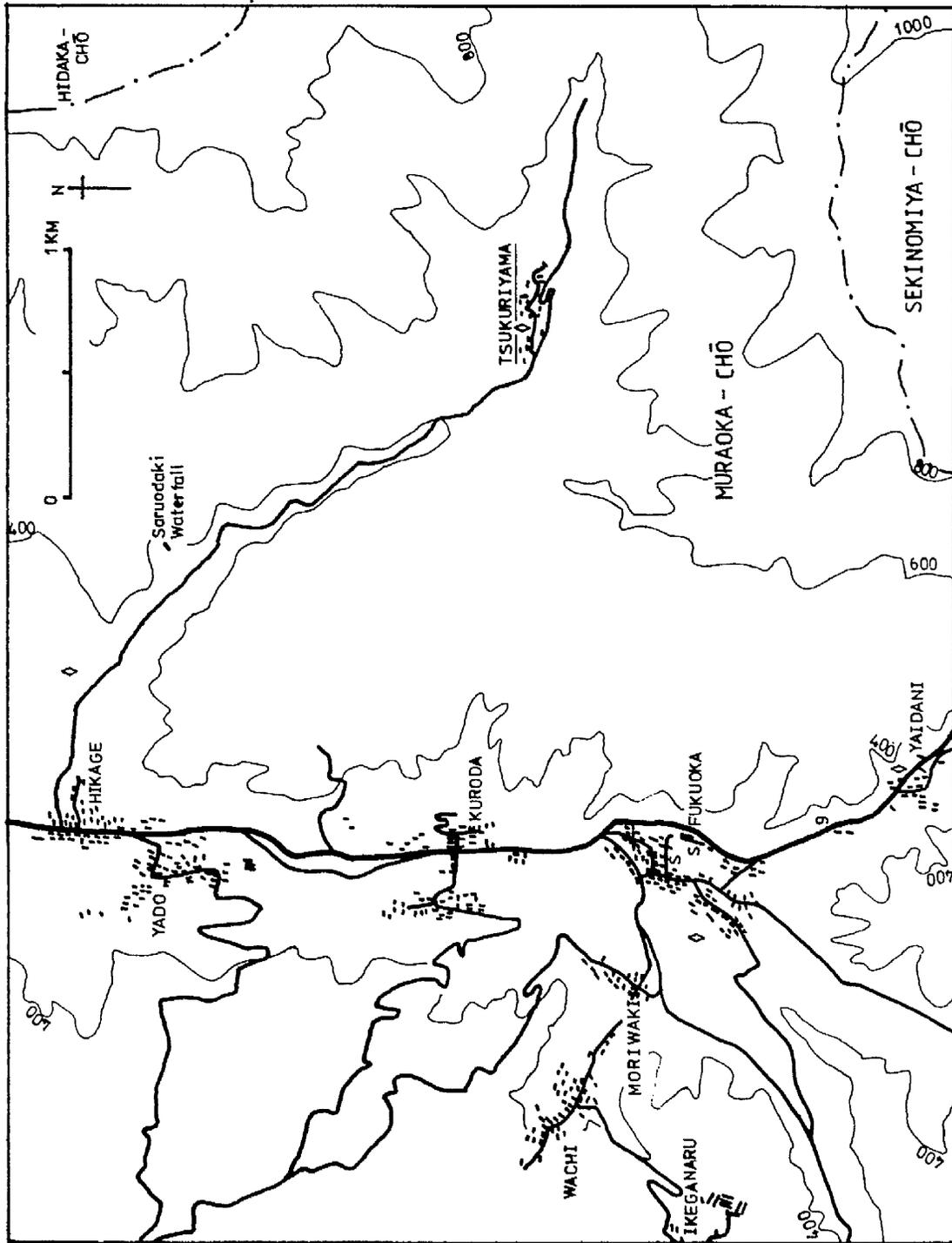
The road runs through steep, densely forested mountainsides and rises gently. In places the characteristic criss-cross of logs for the cultivation of *shiitake* mushrooms can be seen through the trees. About a kilometre further on from the waterfall, the road suddenly opens out into flat paddy land, with terraced mulberry fields on the lower slopes above. At approximately three kilometres from Hikage there is a small bridge which crosses the river and marks the beginning of the settlement of Tsukuriyama.

The prefectural road continues past the village, but is not metalled beyond Tsukuriyama and terminates in the mountains 1.5 kilometres further on. The road in the village itself is metalled as far as the

Map VII-3. Muraoka-chō



Map VII-4. Tsukuriyama.



point where it terminates at the former primary school. As Map VII-4 shows, the village has a linear lay-out, and the majority of houses are directly accessible by motor vehicle.

The village headman alleged that Tsukuriyama was the last village in Muraoka-chō to have its access road metalled, and complained that the prefectural authorities took longer to carry out resurfacing work than the rural district. The road was first metalled as far as the waterfall in the early 1970s, then a further kilometre was completed around 1977, one more in 1979, and it was to be finished in 1980. In winter, the prefecture clears it of snow every day that it snows.

Tsukuriyama is sited at approximately 500 metres above sea level, at the confluence of the Tsukuriyama River and its tributary, the Mushiya. Paddy fields surround the houses below the confluence, but further up the valley rice gives way to intermittent vegetable cultivation. An old shrine stands to the north of the road, beside the tributary stream, about a quarter of the way up through the village, but judging by the weeds in its precinct it is not often visited nor well maintained. Nevertheless, it continues to be the centre of a small village festival on 28th September annually.

In 1980 the houses were mainly in traditional wattle-and-daub with characteristic tan-coloured walls and heavy wooden porches and front doors, but several had been modernized to some extent. Three houses were uninhabited: one had been empty since its occupants, two teachers, had moved to Kyōto two or three years previously, but the former occupants returned occasionally at weekends; one was that of a high school teacher who returned about once a month; and one was that in which an 80-year-old inhabitant, who had been living alone, died in 1979.

The former schoolhouse was an old weatherboard building, built some forty years previously, which went into disuse as a branch school (*bunkō*) in the mid-1970s. It had, however, been turned into a village hall (*kōkaidō*), and the front entrance had been renovated, somewhat incongruously with modern aluminium and glass (see Plate 5). In addition, in the valley some 70 metres below the houses of the village, to the south of the road, there was a cluster of five or six buildings improvised from mainly wood and corrugated iron. One was a communal shed for rice polishing and grading and the others were all worm sheds for sericulture. These latter were all approximately 2.5 metres wide by 3 or 4 metres long. Inside, a narrow corridor was marked off with boards or corrugated iron to about knee height, so that the rest could be filled with freshly-cut mulberry branches for the voracious silkworms.



Plate 5. Tsukuriyama: deserted schoolhouse, partially renovated and used as a meeting hall (1980)

Plate 6. Tsukuriyama: elderly inhabitant, keeping a cow in the traditional way. Note the tethering post on the roadside behind her (1980)



The secular decline in the number of households and population of Tsukuriyama is shown in Table A2. The population of Tsukuriyama reached a peak just after the war owing to the arrival of evacuees, especially children, from the cities. The population began to decrease from around 1955, when it was 154 and the number of households was 27. By 1980 the number of households had declined by one-third to 18, and the population by more than 60 per cent, to 59. Table A3 shows that 12 of the 14 sample households had sent out an average of two migrants each, and Tables A4 and A5 show respectively that the majority were 18- and 19-year-old high school leavers and that their chief reason for leaving the village was to seek employment.

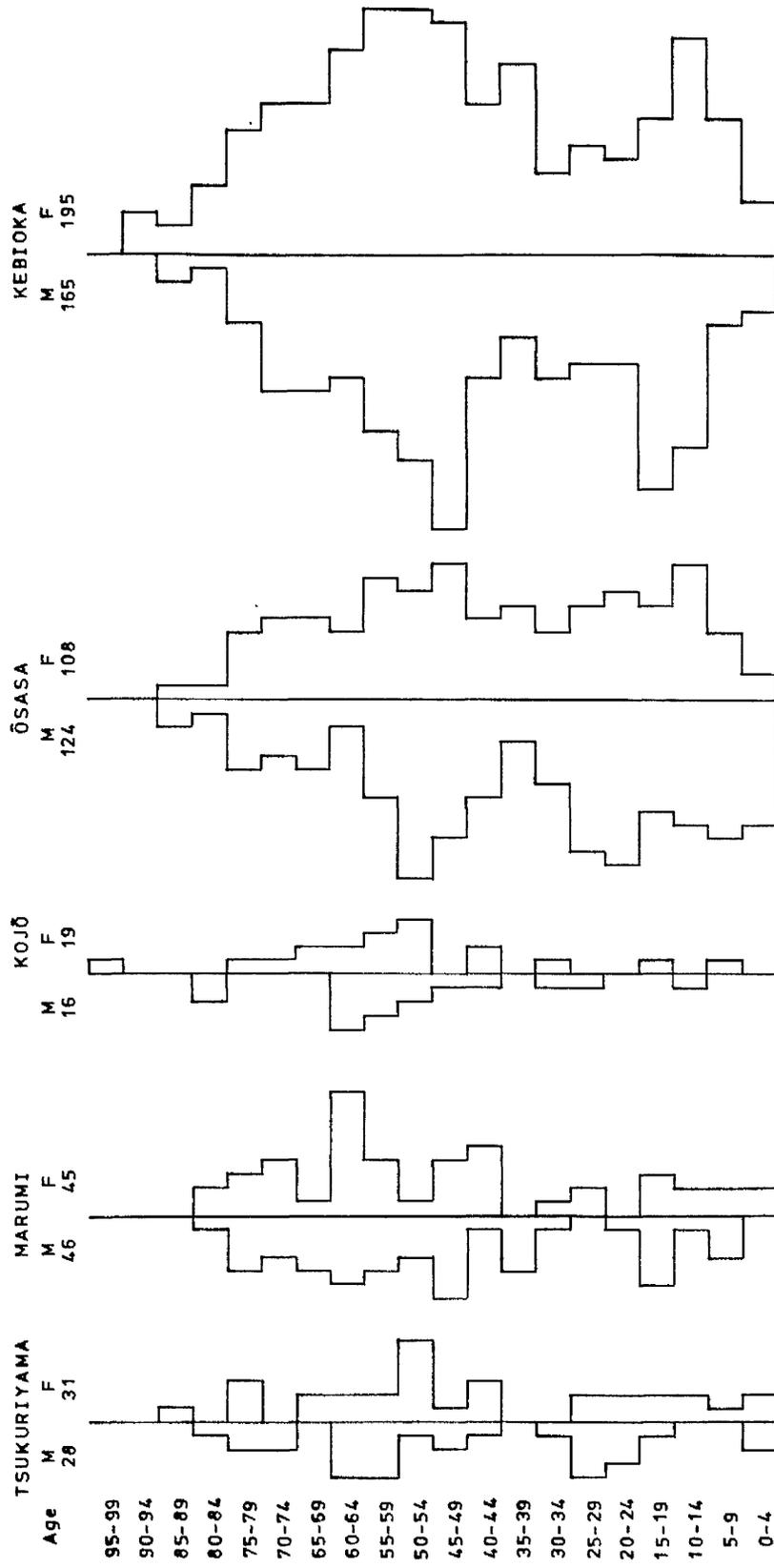
As many as seven return migrants were recorded (see Tables A9-A15), all but one of whom had found local employment within commuting range. The presence of these returnees, all but one of whom were male, revealed itself in the age-sex structure of Tsukuriyama (see Table A16 and A17 and Figures VII-1 and 2): while there was a preponderance of males aged 55 to 65, the presence of young returnees had resulted in a relatively large number in the 20 to 30 age range for males, whereas the village had very few males aged less than 15 or between 30 and 45 years old. The age imbalance of females, while still marked, was notably less so than for males.

Only one person was living alone, a man aged 64, and there were four two-person households, all couples whose children had left. Three of these were in their fifties, and one in their late seventies. Otherwise, the remaining nine sample households had a more balanced structure (see Table A21), mainly thanks to the presence of returnees.

The return of young migrants provides cause for some optimism about the future of Tsukuriyama, and this is further reflected in Table A22, from which it is clear that 78.6 per cent of the sample households claimed to have a successor, and as many as 50 per cent believed that their successor would actually take up the headship of the household. This was one of the highest affirmative response rates among the villages studied.

According to the village headman, approximately half of all households in the immediate post-war period were charcoal burners, and half were primarily farmers. Generally speaking, the charcoal burners did not raise silkworms, but the farmers did as a source of cash income. Approximately half of all households kept a cow for draught purposes, but none

Figure VII-2. Population pyramids: Muraoka-chō, total population of sample villages.



kept one for beef or for breeding. As a result, when powered cultivators were introduced in large numbers, cattle were no longer needed.

Forestry also used to be important. There is approximately 400 hectares of forest land in Tsukuriyama, of which each household privately owns on average three to five hectares (see Table A28), which has mostly been reafforested. According to the 1975 agricultural census, the 18 households held a total of 87.6 ha., an average of 4.87 ha. per household. In addition, the 18 households have rights to the village's common forest, which amounts to some 200 ha. It is largely un-reafforested mixed timber, and was formerly used for charcoal burning, but is nowadays used only for *shiitake* mushroom cultivation. Since there is no profit from reafforestation for twenty to fifty years,<sup>13</sup> village inhabitants are disinclined to participate in such work. In addition there are about 150 ha. of *chō* (rural district) forest in Tsukuriyama, which it is the village's responsibility to maintain, and they entrust its management to a public corporation.<sup>14</sup> By this means, 50 per cent of any profits are received by the corporation and 50 per cent by Tsukuriyama. Employment in forestry day labour provides an occasional cash income for about three males in the village from June to August. Payment amounted to generally less than ¥7,500 per day in 1980, but reached ¥10,000 if machinery were used.<sup>15</sup>

According to the agricultural censuses, there was a total of 9.9 ha. of arable land in Tsukuriyama in 1960, an average of 0.47 ha. per farm household (see Table A23). This declined to 9.40 ha. (average 0.47 ha. per farm household) in 1970; to 8.52 ha. (average 0.43 ha. per farm household) in 1975; and to 8.50 ha. (average 0.57 ha. per farm household) in 1980.

Of this arable land, 7.7 ha. (average 0.37 ha. per farm household) were paddy land in 1960 (see Table A24). Again, this steadily declined to 7.60 ha. (average 0.38 ha. per farm household) in 1970; to 7.30 ha., of which 6.74 ha. were actually cultivated (average 0.42 ha. per household with paddy land) in 1975; and to 6.06 ha., of which 5.95 ha. were actually cultivated (average 0.39 ha. per household with paddy land) in 1980. In 1979 the village shipped approximately 9,000 kilograms of rice, and in 1980 the yield per hectare was 3.50 tonnes, the third highest for the villages studied (see Table A25).

During the 1970s, the actual acreage of paddy land in the village was considerably reduced, both because increasingly frail and aged inhabitants no longer had the stamina to cultivate it and because of the

government's rice production adjustment policy (see Tables A26 and A27). A little had been converted to dry fields and planted to adzuki beans under a village cooperative "five-year plan" or rented out to other inhabitants, but much more had been reafforested.

Furthermore, whereas in 1960 ten households kept a total of ten cows, in 1970 only three households kept four animals, in 1975 three households kept seven, and in 1980 only two households kept one each (see Plate 6).

In 1960, ten households engaged in sericulture, and twelve continued to do so in 1975. In 1980 there were three households engaged in sericulture, of which two in particular had specialized and produced respectively 680 and 750 kilograms of cocoons in 1979. Sericulture accounted for 27.6 per cent of farm income of the sample households. The acreage under mulberry, though, had fallen from 1.7 ha. in 1960 to 1.2 ha. in 1970 and only 0.8 ha. in 1975, but had risen again to 2.1 ha. in 1980.

With the general decline of traditional primary occupations such as charcoal burning, forestry and livestock rearing, those households who chose to remain in Tsukuriyama began to seek alternative sources of income, and from the mid-1960s the production of *shiitake* became increasingly important.<sup>16</sup> By 1980, *shiitake* production was providing 40.5 per cent of the farm income of the sample households. It was the largest source of farm income in Tsukuriyama, more than double that from rice (see Table A32). In 1979, the crop of *shiitake* produced nearly 2,000 kilograms of dried mushrooms.

Table A30 shows that only four inhabitants of the sample households engaged solely in farming, and all were women aged 45-75 years. Two more women, aged 50-60, were engaged in farming together with forestry (see Table A31). Those engaged in farming, whether farming alone or farming with some other activity, are shown in Table A29, and from this it is clear that all farmers but one were aged over 40 years old, and half of those were women.

Even so, farming was the most important source of income in the village, and accounted for 31.5 per cent of gross incomes (see Table A52). Apart from occupations in the primary sector, many inhabitants, particularly young adults, commuted from the village to permanent or casual employment (see Tables A34, A35, and A41-A44).

Income from full-time non-agricultural employment provided 29.7 per cent of the income of the sample households (see Table A52). Moreover, it is noteworthy that casual employment was almost entirely in the guest

houses or ski lifts of Mt. Hachibuse, and no inhabitant resorted to labouring on road construction sites (see Tables A41-A44).

However, approximately half of the total number of households in Tsukuriyama sent out *dekasegi* migrants in winter (see Table A36), and Table A39 shows that at least eight members of sample households went to *sake* breweries. The two "others" were women who worked and stayed at guest houses on Mt. Hachibuse, and would probably not consider themselves as *dekasegi* migrants. From Table A37 it is clear that all *dekasegi* migrants in Tsukuriyama were aged between 40 and 65 years old, reflecting the repudiation of *dekasegi* on the part of younger people. It was nevertheless an important source of income, and accounted for 23.5 per cent of gross total income of the sample households (see Table A52).

Household incomes in Tsuriyama, then, although not high by current Japanese standards (see Table A53), were nevertheless not so low as in some of the other sample villages, and amounted to an average ¥2,806,000 in 1979/80.

According to the village headman, the greatest problems for young people who wish to reside in Tsukuriyama are finding jobs and, for males, brides. Even though it is possible to make a living, Tsukuriyama is not attractive for young brides. Nevertheless, three households contained young married couples. In one case the wife had been a local girl, from Fukuoka (Muraoka-chō), but two of the husbands were return migrants who had brought wives with them, one from Himeji and one from as far as Kagoshima (Kyūshū).

Public transport does not reach as far as Tsukuriyama, but commuting is no doubt facilitated to a certain extent by the bus service from Hikage. There are approximately twenty return journeys per day from Hikage, and although they run only approximately every fifty minutes during the day, there are seven before 08.15. These buses run mainly between Yōka railway station and either Kasumi, Akioka (Mikata-chō) or Yumura (Onsen-chō); a few terminate at Muraoka. In winter the road to the village is cleared after every snowfall, but the villagers continue to worry about commuting in icy conditions in winter.

The most common grievance was the poor television reception in Tsukuriyama. Only NHK and sometimes the commercial Nihonkai Terebi channels were viewable (in contrast to the eight or nine channels available elsewhere). Negotiations were in progress for improving reception, with 50 per cent of the cost to be borne by the householder and 50 per cent by the prefecture, and the improvement work was to be carried out in late 1980.

The village had no shop, but a van delivered groceries such as bean curd and bread two or three times a week from the shop in neighbouring Hikage. Whenever possible, shopping for everyday articles was done in Fukuoka or Muraoka, and Yōka or Tottori were visited occasionally for larger items; Takeda, the furniture-manufacturing centre in Wadayama-cho,<sup>17</sup> was visited for the purchase of household furniture.

The former school in Tsukuriyama had been a winter branch of Hikage Primary School until the latter was amalgamated with, and moved to, that of Fukuoka, when it was renamed Uzuka Primary School in 1972; but there were no children of primary school age in Tsukuriyama in 1980, and the older children were boarded during the winter months at Uzuka Middle School in Fukuoka.

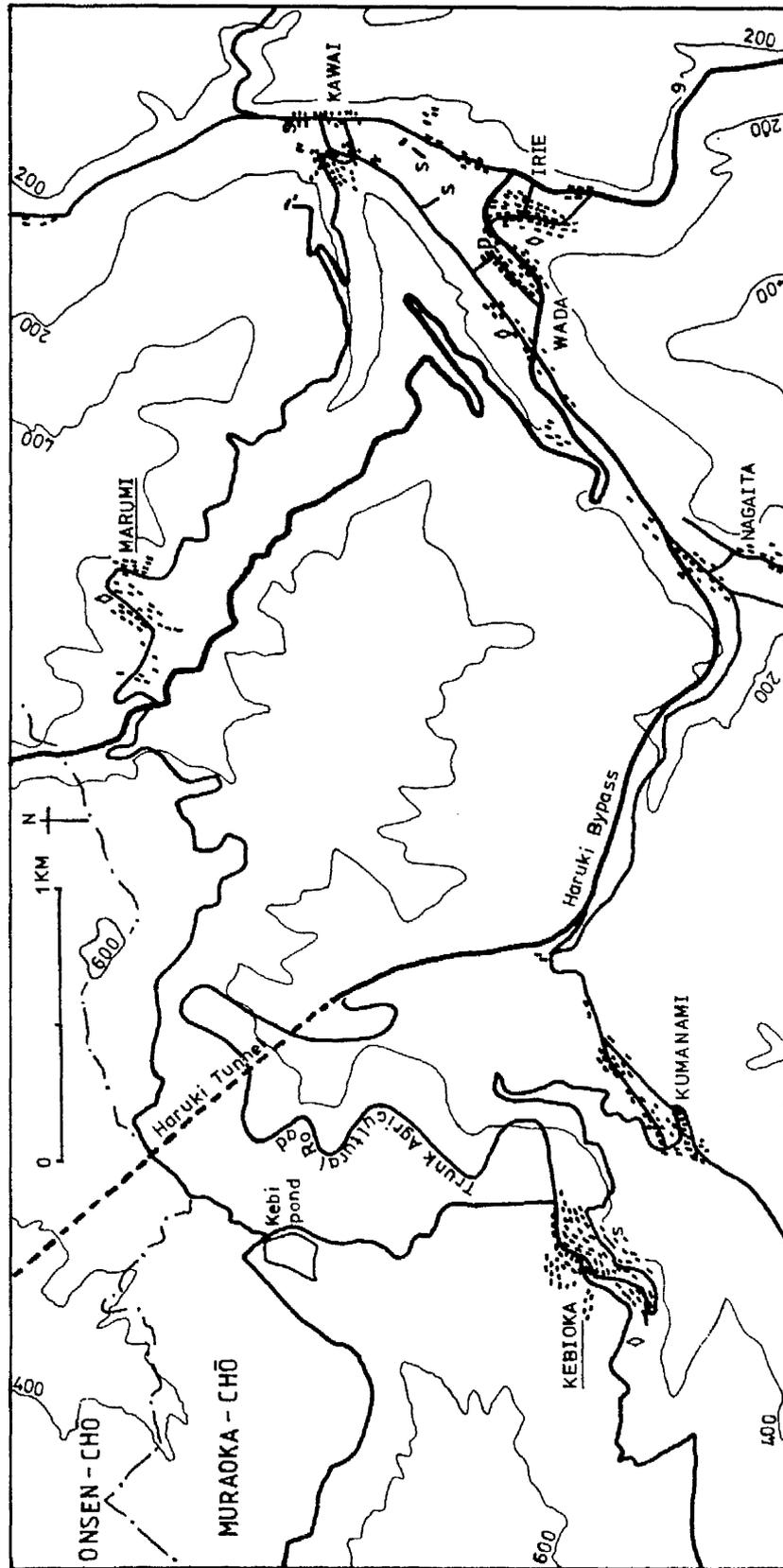
The retention of the annual village shrine festival is indicative of the survival of a community spirit among the residents. Little tension could be detected among the villagers, and the older generation of farmers especially were apparently able to work together fairly harmoniously.

Tsukuriyama is a small settlement in terms of its population and number of households, and has suffered severely from depopulation since 1955. Nevertheless, with the return and retention of some younger male inhabitants, who chiefly commute to full-time jobs locally, during the 1970s, there are some grounds for optimism concerning the future of Tsukuriyama. The population is, and will be, smaller than in the past, but there is evidence that the occupational structure is in a state of transition. Those of middle-age and older have changed partially from traditional occupations such as charcoal burning, forestry, small-scale sericulture, rice production and *dekasegi*, to specialization in *shitake* cultivation, some large-scale sericulture and *dekasegi*. Generally speaking, younger adults in the community have opted out of the primary sector and seasonal migration in favour of full-time employment, particularly in local manufacturing firms. As the older generation of farmers retire and die, the village is likely to depend less and less on farming and increasingly on full-time jobs. Tsukuriyama is thus in a transition towards a more "dormitory" function than its traditional role as a producer of primary products.

(iv) Marumi

Marumi is a village in the north-west of Muraoka-cho (see Map VII-3). It can be approached from Irie, from the old route of National Route 9,

Map VII-5. Marumi and Kebioka.



which leads into Onsen-chō via the Haruki Pass. The old national road takes sharp hairpin bends in a generally north-westerly direction for 4.5 kilometres and affords splendid views across the valley before reaching the turn-off for Marumi. From here the village can be seen nestled against the mountainside to the east (see Plate 7). This old national road was metalled around 1968 (see Map VII-5).

The road through the village leads down south-eastwards eventually to Kawai, with a total length of about four kilometres, and it was not metalled until 1977. At the turn-off point from the old national road into Marumi there is also an unmetalled road which runs in a westerly direction to Onsen-chō, and was newly cut in 1970 as a forest road.

Marumi is embraced by a bend in the road which follows the contours of the hillside at approximately 370 metres above sea level. At the turn-off from the old national road, the road dips steeply down through terraced paddy fields to cross the Marumi River, and the first dwellings are sited by the river itself; then the road rises again into the village proper. Only one household is isolated from the rest, and that is tucked below the old national road, invisible from view. Thus Marumi may be described as partly a linear and partly a clustered settlement.

By 1980, many of the 32 dwellings had been quite well renovated, and one had the carpenter in for rebuilding work. However, one down by the river stood empty and another near it was inhabited by its owner's family only occasionally; these were of traditional wattle-and-daub construction. One other farmhouse, where a widow lived with her teenage daughter, still had even an old-fashioned kitchen with beaten-earth floor, wood-fired cooking range, no ceiling and swallows nesting in the rafters.

According to the village headman, there were 46 households in Marumi at the end of the Second World War. Table A2 shows the decrease in both the number of households and the population of Marumi between 1955 and 1980. After the outmigration of one or two whole households after the war, the prevailing pattern of population decline became the outmigration of young people, especially from around 1960. By 1980, the population had declined by nearly 70 per cent since 1955, while the number of households had decreased by nearly 40 per cent. Table A3 shows that 19 of the 22 sample households had sent out migrants and Table A4 shows that the great majority were school leavers. Nearly half of them had left to seek employment (see Table A5).



Plate 7. Marumi: viewed from former National Route 9, during the rainy season (1980)

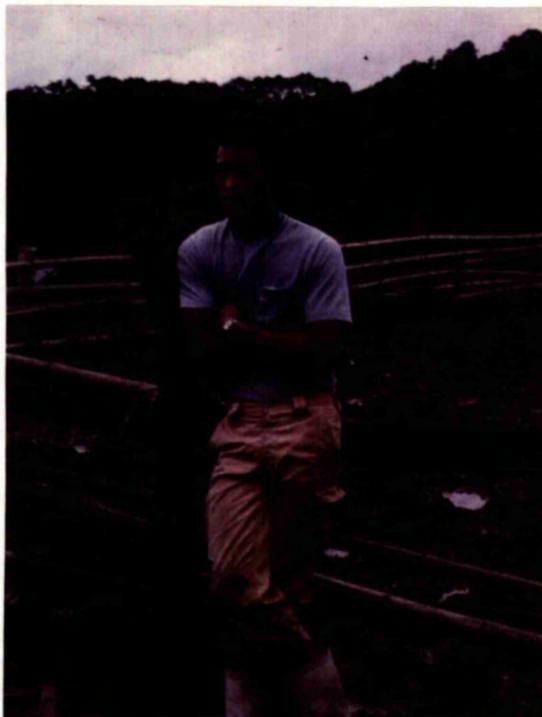


Plate 8. Marumi: Mr. Moriwaki, son of the village headman, and one of the young men who have opted to take up cattle farming. Note the paddock (1980)

The continued outmigration of young people has caused a great imbalance in the age and sex structure of Marumi's population (see Tables A16 and A17 and Figures VII-1 and 2), such that there were no females aged 20 to 24, no males aged 25 to 29, and no males under the age of 5 years. According to one inhabitant, Marumi had attracted only two brides in the past twenty-three years.

The household composition of the sample households is shown in Tables A19 and A21. Four were single-person households, of whom two were women in their fifties and two were men aged 57 and 62 respectively. Since the two men left for *dekasegi* in the winter, they were in Marumi from only April to October. Of the five two-person households, four consisted of couples whose children had left home, and their ages ranged from late fifties to early seventies; the other two-person household consisted of a 35-year-old second son living with his 68-year-old father. Households were thus predominantly aged.

Only three return migrants were recorded in Marumi (see Tables A9-A15). Moreover, although 72.7 per cent of households responded that they had a successor, only 18.2 per cent believed that he would actually succeed to the household headship and 40.9 per cent believed that he would not.

The reasons for the decline in the population of Marumi were not only the attraction of higher wages and standard of living in the cities, but also the relative decline of traditional occupations, beginning with the decline in charcoal burning. The few whole households who outmigrated before 1960 were those which had hitherto depended on charcoal burning for a cash income and, moreover, had very little or no arable land of their own. In 1975, 26 households held a total of 58.5 ha. of forest land, that is, only 2.25 ha. per household on average.

Also in the immediate post-war period, approximately 30 households kept cattle for draught purposes; but the first powered cultivator appeared in Marumi around 1958, and despite some resistance from cattle raisers, a wholesale change from draught cattle to cultivators took place within about five years. Many households continued to keep cattle for breeding purposes, although the numbers steadily declined. The 1960 agricultural census recorded that 31 of the then 42 households were keeping a total of 36 cows; by 1970, only 19 were keeping 31 cows, and in 1975 11 households had a total of 38 animals.

In the early 1950s approximately 30 households raised silkworms. By 1960 only 14 households still engaged in sericulture, and Marumi had one of the highest incomes from sericulture in Hyōgo Prefecture in 1965. By 1970, though, there were only seven households raising silkworms, four in 1975, and only one in 1980. The area of mulberry actually increased from 1.8 ha. in 1960 to 2.1 ha. in 1970 and 1975, but had declined to 0.5 ha. in 1980.

Great changes have also taken place in the area of arable land in Marumi. In 1960 there was a total of 21.1 ha. of arable land (average 0.57 ha. per farm household), which by 1970 was reduced to 17.5 ha. (average 0.55 ha. per farm household), by 1975 to as little as 12.0 ha. (average 0.44 ha. per farm household), and by 1980 to 12.8 ha. (average 0.58 ha. per farm household). In other words, the total area of arable land was very nearly halved between 1960 and 1975 (see Table A23).

Of this, 13.2 ha. in 1960 were paddy land (average 0.36 ha. per farm household); in 1970 this was 11.6 ha., of which 11.55 ha. (average 0.37 ha. per household with paddy land) were actually planted to rice (see Table A24). By 1975 it had fallen to 8.72 ha. (average 0.34 ha. per household with paddy land) and to 8.50 ha., of which only 7.42 ha. (average 0.37 ha. per household with paddy land) was actually planted to rice, in 1980. The yield was 3.8 tonnes per hectare, which was the highest for the seven villages studied (see Table A25).

The chief source of cash income was formerly *dekasegi*,<sup>18</sup> and virtually all healthy males between the ages of 15 and 50 left the village to be employed during the winter. Roughly half were employed by *sake* breweries and half by *kōridōfu*<sup>19</sup> factories in Nara Prefecture. From around 1953, though, the manufacture of natural *kōridōfu* was phased out and refrigerators used instead, reducing the need for labour. The *sake* breweries also became increasingly mechanized and the work less arduous; with increasing difficulty in obtaining young employees, the breweries became more willing to employ older men. Table A39 shows that in 1980 eleven males in Marumi continued to work on a *dekasegi* basis in *sake* breweries during the winter months, of whom nine were head of their household (cf. Table A38). Moreover, by 1980, all but one of the *dekasegi* migrants in Marumi were aged between 45 and 64 years (see Table A37).

The persistence of *dekasegi* meant that only five inhabitants of Marumi were engaged in full-time occupations (see Table A34), and full-time occupations accounted for only 12.5 per cent of the income of sample

households (see Table A52). Apart from one 36-year-old household head who was a carpenter, two of these were middle-aged women employed by a subcontractor of Matsushita Electric (National Panasonic) within Muraoka-chō, and one was a 19-year-old woman employed by the agricultural cooperative; only the remaining one was a 53-year-old household head employed as a white-collar worker with a very stable job within the lifetime employment system. His mother had died in 1979 and his wife had returned to Marumi to look after his 83-year-old father. He himself continued to work in Himeji and returned every other weekend. His plan was to retire to Marumi, and this had clearly been a long-term plan, for he had had their 200-year-old house renovated in 1974, and it was the most modern and well-equipped house in Marumi. The couple, however, had no children.

The most notable feature of the occupational structure of Marumi was the relatively small number engaged in either full-time occupations or casual day labour (see Tables A41-A44), and the relatively large number - compared with the other villages studied - of those engaged in farming (see Tables A29-A31). Indeed, farming was by far the largest single source of income of the sample households (53.1 per cent: see Table A52). In particular, farming in Marumi had attracted more young people than in the other sample villages, for four farmers were aged less than 35, and two of these were engaged in farming only (see Plate 8). This appeared to be extremely unusual for a depopulated village.<sup>20</sup>

The attraction of farming for young people in Marumi was evidently related to the enterprising personality of one 33-year-old farmer, and his 27-year-old wife, who had specialized in the breeding of cattle, and whose success had doubtless influenced other young men in Marumi to favour farming. In 1974 nine households were keeping approximately 30 cows between them and a "livestock ranch" (*chikusan danchi*) project was instigated.<sup>21</sup> By 1978, the number of cattle in Marumi had been increased to 48, and by 1980 to 78 animals, of which all but five belonged to the livestock ranch. From the spring of 1979, four of the households formed a livestock cooperative and were intending to increase further their herds of the local black Tajima Mikata breed. By 1980, the 33-year-old farmer alone had a herd of more than 30 cows, which is large by Japanese standards, and his cattle were winning first prizes in prefectural shows and fetching extremely high prices. His acclaim was such that he was frequently receiving visits from prefectural and agricultural cooperative officials and occasionally even by farmers from distant places wishing to study his techniques.

He had even built a comfortably furnished office-cum-interview-room above his cattlesheds in order to receive such visitors. That he was deriving both a high income and personal prestige from his livestock rearing had no doubt motivated the other households of the livestock cooperative, of which a condition of membership was that the household should contain at least one young male intending to farm seriously in the future.<sup>22</sup>

It is also important to note that these young farmers, unlike middle-aged and older farmers in Marumi, did not leave the village during the winter for *dekasegi*. Instead, one 19-year-old male worked for about sixty days in winter on a day labour basis for a company, and a 23-year-old male worked for about ninety days in winter manning the ski lifts of Hachikita (Ōsasa), both to earn themselves extra pocket money.

This specialization in cattle breeding in Marumi could not have been considered, however, without considerable support, both financial and administrative, from the higher authorities.<sup>23</sup> Advantage was taken of a vast range of subsidies and loans for establishing the ranch to begin with, for the costs of converting land for pasture and fodder-growing, building cattlesheds and paddocks, purchasing stock and machinery such as fodder cutters, and construction of a purpose-built artificial insemination unit. For example, the central government subsidized 80 per cent of the costs of establishing the ranch; the central and prefectural governments together subsidized 80 per cent of the costs of the AI unit, and the rural district provided a further 10 per cent; and the Fund for the Modernization of Farming (*Nyōgō Kindaika Shikin*) scheme enabled the purchase of livestock by allowing loans to be repaid over seven years. For the first two years only the interest, at 6.5 per cent, was repayable, and the remaining five years were allowed for repayment of the principal. Nevertheless, even these enterprising young farmers admitted that they were probably not aware of all of the numerous subsidies and loans to which they were most likely entitled.

One of the four households belonging to the livestock cooperative was deriving a subsidiary income from sericulture, by utilizing an area of the farmyard for raising and feeding silk-worms and using the loft of the cattlesheds as the space for allowing them to spin cocoons, and they were able to sell 800 kilograms in 1979.

Provided the present government's agricultural policy continues to provide valuable financial assistance and protection from foreign imports, the members of the livestock ranch in Marumi are likely to con-

tinue to prosper. Indeed, Table A52 shows that average household incomes were ¥3,622,000 per annum, somewhat higher than in the other villages studied.

Despite the relative prosperity of Marumi, the village shop was closed in 1977, and a mobile shop from the Agricultural Cooperative, which sold fish, vegetables and other foodstuffs, visited the village three times a week, on Mondays, Wednesdays and Fridays. The nearest primary school was the Isou Primary School in Kawai, and a school bus service was available for the pupils. For older pupils, such as the three boys and two girls who attended Muraoka High School, commuting to school involved a 4 km. walk to Kawai before catching a bus to Muraoka.

The nearest bus stop was at Tōge-guchi near Wada, through which approximately thirty return journeys per day passed, of which twenty ran between Yōka railway station and Akioka (Mikata-chō) or Yumura (Onsen-chō) and ten ran between Muraoka and Kasumi.

Undoubtedly, the effects of depopulation upon social life in Marumi had been disruptive, for the traditional festival, a village play, and the summer Bon dances, both of which were symbolic of the solidarity of village society, had been discontinued around 1960, when the outflow of young people became marked.<sup>24</sup> Nevertheless, the development of the livestock ranch and cooperatives are indicators that a spirit of social cohesion, perhaps especially among the younger generation of farmers, is far from dead. From such households I was met with great hospitality and cooperation; from some of the other, more aged households, there was clearly some resistance, and it was apparent that there were undercurrents of hostility and tension among the inhabitants of Marumi themselves. It may be surmised that the success and prosperity of certain households might have given rise to jealousies, and, perhaps, to some resentment that their success had altered the appearance of Marumi by the introduction of large cattlesheds, wooden-fenced corral-style paddocks and the establishment of the main area of the ranch on the other side of the old national road, within sight of the village.

However accurate this impression may or may not be, the fact remains that there is a generation of young people willing to remain in Marumi, with the initiative to develop farming. Although the numbers are smaller than in previous generations, they are likely to ensure the future survival of Marumi as a village. It would appear that much is owed to the leading young farmer, who has inspired others to follow his example. The array of government subsidies and loans for livestock rearing is available to prospective young farmers in the other sample

villages, too, who have evidently not had the initiative to find out about them and consider their possibilities. In other words, it appears that it was primarily due to the persistence and leadership qualities of one young farmer in particular that the financial incentives were taken up by Marumi farmers.

The prosperity of Marumi is thus at present dependent upon the success of cattle breeding, which itself is receiving preferential government treatment. Provided such favourable treatment continues, the survival of Marumi is likely to be assured. However, the Japanese government is continually under international pressure to liberalize beef imports, and progress towards freer trade in meat products would undoubtedly result in a considerable reduction in incentives for cattle breeders. In such an event, the implications for Marumi would clearly be the deprivation of the village's chief prospect for continued survival.

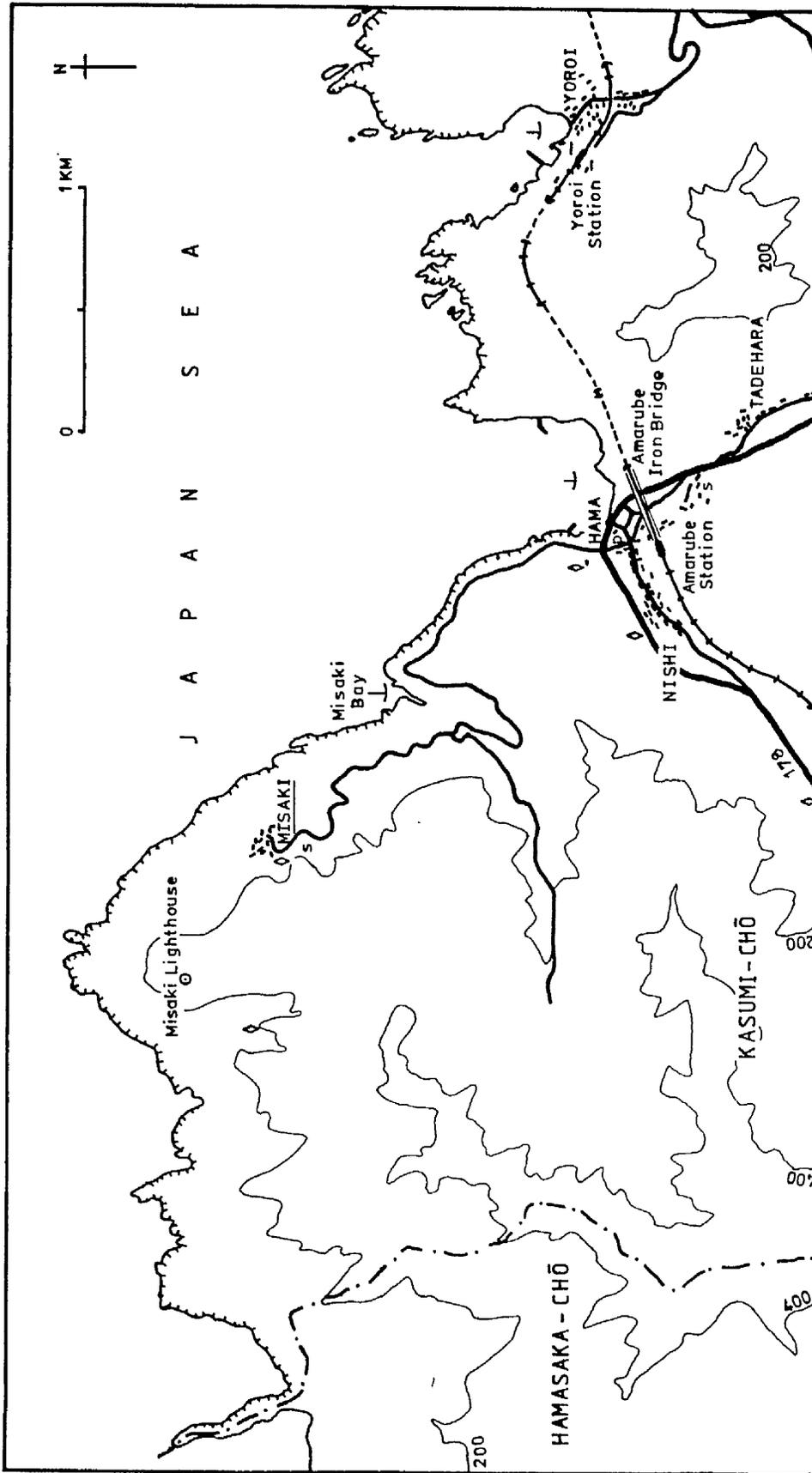
To sum up, then, Marumi is a remote village which, despite severe depopulation, is attempting to adapt to the changed and changing economic and social climate of post-war Japan. It is true that the outmigration of young people continues apace; but it is encouraging for the future of the village that at least a handful in the late 1970s have made the decision to stay, and, moreover, to work in cooperation with each other. The specialization of these young farmers in cattle breeding has provided them with a common aim and common interests, and their enthusiasm has already begun both to revitalize the economy of Marumi and keep alive its community spirit. It remains to be seen whether this can be sustained in the future.

(v) Misaki

By following National Route 178 westwards out of the centre of Kasumi-chō, the road runs parallel with the coast one to two kilometres inland and then joins the coast again at the village of Hama some eight kilometres further on (see Map VII-6). This road was upgraded to its present status in 1970, two years after the completion of the Momomi Tunnel. Hama is well known among Japanese railway enthusiasts for the Amarube Iron Bridge, which was completed in 1913, was one of the first of its kind in Japan and is still the country's highest steel bridge, at an elevation of 46 metres. The national route passes underneath the bridge and turns south-westwards, but a small, steep tarmac road takes one northwards up on the cliff-side and winds for four kilometres round a small stream to lead to the village of Misaki (see Map VII-7). This road was



Map VII-7. Misaki.



first cut in 1957 and first metalled around 1968, and still terminated in 1979 in a rough car park at Misaki; but there were earthworks in progress, and the road was scheduled to join up with the village of Mio in neighbouring Hamasaka-chō in 1984. The work was said to be progressing at the rate of 500 metres a year, and it was to be classed as a forest road.

The view from the car park is spectacular, with the cliffs of the headlands round the coastline visible one behind the other to the east. The village is sited at 170 metres above sea level on the cliffs, with the mountainside rising steeply behind to 550 metres above sea level (see Plate 9).

Before the car park stands an unpainted wooden schoolhouse, a branch of the Amarube Primary School in Hama. From the car park on, however, the village proper, including all households, is directly accessible only by foot. The dwellings are closely clustered together, apart from the gaps where there were formerly buildings. Whilst some of the houses in 1979 were still constructed basically of traditional wattle-and-daub, none had a thatched roof, and most had been considerably modernized or rebuilt with tiled roofs and new aluminium and glass frontages.

A steep, rather weedy, stone-cobbled path led up out of the northern end of the village, through small vegetable patches, past the graveyard, up to the Misaki Lighthouse at 274 metres above sea level. The village inhabitants claimed that it was the highest lighthouse in Japan, that visibility from it is 120 kilometres and that on a clear day even the Nōtō Peninsula and islands of Sado and Oki could be seen. It has been automatic since shortly after the Second World War.

There were no paddy fields in sight of the village, but some terraced ones were visible along the approach road in the valley of the small stream. In 1979, many of these had clearly been abandoned, even in the lower reaches of the valley (see Plate 10). These were the only paddy fields owned by the inhabitants of Misaki, and although approximately four hectares were registered as paddy land, in fact less than two hectares were still being cultivated for rice. Vegetables such as taro and beans were being grown within the village, notably in the flat square patches which were so obviously where buildings had once stood and there were dry fields on the Hamasaka side of the village, amounting to four or five hectares, towards and beyond the lighthouse.

Like Yokoyuki and Kojō, Misaki claims to be a Heike refugee village,<sup>25</sup> and thus it has a long history.



Plate 9. Misaki: the village viewed from at sea. The buoys in the foreground mark the position of the cooperative's fixed net (1979)

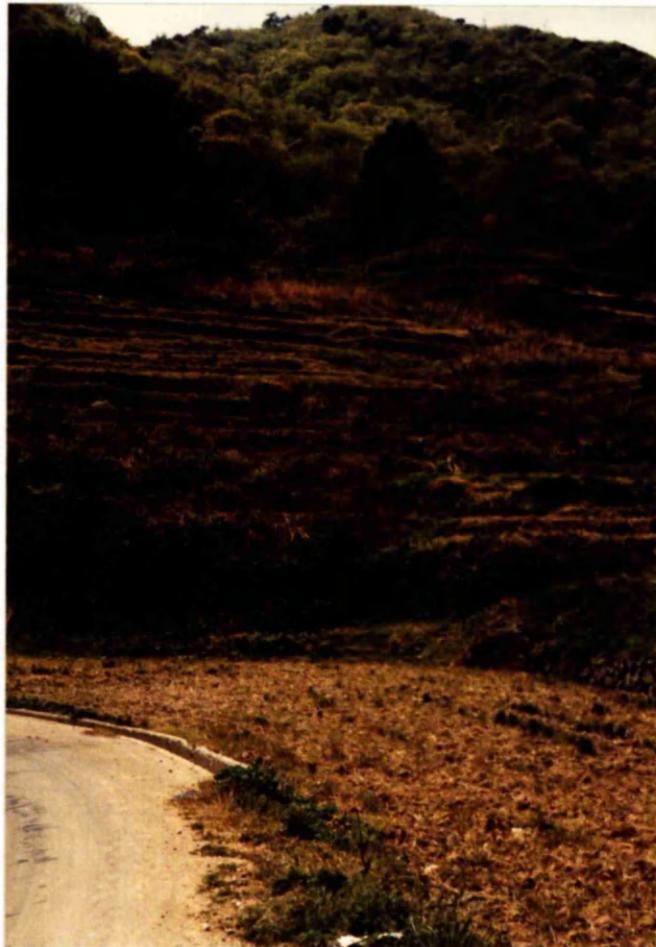


Plate 10. Misaki: abandoned terraced paddy fields (1979)

The demographic decline of Misaki occurred relatively suddenly. The number of households before the war remained stable at 38, but rose to just over 40 during the war owing to the arrival of evacuees. In 1956, there were still 39 households and a population of 292 (see Table A2). There was as yet no road and the number of households fell to 36 in 1960 and the population to 259. Moreover, at that time, Amarube Primary School was in urgent need of repair, and it was then still the responsibility of the villages it served, including Misaki, to contribute to the cost of the repairs. This placed a burden of ¥40,000 to ¥50,000 on each household, a levy which many households could not afford or refused in principle to pay, particularly those with no children of primary school age. Moreover, the simple water supply system in Misaki was also in need of repairs at around the same time, to which each household was required to pay ¥140,000 to ¥150,000. When the talks for all these repairs began around 1963, it caused a major rift in the community and a large number of families moved out, mainly locally to Kasumi. By 1965, then, the number of households had fallen by 38.9 per cent and the population by 37.8 per cent since 1960. Thereafter the population continued to decline, but the number of households remained stable at 22. (Later, infrastructure such as maintenance and repairs of schools and water supply became the responsibility of the rural district.)

However, the continued decline of the population while the number of households remained static suggests that once the outmigration of whole families had taken place more or less en masse in the early 1960s, outmigration became characteristically a matter for individual members of households. Indeed, ninety per cent of the residual households reported having sent out migrants (see Table A3). The great majority (60 per cent of them) had left the village upon leaving school at age 15 or 18 (see Table A4), and 80 per cent of them had left for employment elsewhere (see Table A5). It is noteworthy that only 3.9 per cent had left to further their education, which is well below the corresponding rates of over 20 per cent recorded in the other sample villages, and tends to support Norbeck's contention that the children of fishing villages are less ambitious with regard to academic achievement than those from farming or forestry backgrounds.<sup>26</sup>

Only one case of return migration was reported in Misaki, that of a 39-year-old eldest son, who returned to assume the headship of the household, bringing with him his wife and two children (see Tables A9-A15). He had spent his years since leaving middle school in becoming a skilled kitchen and bathroom tiler in Ōsaka, and had returned to Misaki, he said,

because he knew there were relatively few such tilers in the Kinosaki area; and given that many older farmhouses in the region were recently undergoing renovation, he was optimistic about making a living in Misaki in this way. His return had also been precipitated for the sake of his mother, who had been living alone after being widowed a year or so before.

The structure of the population of the remaining households (see Table A16 and Figure VII-1) shows that, while still imbalanced, it is nevertheless less markedly so than that of some of the other villages studied. Furthermore, Table A22 shows that more than half of the sample households believed that they had a successor who was likely to take up the headship of the household in Misaki.

Table A19 shows that households were somewhat larger in Misaki than in the other sample villages: there were no persons living alone, and there was one household with eight and one with nine members. Thus household composition in Misaki was markedly younger and more balanced than in the other villages studied (see also Table A21).

It was noted earlier that since the mid-1960s the number of households has remained stable while the population has continued to decline; but to what may this prevailing pattern be attributed? It is at least in part explained by the changes in the economy of Misaki since the Second World War.

The inhabitants of Misaki traditionally lived by supplementing their farming activities with fishing. In addition to working a small amount of paddy land and dry fields, virtually all households engaged in some fishing, especially in the winter agricultural slack season. Virtually all households raised silkworms, and about 30 households kept one or two cows. In 1960, 14 households kept a total of 15 cows, but by 1970 only three households were keeping one cow each, and only one household kept one cow in 1975 and was continuing to do so in 1979. In 1970, 13 households engaged in sericulture, and in 1975 nine did so, but there was none by 1979; the acreage under mulberry declined accordingly from 5.0 ha. in 1970 to 3.2 ha. in 1975.

The total area of arable land in Misaki in 1960 was 13.5 ha., an average of 0.43 ha. per farm household (see Table A23). By 1970 it was 10.0 ha. (average 0.50 ha. per farm household); by 1975 it stood at 7.5 ha. (average 0.44 ha. per farm household); and by 1980 it was 3.03 ha. (average 0.20 ha. per farm household): that is, the total area of arable land in Misaki was less than a quarter in 1980 of what it had been twenty years previously.

Of this, the amount of paddy land was never very great - as mentioned earlier, Misaki inhabitants had only one small valley of terraced paddy fields, which amounted to 3.7 ha. (average 0.12 ha. per farm household) in 1960; 2.80 ha. (average 0.19 ha. per household with paddy land) in 1970; 1.80 ha. (average 0.15 ha. per household with paddy land) in 1975; and in 1980 the total was 1.42 ha., or an average of 0.13 ha. per holding: by far the smallest of any of the villages studied. The yield was also the lowest of all the villages, at only 2.4 tonnes per hectare (see Tables A24 and A25).

One 60-year-old inhabitant had specialized since 1961 in growing fruit, and in 1979 he had 0.2 ha. of pear orchards and 0.06 ha. under grape vines. The pears were of the round Japanese variety.

In addition, the village owns approximately 10 hectares of common forest land and there are approximately 150 ha. of privately owned forest. This is virtually all mixed "natural" forest, which was previously utilized for charcoal burning until four or five years after the war. In 1975, 16 Misaki households held a total of 37.5 ha. of forest, that is, an average of 2.34 ha. per household. Table A28 shows that most households of Misaki owned less than five hectares of forest, and none reported deriving any income from it in 1978-79.

However, from around 1968, Kasumi-chō, including Misaki, began to benefit from the discovery of the squid fishing grounds at Yamato-tai Shallows (see Map VI-8). This meant that fishing was able to provide a living all year round for fishermen, since in practice they could fish for squid from June to December and trawl or catch crabs from September to May. The expansion of the fish processing industry in Kasumi from around the same time meant that there was increased demand for female labour in the hundred or so small, specialized processing plants within Kasumi-chō, and many housewives in Misaki took the opportunity of increasing their household income in that way (see Tables A35 and A41-A44). The boom in the fishing industry of Kasumi-chō meant that there were opportunities for not only eldest sons, but even second and third sons, to take up fishing as an occupation. Table A33 shows that in 1979 a total of eleven males were engaged in fishing in Misaki, of whom five were under the age of 30. Six of the eleven were employed as above, chiefly on squid boats, but also on trawlers and purse-seine fishing boats, based in Kasumi Port.

The remaining five of the eleven fishermen in Misaki work for the Amarube Fishing Cooperative together with fishermen from the neighbouring villages of Hama and Yoroi (see Map VII-7), using only a fixed net cast

in Misaki Bay (see Plate 9). The members from Misaki rise at 5.30 a.m. and drive down to the jetty at Hama, where one boat is launched at day-break with usually six or seven crew members. It sets out for Misaki Bay and meets a similar small boat from Yoroi, and the two boats work together to haul in the nets. The fish tend to be a mixture but are predominantly varieties of yellow-tail. It takes about two hours for the nets to be hauled in, emptied of their catch and dropped again, and then both boats return to Yoroi harbour at about 8.00 a.m. The fish are landed, sorted, then sold by auction between 8.30 and 9.00 a.m. Yoroi harbour has facilities for chilling and freezing; and the rapidity of the sale after being caught means that the fish are extremely fresh and will fetch a good price from the hotels and restaurants of the Keihanshin region. The Hama boat returns to Hama harbour and the Misaki fishermen return home at about 9.30 a.m.

The fixed net technique was first introduced to Amarube in the early 1940s by a fisherman from Hamasaka who had learnt the technique in Hokkaidō, and who settled in Hama during the war. In 1945 Hama and Misaki villages set up one fixed net cooperative and Yoroi another. The fish were landed at Yoroi rather than Hama because Yoroi had a railway station whence the fish could be consigned, whereas Hama at that time did not. The amalgamation of the two cooperatives in the late 1950s resulted in the formation of the Amarube Fishing Cooperative, and this was affiliated with the Kasumi Fishing Cooperative in 1969. In 1979 the Amarube Fishing Cooperative had 130 members: 20 households in Misaki, 50 in Amarube and 60 in Yoroi; rights of membership are restricted to inhabitants of those three villages, and shares may be registered in the name of only one person per household. The shares are issued at ¥1,000 each, and one person may hold a maximum of 250 shares; they are not transferable, and any shareholder who leaves their village must surrender their shares.<sup>27</sup>

In 1979, the Cooperative employed sixteen people: five fishermen from each of Misaki and Hama and four from Yoroi, and two administrative staff - one from Hama and one from Yoroi. After deduction of expenses, some 40 per cent of the Cooperative's income (¥140 million in 1978) was paid to these sixteen as wages, and the remainder paid out in the form of dividends to shareholders. In 1979, the Cooperative owned three twenty-tonne boats and one one-tonne boat.

There is little doubt that this unearned income for virtually all Misaki households has greatly contributed to the general prosperity of the village.<sup>28</sup> Even excluding this, fishing was the chief source of

income (36.4 per cent) for the sample households (see Table A52).

In 1979, farming accounted for only 3.3 per cent of the total income of the sample households in Misaki<sup>29</sup> (see Table A52). From Table A29 it may be seen that a total of 21 inhabitants were engaged in farming only or farming with some other occupation; two-thirds of these were women, and all but two were aged over 45; as many as eight were aged 65 or more, and one of these, a 69-year-old male, had specialized in growing pears and grapes. Only four inhabitants aged less than 65 were engaged solely in farming, and only one of these was aged less than 45, and that was a housewife.

Furthermore, Tables A34 and A35 show that Misaki had fourteen inhabitants engaged in what may be termed full-time occupations, a relatively high proportion in comparison with the other sample villages. Four of these were white-collar jobs such as social work, hospital administration and banking, and it is noteworthy that the inhabitants involved in these occupations were young people between the ages of 21 and 26 who had chosen to remain in the village and treat it as a "dormitory" for commuting to as far afield as Toyooka. Table A52 shows that full-time employment accounted for as much as 32.5 per cent of the total income of the sample households.

The availability of job opportunities both in fishing and elsewhere meant that only one inhabitant of Misaki left for *dekasegi* in the winter (see Tables A36-A40), and only one resorted to construction day labour (see Tables A41-A44). Day labour, primarily work in the fish processing industry on the part of middle-aged housewives, provided 17.0 per cent of the income of Misaki.

In many cases, the fish processing companies sent round minibuses to pick up employees. No public transport serves Misaki, and the nearest bus stop is at Shimonohama in Kasumi. However, trains from Amarube Station take only eleven minutes to Kasumi Station, but there are only ten return journeys per day which stop at Amarube. This station was not opened until 1959, until when the nearest station had been at Yoroi. Trains to Toyooka from Amarube take sixty to ninety minutes, so commuting is not unreasonable.

Misaki gives the impression of having a strong community spirit. Although this may seem a highly subjective judgement, the inhabitants on the whole were more cheerful and extrovert than their counterparts in the farming and forestry villages.<sup>30</sup> That Misaki had retained some traditional community functions is illustrated by the fact that while fieldwork was

being conducted in the village, many of the housewives and older inhabitants gathered at one house for a Buddhist prayer meeting. Although the young wives had mainly been brought into the village from elsewhere, one 26-year-old fisherman had married a Misaki girl two years his junior, and he was clearly very proud of his bride. He claimed that she was only distantly related, and seemed unclear of the precise relationship.<sup>31</sup>

Misaki had so far succeeded in retaining its primary school, a branch of Amarube Primary School in Hama, at least up to the third grade, despite its having only three pupils. There had been some talk of replacing the Misaki branch school with a school bus to the main school, but so far the objections of the parents had prevailed. Two older children attended the main school.

There was a small shop, albeit stocked with little more than sweets, rice crackers and cigarettes, and Hama was the nearest place for obtaining provisions.

In short, Misaki has suffered depopulation in the post-war period, first of all by the outmigration of several whole families in the early 1960s, and then by the continued outmigration of young people. However, with the improvement in road communications to Misaki and increasing mobility due to private vehicle ownership, Misaki came within reasonable commuting distance for broader job opportunities, both within and beyond Kasumi-chō. The traditional fishing skills, initiative and cooperative spirit of the inhabitants have enabled them to take advantage of two things: first, the post-war rise in consumption - in this case, the flourishing of high class restaurants and hotels in the urban areas of the Keihanshin region, which provide the market for the fresh fish which the cooperative catches; and second, the boom in the Japan Sea coast fishing industry which occurred in the late 1960s<sup>32</sup> and which was able to provide a substitute for the declining farming activities of Misaki.

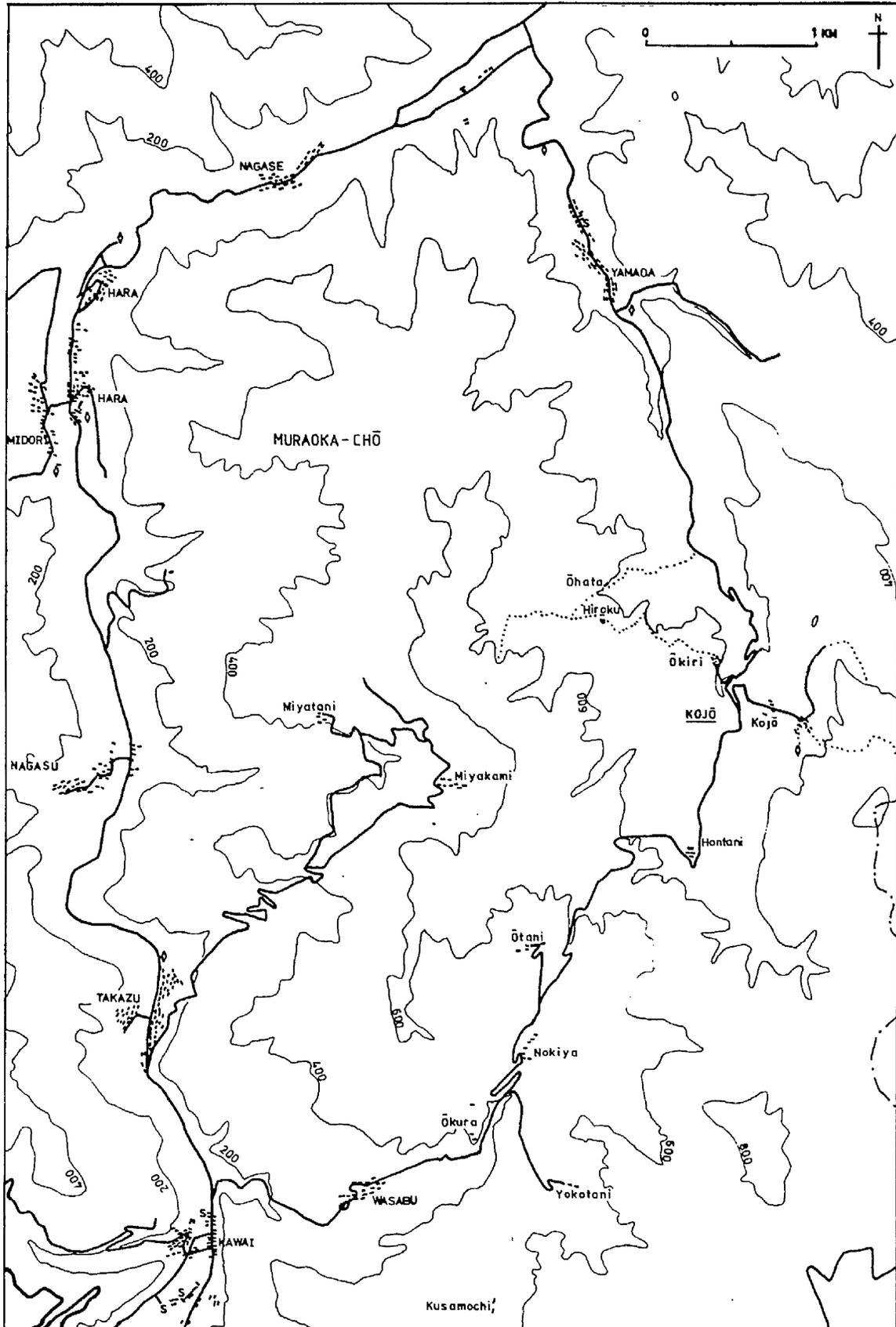
Thus in the late 1970s, the problem of depopulation in Misaki was abating, chiefly on account of many more households than in previous generations specializing in fishing, which was able to attract even young members of the community. Its prosperity was reflected not only in the many recently-renovated dwellings in the village, but also in the cheerful disposition of its inhabitants. It is not unreasonable to assume that, provided the fishing industry in particular continues to flourish, Misaki will thrive along with it.

(vi) Kojō

Kojō is situated in the north-east of Muraoka-chō, and is without doubt the most remote settlement of the rural district. It is accessible by two routes, each as difficult as the other (see Map VII-3). Either way, one travels northwards from the Rural District Office along National Route 9, then from Kawai one takes the Kasumi road, and "important provincial road" (*jūyō chihō dōro*).<sup>33</sup> One route is to take a small *chō* road north-eastwards about 0.5 kilometres from Kawai, and pass through the village of Wasabu. This is metalled for only the 2.5 kilometres to Wasabu, from which point onwards for the remaining three kilometres to the main hamlet (*koaza*) of Kojō, it is unmetalled, single-track and has gradients of 1:6. Alternatively, one takes the Kasumi road for ten kilometres from Kawai, then takes a turning southwards. This is a narrow prefectural road, metalled for only two kilometres as far as the village of Yamada, and from there on it is again unmetalled and single-track all the way to Kojō, nearly four kilometres further on. The road is steep, with many hairpin bends, and climbs along the mountainside, from which the water of the Yamada River is barely visible in the gorge far below (see Map VII-8).<sup>34</sup>

The village of Kojō consists of four small hamlets: Kojō, Ōkiri, Hontani and Hiroku. By 1978, Kojō had six households, Ōkiri had four, Hontani two and Hiroku two (see Table A2). The hamlets are widely spaced apart, and during the summer of 1980, work was in progress to concrete the roads between the three hamlets of Kojō, Ōkiri and Hontani. Kojō is the only one on the eastern side of the valley, at 500-550 metres above sea level, and Ōkiri is on the opposite side, just over one kilometre away by road, at 420 metres above sea level; Hontani is approximately 1.8 kilometres to the south of Kojō hamlet, along the Wasabu road, at 520 metres above sea level; and Hiroku lies to the north-west and can be reached only by foot. It is situated in the mountains beyond Ōkiri, along a footpath which climbs up and down, crossing the valleys of two streams. Hiroku itself is the first house to be reached, and is at 480 metres above sea level. It stands thatched and ancient, dark and blackened by wood-smoke inside, almost overgrown by encroaching undergrowth and shrubbery. Near it are the tumbledown remains of two houses deserted around 1968. The path continues on north-eastwards, and crosses another stream to reach the second household of Hiroku hamlet, called Ōhata, at 400 metres above sea level. This house is also thatched and stands alone, for there were no longer any discernible signs of the two other houses that were abandoned

Map VII-8. Kojō.



there before the war. Resting against the porch in 1978 was an old-fashioned wooden A-frame back-pack with home-made straw rope straps, an indication that everything to and from here must be carried through the mountains by the occupants themselves. This hamlet is approximately 1.5 kilometres from Ōkiri, but the walk over the hilly terrain takes at least forty minutes even in fine weather (See Plate 11).

According to the officials of Muraoka Rural District Office who guided me to Hiroku hamlet, negotiations had been continuing for some time<sup>35</sup> between the two households and the rural district office. The householders petitioned to have a road cut through, and the rural district office refused on the grounds of expense. Instead, they requested that the families move at least as far as the road, which they in turn persisted in refusing to do on the grounds that they would not abandon their family graves.<sup>36</sup> Neither of the two officials, although local men, had ever visited Hiroku before, and the younger expressed great surprise that anybody had ever settled in such a remote place to begin with. According to local tradition, Kojō, like Yokoyuki and Misaki, is a Heike refugee village.<sup>37</sup> Certainly, its origins go back to at least the twelfth century, and it was probably an offshoot of the neighbouring village of Yamada.<sup>38</sup>

In Kojō hamlet stands the village shrine, now nominally tended by the village headman. It originally housed the *ujigami* (tutelary deity) of Kojō hamlet, but that of each of the other three hamlets were moved into it in 1940, since when it has served the whole village.<sup>39</sup> This event may perhaps be interpreted as a symbolic landmark in the decline of the religious functions of the village as a whole.

The old thatched schoolhouse which used to be used during the winter months stands in Ōkiri, but it is now used only infrequently for village meetings. Virtually all other buildings in the village are likewise unmodernized, built of wattle-and-daub with roofs of thatch.

Kojō is such a small village in terms of its population and number of households that the village headman, with the help of the head of the *honke* (main family), was able to provide detailed information concerning its decline. At the beginning of the twentieth century there were 29 households in Kojō, and outmigration began in the 1910s when four households left; two of them were in Kojō hamlet and two in Ōkiri. One in Hontani left during the 1920s, and the descendants at present live in Kawai. Two more households, both at Ōhata, left during the 1930s. In the post-war period, one household at Hiroku left in 1960 for Kasumi-chō, for

the sake of their grandchild's education.<sup>40</sup> The house, arable land and 13 hectares of forest were sold for only ¥1 million.<sup>41</sup> Another of the Hiroku households moved out around 1970, to Yamada. Exact dates for the rest are not certain, but one man moved to Kasumi when his father died; one old lady joined a child in Toyooka; two grown children of one household moved respectively to Toyooka and Himeji when their parents died; a married couple left for Ōsaka around 1977; and a married couple in their early forties left to join their children in Toyooka in 1979. All of these latter were in Kojō hamlet. In addition, there used to be two more households out in the mountains to the east of Kojō hamlet, but it is not certain when their occupants left. In 1969 there were seven households in Kojō, four in Ōkiri, three in Hiroku and two in Hontani.<sup>42</sup>

Without doubt, then, outmigration of whole families at once occurred particularly in the pre-war period, but since the war the prevailing pattern had been a more gradual process in the decline of individual households, with some members dying and others moving out by stages. It is noteworthy that the majority of outmigrants from now defunct households moved relatively short distances and settled locally in nearby villages.

Tables A3-A8 show that approximately 80 per cent of the residual households in Kojō had sent out migrants, chiefly middle school leavers, who left both for educational and occupational reasons. There were no return migrants.

As a result of such continued outmigration, the number of households and the total population of Kojō decreased from 23 and 135 respectively in 1955 to 14 and 35 respectively in 1980.<sup>43</sup> This means that the number of households declined by nearly 40 per cent and the population by nearly three-quarters during that period (see Table A2).

The structure of the residual population is shown in Tables A16 and A17 and Figs. VII-1 and 2. From these it can be seen that the great majority of the inhabitants of Kojō are in the 50 to 64 age range. The relatively small number of over-65-year-olds perhaps reflects that not only does Kojō suffer extremely cold, harsh winters with two metres of snow, but that even in summer the doctor refuses to travel as far as the village, on the grounds that it is too remote, and the nearest doctor is located thirty minutes' drive away.

Of the eleven household (1978) sample, one was a 57-year-old woman living alone, and six were two-person households. Five of these were couples aged from their early fifties upwards, whose children had left

home; one consisted of a 48-year-old second son and his 78-year-old father. Furthermore, it is clear from Table A22 that although virtually all households had a successor, only a small proportion believed that he would actually succeed. In fact, there were three "young" men in Kojō, aged 26, 35 and 43 years respectively, but all were unmarried, and it was thought unlikely that they would be able to find a bride so long as they remained in Kojō.

The reasons for the decline in the population are not only the severity of the climate and the problems of accessibility, but also a relative deterioration in the means of making a living. The traditional economy of Kojō seems to have persisted somewhat longer than that of some of the other villages studied.

Kojō village has approximately 70 ha. of common forest land. The village is known to have had a few woodworkers in former generations; and from before the war until around 1955 charcoal burning was an important source of income.<sup>44</sup> Already by the late 1960s, forest land was largely neglected,<sup>45</sup> but in 1975 inhabitants owned a total of 58.9 ha. of forest land, an average of 4.21 ha. per household. Seventeen hectares of this was held by the chief family (*honke*) of Kojō hamlet (see Table A28).

Formerly, the whole of Kojō village had 7.5 ha. of paddy fields and 3 ha. of dry fields, of which 1.2 ha. of the former and 0.7 ha. of the latter were held by the Kojō *honke*. But already by the late 1960s - that is, from before the government's policy to reduce the rice acreage was implemented - 1.4 ha. of those paddy fields and 1 ha. of dry fields had been abandoned and only partially afforested.<sup>46</sup>

The 1960 agricultural census recorded a total of 8.8 ha. of arable land in Kojō (an average of 0.44 ha. per farm household), of which 6.5 ha. were paddy fields (average 0.32 ha. per household) (see Tables A23 and A24). In 1970 the total was 8.6 ha. (average 0.57 ha. per farm household), of which 6.6 ha. (average 0.44 ha. per household) were paddy fields. In 1975, the total area of arable land had fallen to 6.4 ha. (average 0.46 ha. per farm household). Only 5.4 ha. were paddy land, and of that only 5.0 ha. were actually planted to rice (average 0.36 ha. per household). The decline continued, and in 1980 there was a total of only 4.84 ha. of arable land (average 0.37 ha. per household), of which 3.87 ha. (average 0.35 ha. per household with paddy land) were under rice. The yield was the second lowest of all the villages studied, at 3.0 tonnes per hectare in 1980. Even so, rice was the most important source of farm income for Kojō,

accounting for 95.3 per cent of the farm income of the sample households (see Table A32). Even the remote Ōhata household continued to produce rice for sale, some 1,500 kilograms in 1978, which was carried on a backpack by the wife of the household as far as the road.

The importance of the continued cultivation of rice for the households of Kojō is reflected in Tables A26 and A27, which show that only three ares of former paddy land had been abandoned by the sample households in 1980. It is true that the sample was small, only five households out of the total of fourteen, but given the marginality of the land here and the remoteness of the village, a relatively larger amount of abandoned paddy land might reasonably have been expected. No doubt the paddy fields of households which no longer exist in Kojō have returned to wilderness; but the very low amount of abandonment among the residual households is indicative of the dependence of the inhabitants upon rice cultivation, their general inability to convert to other crops, and also the understanding and awareness of the financial straits into which such households would be thrown on the part of the administrative authorities, should the inhabitants be forced to abandon rice cultivation.

According to the village headman, virtually all households formerly raised silkworms. Only eight were recorded in the 1960 census, and one in 1975, but there was none by 1978. The area under mulberry accordingly declined from 0.3 ha. to 0.1 ha. between 1960 and 1975. Similarly, nearly all households formerly kept a cow. Fifteen of the 20 households still kept a total of 16 cows in 1960, 10 households kept a total of 10 animals in 1970, and six households kept seven in 1975, but in 1978 only one household still kept one cow, and continued to do so in 1980.

Even so, efforts to diversify have been made. One household in Hontani had converted in recent years to specializing in growing *shitake* mushrooms,<sup>47</sup> and one household in Kojō hamlet was deriving a cash income from *wasabi*,<sup>48</sup> a high value crop, to which the clear, cold, mountain streams of Kojō were well suited. Nevertheless, income from such agricultural sources was insufficient and was supplemented by some of the households chiefly by *dekasegi* migration in winter (see Tables A36-A40) and by forestry day labour in summer (see Tables A41-A44). Indeed, *dekasegi* was the chief source of income, and accounted for as much as 58.1 per cent of the income of the sample households (see Table A52).

Table A52 shows that the average total income for the sample households was as little as ¥1,291,000. Materially, the villagers were not

well off in comparison with average Japanese rural standards of living (see Table A53). Most of the houses were thatched and had undergone little or no renovation. The village headman, for example, had recently tiled his bathroom in 1978, but the bath itself was an old-fashioned round wooden tub, and it was still heated by firewood. He did, however, own a car, which was considered an essential item in such a remote place. The house at Hiroku was less well kept and looked little better than a hovel. Despite the remoteness, though, even the two Hiroku households were served by telephones and electricity, and each had a refrigerator, a washing machine and a television set which had been shouldered over the mountains.

So far as public transport is concerned, the nearest bus stops are on the Muraoka-Kasumi road, at Yamada-guchi and Kawai, but there are only approximately ten return journeys per day, and they run between Muraoka and Kasumi.

The one high school pupil in 1980 boarded at Kasumi High School and returned only for weekends and holidays. Her younger brother attended the Middle School branch school (*bunkō*) in Yamada, where he was one of only twelve pupils. In winter he boarded there and lived alone with a middle-aged male teacher for whom he had to cook. The primary school he had attended previously was Isou Primary School at Kawai. The journey to the primary school had consisted of a fifty-minute walk downhill to Yamada, whence there was a thirty-minute school bus ride to Kawai. The return journey took even longer, with the uphill climb from Yamada taking one-and-a-half hours every school day. In winter he had boarded at the school dormitory in Kawai. The problems of commuting to school had effectively excluded him from participating in extra-curricular activities. The village inhabitants expressed concern for the 5-year-old girl in Kojō hamlet who would have to attend the school from April, 1981.<sup>49</sup>

In the winter when the men were away working in *sake* breweries and the children were lodging at school, only the women and old people remained in their homes, with nothing else to do but clear the snow from the roofs and watch television. In former times, winters were spent in replenishing the household's stock of straw sandals for the following summer, but this is no longer done.

There being no shop in the village, all provisions such as dried fish, tea, sugar and pickles have to be bought in before the snow sets in, to last through the winter. For main items of shopping, Kasumi was



Plate 11. Kojō: Hiroku hamlet. The thatched roof and an outhouse of the Ohata household is just visible in the top left hand quadrant (1978)

Plate 12. Kojō: Mr. Nakayama, the village headman, and his son, in front of their house (1978)



the most convenient centre, rather than Muraoka, since it was perceived to be nearer (see Map VII-6).

Formerly, intermarriage was extremely common. In 1969, for example, the spouses of the then (already aged) heads of the sixteen households originated as follows: four from within Kojō village itself, four from Yamada, four from other villages of Muraoka-chō and four from outside the rural district. In the generation before that, nearly all spouses had originated within Kojō or were from Yamada or Wasabu.<sup>50</sup>

Communication, not only between the village and the outside world but also among the hamlets of the village, was still a great problem in 1980. For convenience' sake, the village headman was elected from Kojō hamlet, but in practice the choice of eligible and suitable males was severely limited, and the post was virtually a matter of selection rather than election: the headman more or less had the duty thrust upon him willy-nilly, and his demeanour showed a diffidence in his ability to fulfil his responsibilities (see Plate 12).

In Watanabe's (1970) survey of Kojō village, he concluded that while there was room for improvement in primary industries, especially the expansion of cattle raising, sericulture and afforestation works, this was being hindered by a "negative" attitude towards work on the part of the inhabitants.<sup>51</sup> He cites as an example of this negative attitude the case of one male inhabitant of Hontani who engaged in day labour on National Forest land for one month in summer, chiefly so that he would be eligible for unemployment benefit.<sup>52</sup>

Nevertheless, despite the comparative lack of material prosperity, the villagers of Kojō were both cheerful and extremely hospitable. Although well aware that the 800-year-old history of the village was likely to end within a few decades at the very most, they accepted the reality of absolute depopulation with resignation and sadness, but with little apparent bitterness.

Thus Kojō is an isolated, small and scattered village, within which the hamlets are distant from one another, and which is endowed with no natural resources that the inhabitants can at present turn to their advantage. It survives, anachronistically, as a relic of the way of life of former ages. That way of life has little to offer the contemporary economic and social climate of Japan, and Kojō is likely to become a deserted village within the foreseeable future.

(vii) Ōsasa

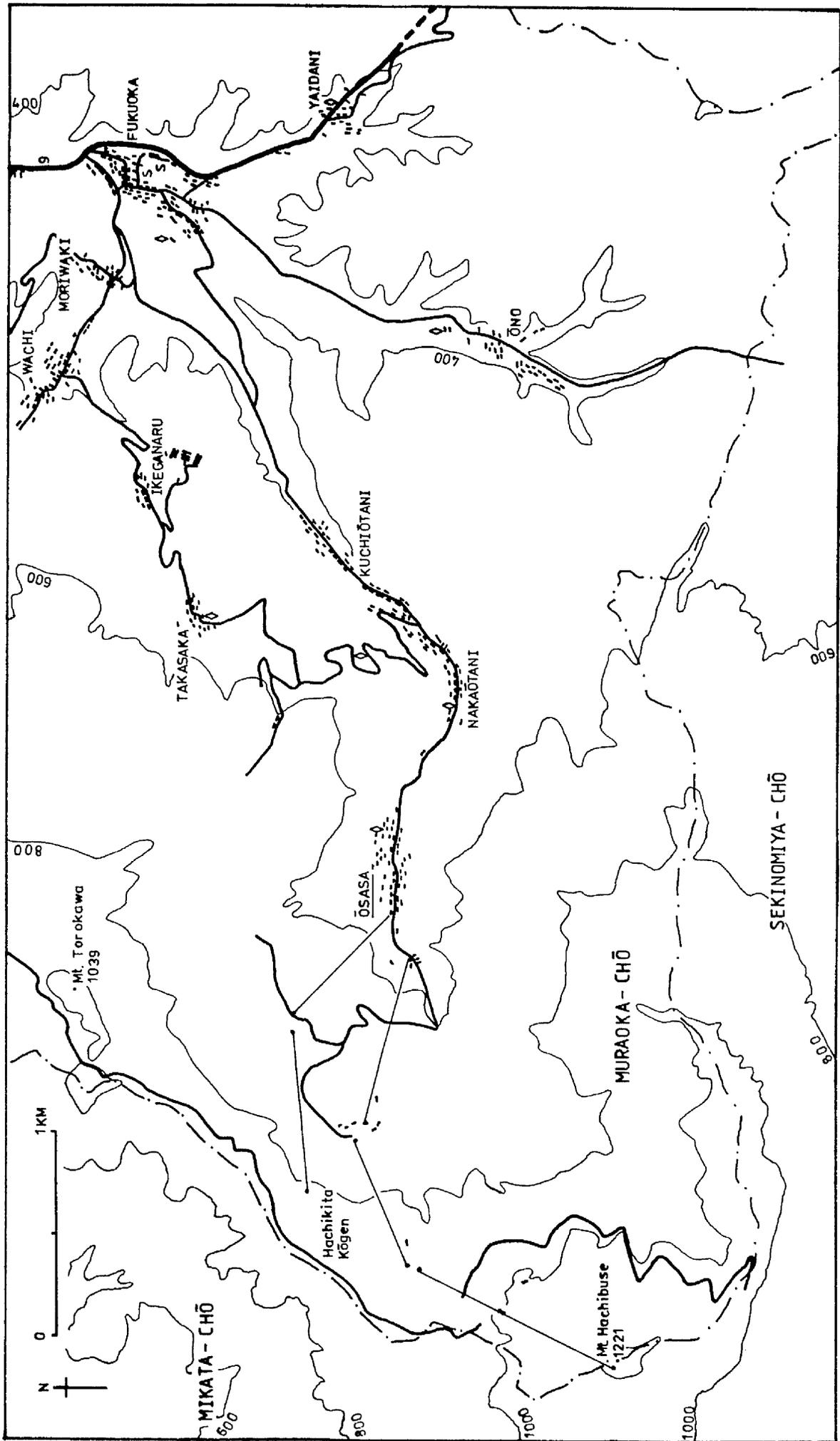
Ōsasa is located in the extreme south-western section of Muraoka-chō (see Map VII-3). Travelling southwards from the Rural District Office along National Route 9 for 6.5 kilometres, one reaches the village of Fukuoka, the second most important settlement of Muraoka-chō. On the western side of the road there stands a splendid new gymnasium, clinic and nursery school complex which was opened in July 1980, and a side road dips down immediately past it to the west. A conspicuous overhead sign stretches right across the turn-off to this road, on which is written "Welcome to Hachikita Kōgen", and other bright red, festive signposts proclaim that it is four kilometres to Hachikita Hot Spring, alias Ōsasa. The road is a gently-inclined prefectural road, which follows the course of the Ōtani River upstream in a south-westerly direction (see Map VII-9). The road was metalled in 1976 as far as the first bridge in Ōsasa, which divides the village roughly in half.

The dwellings of Ōsasa tend to straggle along the road. There are houses on either side close to the road, but on the northern side below the bridge there are some half-dozen houses and the village shrine, all of which are scattered up the steep mountainside and are inaccessible by motor vehicle. Just below the bridge, by the road, there is a village hall on the south side and the village shop on the north side opposite it. Apart from these traditional style buildings, however, the houses of Ōsasa are nearly all large, modern guest houses, a curious blend of modern Japanese and mock-Alpine architecture, with a few of the original farm-houses interspersed among them or almost hidden by their new extensions.

The house lowest down the valley is at approximately 480 metres above sea level, but the remotest is separated from the village proper, being located at above 700 metres at Hachikita Kōgen. The prefectural road continues, unmetalled from the bridge, through the village and eventually ends approximately two kilometres further up, at Hachikita Kōgen itself. This is a grassed, open "plateau" (*kōgen*) with irregular terrain at 740 metres above sea level, and its name is derived from the fact that it is below the north face of Mt. Hachibuse. From the plateau it is possible to walk up a mountain path to join a forest road which runs along the ridge at 900 metres above sea level between Mts. Hachibuse and Torokawa (see Plate 13) and gain a spectacular view down into the valley of neighbouring Mikata-chō.

Some paddy land is close to the village proper, especially below the bridge on the southern side of the road and also further up beyond the dwellings; there, too, is a tank of rainbow and golden trout. There

Map VII-9. Ōsasa.



is an abundance of small streams, tributaries of the Ōtani River, and even in summer the water is very cold and clear. In one place a shallow stream flows over rocks and here the villagers carefully nurture *wasabi*.<sup>53</sup>

Spatially, Ōsasa has no focal point. At one or two places there are tall, incongruous metal structures, which remain in summer as reminders that in winter this is a ski resort and these mark the beginning of one of the ski lifts. Despite the winter bustle, the village in early summer is extremely quiet, with few people about except some small children playing.

Ōsasa is an example of a remote rural settlement which has apparently succeeded in checking its problem of depopulation (see Table A2). Population decline began in the 1950s, but in the early 1960s it became more marked. Between 1960 and 1965, not only the total population but also the number of households declined, both by more than one-fifth. The population continued to decline until the late 1970s, but the number of households remained stable, and eventually both showed a slight increase in the 1980 census.

Table A3 shows that 60.9 per cent of the sample households had sent out migrants, a relatively low proportion for the sample villages. From Tables A17 and A18 and Figures VII-1 and 2, it appears that Ōsasa is particularly depleted of 30- to 40-year-olds, especially males. This is no doubt as a result of the outmigration of young males during the 1960s. In contrast to villages where depopulation has continued more or less unabated, Ōsasa has retained a relatively large number of young adults, particularly males aged 20 to 30, in recent years, as is clear from Figure VII-2. There were no single-person households (see Table A19), and as many as eight of the sample households - more than a third - contained six or more household members: a far higher proportion than in any of the other villages studied. Moreover, Table A22 shows that all households claimed to have a successor, and more than half of them believed that their successor would actually assume the headship of the household sometime in the future.

Why have such vicissitudes occurred in Ōsasa's population? The answer appears to lie primarily in the major conversion which has taken place in the village's economy.

As in the other villages studied, the inhabitants of Ōsasa traditionally depended on a variety of sources of income. Until the early 1960s, all households grew rice, on average 50 ares per household, and any surplus to household consumption requirements was sold. Vegetables were

grown for home consumption only. All households depended on sericulture for a cash income in summer; virtually all households kept one or two cows for breeding and draught purposes; and all healthy young and middle-aged males left the village during the winter months to work in *sake* breweries or *kōridōfu* factories. As only the eldest son inherited the farm, younger sons were expected to seek employment or marriage-adoption elsewhere,<sup>54</sup> and daughters, too, were mostly sent to work away from home until a suitable spouse was found for them, typically seeking employment in the silk-spinning mills at Wadayama and Ebara within the Tajima region.<sup>55</sup> Although there had been a slight fall in the number of households raising silkworms, this general pattern of earning a living continued until around 1962-3. From around this time, representatives from firms of the Hanshin region began recruiting at local schools, and outmigration of young people, including eldest sons, from Ōsasa to the urban labour market became marked.

The 1960 agricultural census for Ōsasa shows that 46 of the 65 households at that time kept a total of 51 cows. By 1970, only 19 of the by then 50 households kept a total of 22 animals; by 1975 only one household was keeping six, and there was none by 1978.

Sericulture declined steadily too, with 40 households raising silkworms in 1960, 24 in 1970 and none by 1975. The acreage under mulberry accordingly fell from 2.6 ha. in 1960 to 1.4 ha. in 1970 and none in 1975.

The total area of arable land in 1960 stood at 38.3 ha., or 0.7 ha. on average per farm household (see Table A23). This was a markedly higher amount per household than in any of the other villages studied. Though the total acreage fell to 36.7 ha. in 1970 and 33.0 ha. in 1975, this relatively large average size per household was maintained (respectively 0.73 ha. and 0.70 ha.). In 1980 the total area was 29.38 ha., or an average of 0.58 ha. per farm household.

Of this, the area of paddy land fluctuated from 28.9 ha. in 1960 (average 0.52 ha. per farm household) to 30.3 ha. (average 0.61 ha. per farm household) in 1970, and to 28.0 ha., of which 26.7 has. (average 0.57 ha. per farm household) were cultivated, in 1975 (see Table A24). In 1980, 23.95 ha. were cultivated out of 25.33 ha. of paddy land, an average of 0.48 ha. per household. Again, this average size of paddy holding was markedly higher than in any of the other villages studied; the yield was 3.7 tonnes per hectare, the second highest of the seven villages (see Table A25).

In addition, 46 households in 1975 held a total of 122.6 ha. of



Plate 13. Ōsasa: Hachikita Kōgen and the village viewed from the ridge between Mt. Torokawa and Mt. Hachibuse (1978)

Plate 14. Ōsasa: a bulldozer in summer preparing a ski slope for the winter. Note the pylons for chair lifts (1978)



forest land (average 2.67 ha. per household) (see Table A28).

The reason for the decline in farming in Ōsasa other than paddy rice cultivation is as follows.

As a result of the completion of National Route 9 through Muraokachō in 1967, the rural district became more accessible from the urbanized Keihanshin region, and from the following year the Ōsaka Kaihatsu Kankō Kaisha (Ōsaka Tourist Development Company) of Sakai-shi, Ōsaka Prefecture, negotiated with the villagers of Ōsasa to establish ski slopes on Hachikita Kōgen, which had hitherto been Ōsasa's common grazing land. The company paid the village ¥1 million for the ground rent, and installed chair lifts; but (according to the village headman) the company took ¥700 million in fares from the chair lifts in one season alone (see Plate 14).

At this time, five or six households tentatively formed a guest house cooperative (*minshuku kumiai*) and converted their farmhouses to guest houses. In the first year of operations, 1968, there were 30,000 visitors, and 50,000 in 1969.<sup>56</sup> The venture rapidly showed profitability, and by 1970 there were 19 guest houses.<sup>57</sup> Within five or six years all other households which had direct access to the road and were not otherwise self-employed (such as the village shopkeeper) joined the guest house cooperative, making a total of 43 guest houses in all. Moreover, the guest houses were able to take advantage of natural hot water pumped from underground, and could thus legitimately claim to be a hot-spring spa.

Upon conversion to the running of a guest house, the households concerned ceased altogether to raise silkworms or breed cattle, and males gave up leaving in the winter for *dekasegi*. Tables A36-40 show that in 1978 there were only three households among the sample of 23 which still continued to send out *dekasegi* migrants. These were all middle-aged heads of households who went to work in *sake* breweries, and all belonged to households which had no direct access to the road. Even the owners of guest houses, however, continued to grow rice and vegetables for consumption by the household occupants and visitors, and this fact accounts for the relatively large holdings of paddy land which continue to be cultivated by the inhabitants of Ōsasa.

Approximately ¥100 million were needed for building each guest house, and this was secured in the form of bank loans, to be repaid over a ten-year period. The interest, at approximately 6 per cent, amounted to around an additional 80 per cent of the principal.

The extent to which the inhabitants of the sample households are occupied by the guest houses is shown in Tables A46-A48. Nineteen of the 23 sample houses were guest houses, of which at least six had two household members and five had three household members involved in running the guest house. Twelve were household heads and 18 were wives of household heads; and those aged between 35 and 60 were the most actively engaged in guest houses. In other words, running the guest house was the occupation for breadwinners. Of particular note is that four males aged under 35 were engaged in guest houses, compared with five females, and this male participation rate rises to seven in the 35 to 44 age range. What this suggests is that young men are sufficiently attracted to running guest houses to be persuaded to remain in or return to Ōsasa, especially, perhaps, when they become mature adults, marry and start families by their early thirties. This is exemplified by the eldest son, the successor, of the household in which I stayed: in 1978 he was aged 19 and was training as a chef in Amagasaki with the intention, he said, of learning the catering trade, in order to return to Ōsasa and take over the family's guest house. Moreover, he said that most of his counterparts in other Ōsasa households were doing, or wanted to do, likewise upon leaving school. By 1980, he had indeed returned to the guest house.

It also appears that for some young men in Ōsasa, the fact of being able to make a comfortable living from the guest house itself does not account entirely for its attractiveness as an occupation: in recent years, skiing has enjoyed as great an increase in popularity among the Japanese as among Europeans, and at least some young Ōsasa men have gained glamour and prestige as ski instructors - a far cry from the lowly status of farmers.

The village itself obtains only a fixed ground rent from the development company, and the villagers smile wryly when referring to the large profits which the company accrues in Ōsasa and from which they themselves do not directly benefit. They are nevertheless thankful for the opportunities they have been afforded by the development of the ski slopes. Their income is not now limited to that from the provision of board and lodging alone; most rent out ski equipment too, and younger household members may earn pocket money as chairlift attendants, ski instructors and so forth. Thus the attitude to the development company is tinged with a degree of ambivalence.

Despite the success of the guest houses, however, the village

inhabitants expressed discontent at the instability of their income, which inevitably depends to a large extent on natural elements beyond their control: the right amount of the right kind of snow at the right time. For example, there were an estimated 170,000 visitors to Ōsasa for skiing in the 1977-78 season; but there were only 130,000 in the 1979-80 season, a decline which was attributed to its being a winter of unusually little snowfall throughout Japan. It did not snow in Ōsasa sufficiently for skiing before the New Year holidays, which form one of the two main national holiday periods in Japan and when Ōsasa generally enjoys its peak of annual business.

Furthermore, the entirely seasonal nature of skiing meant that while the inhabitants were overworked during the winter months from December to March, their resources invested in the guest house were underutilized for the rest of the year. The guest house owners were therefore attempting to expand their enterprises to cater for summer visitors, too, particularly by converting some of their paddy land to tennis courts. The guest house at which I stayed, for example, built four tennis courts. In the autumn of 1978 after the rice harvest, the foundations were prepared, and in the spring of 1979 Ōsaka Tennis Court Company was employed to build and equip the courts at a cost of ¥16 million.

Ōsasa was the most well-served by public transport of the villages studied, as there were four return journeys per day running directly between Ōsasa and Muraoka, with two extra buses from Ōsasa in the early morning. Improvement work on the road so that the bus service could reach as far as Ōsasa was concurrent with the development of the village as a ski resort, with the first 1,112 m. being improved in 1968, 1,100 m. in 1969 and the last 2,468 m. in 1970, at a total cost to the rural district authorities of more than ¥140 million.<sup>58</sup> In addition to the buses direct from Ōsasa, about twenty return journeys passed through, or terminated at, Hachikita-guchi (by the new complex of public buildings on National Route 9), and ran mainly between Yōka Station and Akioka (Mikata-chō), Yumura (Onsen-chō) or Muraoka.

Although the population of Ōsasa appears to have stabilized - at least for the present - depopulation during the 1960s and early 1970s has nevertheless taken its effect in social terms. Like the neighbouring villages, the reduced birth rate in Ōsasa meant that there were fewer children of school age than in earlier generations, and in 1972 the nearest primary school, the Ōtani Primary School (see Map VII-9), was amalgamated

with and moved to the one at Fukuoka, to become Uzuka Primary School, 4.25 kilometres away.

Moreover, with the change in Ōsasa's economic base from a traditional farming lifestyle to a ski resort, the social behaviour of the villagers has been radically modified, from that of a virtually closed community to one with attitudes approaching those of city dwellers. My presence in Ōsasa, for example, aroused far less curiosity than in any of the other villages studied, since even foreigners had not been unknown in Ōsasa. That this social change should have occurred is almost inevitable, given the close contact with ski tourists, most of whom are relatively affluent city dwellers.

To summarize, Ōsasa is a remote settlement, which, like others in Muraoka-chō, suffered severe depopulation after the Second World War, particularly during the 1960s. However, with the improvement in communications, especially the completion of National Route 9, to the area in the late 1960s, Ōsasa began to develop successfully as one of the ski resorts of Mt. Hachibuse. Thus the village's fortunes were reversed, and by the late 1970s the population had stabilized and had even begun to grow slightly.<sup>59</sup> The prosperity of Ōsasa at present therefore depends on the continued popularity of skiing as a recreational activity and the ability of the predominantly urban consumers of such activities to afford skiing as a pastime. Fashions and popular tastes change extremely rapidly in Japan, and there is no knowing how long skiing will be in vogue; and the boom in recreational activities such as skiing during the 1970s was a result of the increased disposable income of city dwellers owing to the rapid growth of the Japanese economy as a whole during the 1960s. The 1970s have seen less rapid growth, and the "market" for skiing may be nearly saturated.

Also, the Hachibuse ski resorts, including Ōsasa, have to compete with those of Hokkaidō and the Japan Alps, which in terms of latitude and altitude are more favourably endowed for skiing. The Hachibuse resorts have been exploited to their natural capacity, and their chief asset is their proximity to the Keihanshin region. Any expansion of tourism in Ōsasa, therefore, has to take the form of diversification of activities, such as for tennis or summer camps, rather than further expansion of skiing facilities.

Provided the inhabitants continue to display the adaptability which they have shown hitherto, the continued prosperity of the village

will be assured. The retention in recent years of young male successors suggests that the problem of depopulation may have been overcome, and provided these young men can attract brides - and the prosperity of Ōsasa at present almost guarantees that - population growth may even accelerate in the near future.

(viii) Kebioka

Kebioka is a large village situated in the north-western limb of Muraoka-chō (see Map VII-3). It is reached by travelling northwards along National Route 9 from the Rural District Office, passing through Muraoka Tunnel, and arriving just over four kilometres further on at the village of Irie. The northward continuation of the road leads directly to Kasumi, but National Route 9 turns sharply westwards and passes through the two villages of Irie and Wada. In 1978, access to Kebioka was by way of the Haruki Bypass (see Map VII-5) which was completed in 1976, and 2.5 kilometres further on was the turning to the west for Kumanami and Kebioka. The narrow prefectural road wound up the mountainside with hairpin bends, through Kumanami, for another 2.5 kilometres before entering Kebioka. It was largely single-track, with passing places at intervals, despite having been widened and metalled in 1977 as far as the old Kebioka schoolhouse. From there on, it swept up through the village, unmetalled, cradling houses on both sides, and passed through to join the prefectural road from Marumi to Onsen-chō.

In March 1980 a brand new road to Kebioka was opened from a point just below the entrance to the Haruki Tunnel to enter Kebioka from the north-east. At a vantage point along the new road, a huge, carved, commemorative stone announces that this is the Prefectural "Depopulation" Trunk Agricultural Road (*Kenei Kaso Kikan Nōgyō Dōro*), is 2,311 metres long, 6 metres wide, was built at a total cost of ¥365 million, defrayed half each by the central and prefectural governments, and took six-and-a-half years to complete.<sup>60</sup>

The dwellings of the village mostly face southwards, at 400-500 metres above sea level. They are closely packed together in a haphazard fashion, and many seem to be almost clinging to the mountainside in a most precarious way. From the higher section of the road, one looks down over a dense mass of roofs of all descriptions: a few thatched, some tiled in blue, some red, and some corrugated iron; there is a criss-cross of overhead wires for the village public announcement system; and beyond are the

deep green shades of the forested mountainside across the valley (see Plate 15).

In 1978, many of the farmhouses were still traditional longhouse-style, with a cowshed under the same roof as the dwelling, separated only by the *doma*, or entrance hall. In the evenings, the whole village was pervaded by the aroma of woodsmoke, as the baths in many of the households were stoked in the time-honoured fashion with firewood; only a few of the households had converted their baths to gas.

Extremely steep, narrow footpaths and steps, some concreted, some not, wound among the houses and plots of narrow, neatly-kept, terraced vegetable patches. The steepness of the terrain and the nature of the soils are such that landslides are very common in all parts of the village, and tests have to be carried out two or three times a week.<sup>61</sup>

In the lower part of Kebioka there is an old schoolhouse, which was closed in April 1978. Sixty years ago or so, it accommodated 150 pupils; but by 1977 there were only 33. One justification for metalling the road as far as the school was so that a school bus could now pick up the primary school children and take them to the Isou Primary School in Kawai. A snow-plough clears the road every day in winter. The school bus service was not available, however, for middle and high school pupils, who had to walk; the hills are too steep for cycling. After the closure of the primary school, it was put to use as a kindergarten, but villagers were uncertain as to how permanent this arrangement would be, due to the rapid fall in the birth rate. For example, there were 17 infants in the kindergarten in 1976, 14 in 1977 and 12 in 1978. Also, from the spring of 1980 the former schoolhouse was attended every Thursday by a young doctor and one nurse for medical consultations.

In the middle of the village there stands a smart village hall, newly built in 1977, largely on the strength of special funds for aid to depopulated areas<sup>62</sup> (see Plate 16).

One deserted house in Kebioka had been utilized since 1971 as a blouse factory. A jobber from Kyōto brought cut pieces, and nine Kebioka housewives were employed in stitching them. Five more were employed in a woollens factory in a similar set-up in the village from 1979.

There is a temple near the village hall, and in 1980 it was said that there were plans afoot for building a sports ground on Kebioka temple's land near the Kebi Pond (see Map VII-5). Apart from these public buildings, Kebioka supported two small shops.



Plate 15. Kebioka: dwellings. Note the wide range of building materials in evidence. The pylon in the middle distance is for the village's public address system (1978)

Plate 16. Kebioka: the newly completed village hall (1978)



Despite depopulation, Kebioka is still an exceptionally large village compared with the Japanese average, let alone for a remote upland area.<sup>63</sup> Table A2 shows that in 1980 there were 104 households and a population of 355, but this represents a decrease of respectively 20.6 per cent and 40.7 per cent since 1955. The table shows also that this decline has been a steady process, but was at its greatest in the early 1960s. The effect of depopulation upon the age-sex structure is shown in Tables A16 and A17 and Figures VII-1 and 2, from which it can be seen that there were few children aged under 10 and relatively few inhabitants aged 20 to 40 years. Overall, Kebioka appeared to be a village of the "children and old people" type.

This is reflected in the wide range of household composition (see Tables A19 and A21). The three single-person households among the sample were one 65-year-old male and two females aged respectively 74 and 54 years. Of the two-person households, all but one (eight) consisted of couples whose children had left home, ranging from their late forties to early seventies. Thus the one- and two-person households were considerably aged.

However, although there are still several children in Kebioka, their numbers, as noted above, decline rapidly in the lower age groups; and Table A22 shows that although many households responded that they had a successor, only a small proportion (18.8 per cent) believed that their successor would actually assume the headship of the household. It is therefore apparent that Kebioka is in a transition stage towards becoming one of the "old people only" type, for children were almost universally leaving Kebioka upon leaving school, and no migrants had returned as of 1978.

Before and until shortly after the Second World War, a common lifestyle was shared by the villagers. Of the then 130 or so households, approximately half raised silkworms in the summer, about 80 kept one or two cows for draught and breeding purposes, and virtually all grew vegetables for self-sufficiency. Approximately 40 hectares of rice were cultivated, averaging 30 ares per household. In the winter, virtually all healthy adult males left Kebioka to work in winter in *sake* breweries or *kōridōfu* factories, leaving only the women, children and old people to tend the cows.

This traditional lifestyle had persisted to a considerable degree in Kebioka, even in the late 1970s. According to the agricultural censuses,

the total area of arable land in Kebioka was 49.2 ha. (average 0.45 ha. per farm household) in 1960 (see Table A23). This had declined to 42.9 ha. (average 0.44 ha. per farm household) by 1970 and to 37.8 ha. (average 0.42 ha. per farm household) by 1975; but had risen slightly to 39.3 ha. (average 0.45 ha. per farm household) in 1980.

Of this, there were 37.8 ha. (average 0.34 ha. per farm household) of paddy land in 1960; 36.2 ha. (average 0.37 ha. per farm household) in 1970; 33.9 ha., of which 31.6 ha. were actually cultivated (average 0.35 ha. per farm household) in 1975; and 33.7 ha., of which 30.2 ha. (average 0.35 ha. per holding) were actually cultivated in 1980 (see Table A24). The yield was 3.5 tonnes per hectare, the third highest of the seven villages studied (see Table A25).

It is doubtless primarily the comparatively large area of paddy land in Kebioka which has enabled such a relatively large community to be sustained. The importance of rice cultivation to the economy of Kebioka underlies the justification for the building of the Trunk Agricultural Road mentioned earlier, for the road was constructed with the specific aim of facilitating the transport of fertilizers and so on to the terraced paddy fields and the transport of the harvested crop away from the fields. The investment in the road was planned and executed by the local authorities, even under the conditions of the rice production adjustment policy.

Sericulture in Kebioka died out relatively quickly, for already by 1960 only five households were raising silkworms, only three in 1970 and none in 1975. Only 0.4 ha. were under mulberry in 1960, and it is likely that the amount by 1970 was so little as to be negligible.

Cattle raising, on the other hand, has continued to be important for many Kebioka households. In 1960, 74 households kept a total of 91 cows; in 1970, 59 households kept a total of 71 cows; in 1975, 39 households had 61 cows; and in 1980, 32 households had a total of 56 cows. Of the sample households, ten kept one cow, four kept two and two kept three. One householder was reported to have expanded his herd to around ten, but apart from this one exception, the cattle in Kebioka were being kept along traditional lines for breeding purposes.<sup>64</sup>

Village inhabitants attributed the decline in the number of cattle since the war to various causes. Not only have there been price fluctuations and increases in the cost of feed, but also young people increasingly repudiate keeping cows in the traditional fashion. This is because the cows, kept as they are under the same roof as the family, produce noxious smells and attract flies, and young people, better educated than their elders, are more hygiene conscious. Furthermore, the keeping

of even only one cow binds at least one member of the family to the house at all times, in order to feed, water, exercise and clean it. Thus it is generally only the older members of the community who keep cows, and the custom is generally discontinued when they themselves become too old and frail for the work involved.

In addition, in 1975, 63 of the households held a total of 60.4 ha. of forest land, or only 0.96 ha. per household on average (see Table A28).

Tables A36-A40 show that even in the late 1970s, 32 (two-thirds) of the 48 sample households continued to send out *dekasegi* migrants, chiefly to *sake* breweries in Wakayama Prefecture.<sup>65</sup> As many as 30 of the 33 *dekasegi* migrants were head of their household, including one female; and although the majority were aged between 40 and 60 years, four were in their thirties and three were aged 60 to 74 years.

In view of the fact that of the households in Kebioka which did not send out *dekasegi* migrants, there were three of the two-person households and all three single-person households, and considering that all six were "aged" households, it is clear that the actual dependence upon *dekasegi* for households with adult males in the active age groups was even higher than two-thirds.

Table A51 shows that although only two sample households in Kebioka depended on farming only and one on *dekasegi* only, five depended entirely on farming with *dekasegi*, and as many as fourteen depended on farming with forestry and *dekasegi*. This is even taking into consideration the activities of all household members.

The prevailing traditional lifestyle in Kebioka of farming, especially rice cultivation and livestock husbandry, with *dekasegi* is unattractive for most young people of the village, as in the other villages studied. Compounded with the undesirability of the work itself for young adult males is the awareness that should they themselves opt to accept such conditions, it would be virtually impossible for them to obtain a wife. In some senses, the greater burden falls on the wife of such households, for it is she who must endure the long cold period of deep snow in Kebioka from December to March, look after her parents-in-law, children and livestock while her husband is away, as well as assist with the farming operations in the summer. If young women in Japan today find the life of a farmer's wife unattractive, how much less attractive is the prospect of becoming the wife of a farmer who also leaves for *dekasegi*. Such a life-

style places a great strain on relationships within households,<sup>66</sup> and is totally unacceptable to the educated and socially aspiring young women of contemporary Japan, even to those from other farming and *dekasegi* households in Tajima who are more likely to be accustomed to it. In Kebioka, which is such a large village and depends to such a large degree on farming and *dekasegi*, these problems are especially acute. Many young men are unwilling to risk their marriage prospects by remaining in Kebioka. The extent of the problem is indicated in Table A22, in which it is shown that although 41 of the 48 sample households responded that they had a successor, only 9 believed he would succeed and 27 thought that he would not.

In the long-term, therefore, Kebioka's future is uncertain. What is clear is that the present pattern of population decline is likely to continue for several years. At present young adults tend to leave Kebioka unless they can obtain stable employment within commuting distance, such as at the Rural District Office. Their parents remain in the village into old age. In some cases, death occurs in the village, but the more typical pattern appears to be that they continue to work some of their dry fields until too infirm and then join children who have left Kebioka. Given the present predominance of middle-aged and older inhabitants in Kebioka, the 1980s and 1990s are likely to see the continued depopulation of the village, increasingly due to deaths and outmigration of old people rather than the outmigration of the young.

Why have the residents of Kebioka continued with their traditional lifestyle? This appears to be a combination of factors. First, the village is relatively well-endowed with paddy land, and rice cultivation is relatively lucrative. Second, the population has a large proportion of middle-aged and old people; and of these, the males started their active working lives by leaving to work in *sake* breweries in winter, and the brewery work is highly skilled. The older men of Kebioka are by now experienced brewers and can obtain a sizeable income from their season of winter work. Wages from brewing averaged around ¥7,000 per day in 1978, but master brewers received up to ¥10,000 per day. This is considerably more than these men could have earned in the only other jobs open to them, such as employment in local factories or day labour, where wages were ¥3,000 to ¥5,000 per day. Thus for the older generation of men in Kebioka, the continuation of the traditional way of earning a living is the most lucrative for them.

Although Kebioka is depleted compared with former generations, the sheer size and spatial compactness of the village has ensured the survival of a strong community spirit. The new village hall, according to the villagers themselves, was in use virtually every day of the week by some sector of the community or another. The Senior Citizens' Association (*Rōjin-kai*) was flourishing, and even the Young Men's Association (*Seinen-kai*) was still functioning for various activities. The traditional dance-drama of Kebioka was still very much alive, and in 1978 was presented in the grounds of Muraoka High School for the rural district's summer festival, and once again on the NHK's Kinki regional "Newswide" programme in 1980. The various character roles were being taught by the older participators - at least one of whom was in his seventies - to the younger male inhabitants in their twenties. In other words, social interaction within Kebioka was not only within peer groups but also bridged generations, at least for males.

The nearest bus stop was at the Kumanami turn-off on the Haruki Bypass, which was served by six return journeys daily - that is, a two- to three-hourly service - between Muraoka and Yumura (*Onsen-chō*).

To summarize, Kebioka is a large village, which in the post-war years has continued to suffer population loss, especially of young adults. The poor quality of roads to the village, at least until the end of the 1970s, made commuting difficult, and the traditional pattern of farming, especially rice cultivation and the breeding of cattle, together with forestry and *dekasegi* persisted for the majority of households. The general repugnance towards such a lifestyle on the part of young people has continued to "push" them from the village. Even so, the very size of Kebioka and the geographical proximity of dwellings have meant that its social cohesion remains relatively strong considering the degree of its population problem.

(ix) Conclusion

Chapter VII has described in turn the state of seven depopulated villages of the Tajima region as they were in the late 1970s. Particular emphasis was placed upon their locations, the demographic structure of their residual populations, the changes, if any, which have taken place in their economies since the Second World War, and, to some extent the present state of social life in each of the villages.

But what can be learnt about rural depopulation in post-war Japan

from the villages studied? To what extent has rural depopulation pursued a similar course in each of the villages and to what extent has it differed? How have the inhabitants of the villages reacted to their new state of depopulation? Have they all reacted similarly? If not, why not?

Description alone of each of the villages fails to answer these and other questions. Chapter VIII, therefore, will view the seven villages as a whole, draw comparisons and contrasts among them, and aim to answer the questions posed above.

CHAPTER VIII: THE TAJIMA REGION: SOME CONCLUSIONS  
CONCERNING THE SELECTED VILLAGES

(i) Introduction

The effects of rural depopulation since the Second World War upon seven selected villages of the Tajima region of northern Hyōgo Prefecture were analyzed in Chapter VII, village by village. Chapter VIII will attempt to draw comparisons and contrasts among them and to reach some conclusions. The discussion will be focused upon the physical environment, the demography, economy and to some extent the social environment of the villages concerned, but it should be borne in mind that there are several points of overlap between such categories.

(ii) The physical environment and accessibility

For the seven villages studied, their physical environment has been the foundation upon which their fortunes have stood: it is this above all else which has prescribed their accessibility and economic activities.

The villages, it will be remembered, were selected on the basis of the severity of the decline in their populations.<sup>1</sup> It can be no coincidence, however, that all were situated in the mountainous peripheries of the rural administrative districts in which they were located.<sup>2</sup> For all but Misaki, which was on the coast, this meant being sited at altitudes of between 340 and 550 metres above sea level. The mountainous nature of the terrain meant that there was little flat land available either for cultivation or housing, and in all the villages except Kojō the dwellings stood extremely close together on steep slopes. This was most marked in Kebioka, Marumi, Yokoyuki and Misaki, where many houses were directly accessible only by steep, often unconcreted footpaths. In the case of Misaki, no dwellings were directly accessible by motor vehicle. Marumi and Ōsasa each had only one household markedly isolated from all others; but Kojō was exceptional in that it consisted of four distinct hamlets widely separated from one another. In Kebioka, where slopes were often very steep indeed, there was the constant threat of landslides within the village. And in Yokoyuki, the encroachment of wild animals from the neighbouring mountains, especially wild boars and bears, was causing crop damage and consternation among inhabitants.

Apart from constraints imposed by relief, one major physical factor affecting the activities of the village inhabitants was the pro-

longed period of deep snowfall: some two metres or more in average winters, from December to March. This effectively eradicated the possibilities in all villages for primary production in winter, except for fishing in Misaki. In Ōsasa alone, situated as it is below the north face of Mt. Hachibuse, one of the highest mountains in the Chūgoku Mountain Range, had the snow cover been turned to advantage for the development of the village as a ski resort. Indeed, whereas the period of deep snowfall was one of the most serious drawbacks to the development of all other villages, in Ōsasa it was the greatest asset. More will be said of this later.

The terrain with its steep mountainsides and narrow valleys, and the climate with its harsh winters, were the prime cause of the late development of communications to the seven villages.<sup>3</sup> It was not until 1967 that National Route 9, passing through the centre of Muraoka-chō, was completed, and ameliorated communications somewhat for the five of the villages (all but Misaki and Yokoyuki) located in the peripheries of that rural district. And it was not until 1968 that National Route 178 was completed through Kasumi-chō, facilitating communications for Misaki. Hitherto, the San'in Railway line had been the chief means of transport through Kasumi-chō, and Yoroi was the nearest station to Misaki until Amarube Station was opened in 1959. No road of national route status passed through Ōya-chō to ease communications for residents of Yokoyuki.<sup>4</sup>

The upgrading of National Route 9 had a great impact in Ōsasa in particular, as the development of the ski resort awaited the completion of the road, in order that it might become the main artery bringing skiers to the village. There is little doubt that the other villages, even Yokoyuki, benefited either directly or indirectly from the completion of the national routes.

The improvement of access roads from the main roads to the villages was generally not carried out until the 1970s. Those to Misaki and Yokoyuki were first made passable for motor vehicles in 1957 and 1963 respectively, but they were not metalled until 1968 and 1971 respectively. Those in Muraoka-chō were not metalled until the latter half of the 1970s, starting with Ōsasa in 1976; the Kebioka and Marumi roads were metalled in 1977, and the Tsukuriyama road not completed until 1980. The two roads into Kojō remained unmetalled from the neighbouring villages of Yamada and Wasabu, but in 1980 the roads between three of the hamlets of Kojō village were being resurfaced, with concrete rather than tarmac, for

greater road-holding on the steep gradients and hairpin bends. The fourth hamlet remained remote and inaccessible by anything other than foot.

In the case of Misaki, Ōsasa, Tsukuriyama and Yokoyuki, these were no-through roads (so far as any other than foot traffic was concerned) which terminated either at, or shortly beyond, the village. From Misaki, however, the road was in the process of being extended to join up with the village of Mio in neighbouring Hamasaka-chō. In all cases except Kojō, the relevant authorities took responsibility for snow clearance in winter.

Thus it was not until the late 1960s that accessibility to the villages improved markedly upon that of the early twentieth century; and it was not until the late 1970s that the villages in general, excluding Kojō, became served by roads metalled to standards virtually comparable with those of Japan's urban areas.

Access directly to the villages by means of public transport (other than taxi) was impossible in all but Ōsasa, and even there the service was not instigated until 1970 and consisted of only four return journeys per day, between Ōsasa and the centre of Muraoka. From Tsukuriyama the nearest bus stop was three kilometres, from Yokoyuki, Ōsasa (at Hachikita-guchi) and Misaki (Amarube Railway Station), it was four kilometres, from Marumi five kilometres, and from Kojō 5.5 to 6 kilometres. The walk from the nearest bus stop (or rail station in the case of Misaki) to all the villages entailed an uphill climb along roads with no pedestrian pavement, and with particularly steep gradients and "blind" hairpin bends to Marumi, Kebioka, Kojō and Misaki. In all cases, the service was infrequent. Thus despite the newly improved roads, which chiefly benefited vehicle owners, mobility continued to be a major problem for the aged, the very young, the infirm and those who could not afford to own a motor vehicle - including most housewives.

Table A54 shows the distance from each of the villages to a DID,<sup>5</sup> as recorded in the 1980 agricultural census (except for Tsukuriyama and Yokoyuki, for which data were not recorded). By this criterion, Misaki was by far the most accessible, and Kojō the most remote: the marked contrast in road conditions is reflected in the fact that while the 12 km. between Misaki and Kasumi could be covered in 25 minutes, the 10 km. from Kojō took as much as 80 minutes. The amount of time between Kebioka and Kasumi, 40 minutes, is almost certainly taking into account the Haruki Bypass and the new Trunk Agricultural Road, before the completion of which the journey took considerably longer.

(iii) The demography of the villages

The seven villages were selected on account of the decline in their populations and numbers of households in the post-war period, and Table A2 shows that population loss ranged from one-third in Ōsasa to three-quarters in Kojō for the period from 1955 to 1980.

Distinct peaks of population loss may be detected, with highest intercensal decrease rates ranging from 14.1 per cent in Kebioka to 37.8 per cent in Misaki. The timing of the peaks is not coincident for all the villages: greatest population loss occurred between 1960 and 1965 in Tsukuriyama, Ōsasa and Kebioka, and between 1960 and 1970 in Misaki, while Marumi's greatest losses were between 1965 and 1970 and between 1975 and 1980. Yokoyuki and Kojō, on the other hand, have lost approximately one quarter of their populations during each intercensal period - in Yokoyuki's case since 1965 and in Kojō since 1955 or earlier. Ōsasa was exceptional in that its population actually increased between 1975 and 1980, and that of Misaki remained static.<sup>6</sup>

A decrease in the number of households is also a useful indicator of rural depopulation, and the decline in the number of households during the period from 1955 to 1980 ranged from 20.6 per cent in Kebioka to 41.0 per cent in Misaki. There was markedly greater variation among the villages with regard to the decrease in household numbers than with population. Tsukuriyama, Misaki, Ōsasa and Kebioka all suffered their greatest losses between 1960 and 1965, Yokoyuki between 1965 and 1970, Marumi, again between 1965 and 1970 and between 1975 and 1980, while the number of households in Kojō declined most between 1955 and 1970. The highest intercensal decrease rates ranged from 7.8 and 9.8 per cent respectively in Kebioka and Marumi to 38.9 per cent in Misaki.

In the early post-war period, some outmigration of whole families accounted for the decline in the number of households in all villages, most notably in Misaki during the early 1960s. In Kojō and Yokoyuki it has not been unknown even in recent years.<sup>7</sup> Misaki was depleted in the early 1960s, when several households outmigrated at about the same time, allegedly as a result of a village levy to be imposed for certain infrastructural improvements, before such matters became the responsibility of the rural district authorities. There seems little reason to suppose that such a situation should have arisen more commonly in south-western than in north-eastern Japan; and there is no reference among Japanese scholars to such levies being a common cause of whole-family outmigration: so the

episode of whole-family outmigration in Misaki was probably rather exceptional.

During the late 1960s and the 1970s, population and household decline in all villages was typified by the outmigration of young inhabitants upon leaving school. The older generation tended to remain in the village until too old to cope. Some then left to join children who had already settled elsewhere, but some died in the village.

The extent of the outmigration of young people is shown in Tables A3-A8. The smallest proportion of the sample households which had sent out migrants was recorded in Kebioka and Ōsasa: around 60 per cent, and approximately only two migrants per household. In Misaki and Yokoyuki, at the other extreme, around 90 per cent of households had sent out migrants, averaging around three per household. The overwhelming majority of migrants from all villages were aged either 15 or 18 years old (see Table A4), and the period from 1965 to 1971 saw the greatest outflow from residual households (see Table A6).<sup>8</sup> There was remarkably little differential between the sexes and among villages, other than a markedly greater outflow of daughters than sons in Yokoyuki (see Table A7).<sup>9</sup> This suggests that in these remote settlements not even eldest sons could be persuaded to remain.<sup>10</sup>

The reasons given for the initial outmigration, however, differed markedly among the five villages for which such information was obtained (see Table A5). Whereas around 22 per cent of outmigrants from Yokoyuki, Tsukuriyama and Marumi left in order to further their education, the corresponding figure for Kojō was as high as 54.5 per cent, which may be accounted for by the fact that the village was so remote that children could not remain at home even to attend high school. In Misaki, on the other hand, only 3.9 per cent had left to further their education, which may perhaps be indicative of a lower level of aspiration in academic achievement among children of fishermen than among those of other occupational groups.<sup>11</sup> A correspondingly higher proportion in Misaki than in the other villages left to take up employment elsewhere. Around 10 per cent of migrants from all villages had left in order to marry, and these were almost all females. Kojō was the only exception, since no such migrants were recorded, no doubt owing to their necessity to leave for educational or occupational reasons at a younger age than that customary for marriage.

Migrants from all villages had been attracted chiefly to Ōsaka,

but also to Kōbe and Kyōto; and Himeji had been particularly attractive for migrants from Yokoyuki (see Table A8). Two less important centres of equal attraction were Tōkyō and Toyooka.<sup>12</sup>

Twenty-one return migrants were recorded,<sup>13</sup> none of whom was in Kojō (see Tables A9-A15). Most had been away for around four years, and only fifteen had remained. Yokoyuki and Tsukuriyama had been the most attractive villages for return migrants. The great majority had either already become head of their household or were the eldest son, and to succeed to the household headship or to look after ageing parents was by far the most common reason given for returning, especially in Tsukuriyama. In Yokoyuki, unemployment and illness were equally important as reasons for return, and unemployment even after returning was more common in Yokoyuki than in the other villages.

Although Yokoyuki and Tsukuriyama both attracted markedly more return migrants than Kojō, Marumi or Misaki, the circumstances surrounding their return is fundamentally different: those who returned to Tsukuriyama gave positive reasons for attraction to the village, and were virtually all actively engaged in local employment, whereas there was only one similar case in Yokoyuki. All others in Yokoyuki gave "negative" reasons for returning, such as being made unemployed elsewhere, and continued to be unemployed or to participate mainly in only day labour upon return. In other words, Tsukuriyama exerted a marked "pull", whereas Yokoyuki received mainly only those who had been "pushed" from elsewhere. Data are not available for Ōsasa, but there was evidence that Ōsasa, too, was exerting a positive "pull" upon return migrants during the late 1970s.<sup>14</sup>

At what stage of demographic decline were these villages in the late 1970s as a result of early outmigration of whole families, continued outmigration of young people, and the presence of some returnees? The situation with regard to their population losses and the decreases in the numbers of households would suggest three broad categories: (a) those which had stabilized, i.e., Ōsasa and Misaki; (b) those which were continuing to decline, though, perhaps, more gently than hitherto, i.e. Tsukuriyama, Marumi and Kebioka; and (c) those which had continued to depopulate steadily, i.e. Yokoyuki and Kojō.

The question, however, can be answered fully only by considering the structures of both the residual populations and the residual households.

The age-sex structure of the sample population is shown in

Table A16, and that of the total population of the five sample villages in Muraoka-chō is shown in Table A17. Figures VII-1 and 2 are population pyramids constructed on the basis of these tables, and from these pyramids, it is clear that the 45-54 age group was the largest overall and that all villages were aged to some degree. This is attributable to the universal loss of young people during the 1950s and 1960s.

The recent retention of young people and return migrants,<sup>15</sup> predominantly males, is apparent in Yokoyuki, Ōsasa, Tsukuriyama and Misaki. In Kebioka the continued loss of school leavers is particularly marked by the depleted numbers of 20- to 44-year-olds, males and females alike. Provided the present trends continue in Kebioka, with continued out-migration of school leavers and little or no return migration, the village will rapidly age during the 1980s. Yokoyuki was already extremely aged, and Kojō was in the final stages of absolute depopulation.

The presence of a relatively greater proportion of young people in Ōsasa accounts for its considerably higher proportion of dependents (children and old people), and the lack of children in Tsukuriyama is similarly apparent in the dependency ratio (see Table A18). Tsukuriyama and Misaki had the lowest index of ageing and Yokoyuki the highest.<sup>16</sup>

Such was the predominant age-sex structure of the populations of the villages, but what was the predominant pattern of household composition? Table A19 shows that households contained mainly two or three members. Yokoyuki and Marumi had a relatively large proportion of single-person households, whereas none was recorded in Misaki or Ōsasa. Large households of six or more members formed around 20 per cent of households in Kebioka and Misaki, and as much as 35 per cent in Ōsasa.

The composition of residual households is extremely important, since (as Table A20 shows) the consistent pattern which emerged for all villages was the smaller the household the more aged was its structure. Thus Yokoyuki and Marumi in particular had a relatively large number of old people living alone,<sup>17</sup> whereas households in Kebioka, Misaki and Ōsasa were generally more balanced (see also Table A21). This, again, clearly reflects the prevailing pattern of the outmigration of young people leaving behind aged parents, rather than the outmigration of whole families, most especially in Kojō and Yokoyuki.

One further clue to the effects of demographic decline upon the villages studied concerns the likelihood of potential household successors actually taking over the household headship. Low affirmative response rates of around 19 per cent were received in Yokoyuki, Marumi, Kojō and Kebioka, whereas there were quite high response rates of 50.0 to 56.5

per cent in Tsukuriyama, Misaki and Ōsasa (see Table A22).<sup>18</sup>

Thus, by taking into consideration the various demographic factors above, a clear picture may be gained of not only the present state of decline in the villages studied, but also their future under present demographic trends. The resulting typology is somewhat more complicated than that suggested earlier, with four, rather than three, categories being more appropriate:

- (a) Population renewal: Ōsasa and Misaki. The village has suffered depopulation. Initial outmigration of young people resulted in depleted numbers of 30- to 45-year-olds by 1980. However, the recent retention of young adults or return of former migrants, some of whom already had children, has begun to redress the age imbalances in the population. As a result, the population and number of households have both stabilized or already begun to grow. Given the continuation of present trends, loss of population in future will chiefly be caused by the death of the older generation rather than the outmigration of young people, and the structure of the population should become increasingly better balanced.
- (b) Potential population renewal: Tsukuriyama and Marumi. Depopulation has been severe, to the point where few children or young people are present in the village. However, the very recent retention of young adult males or the return of male migrants, who have generally not married or started families but who have engaged in gainful employment locally, demonstrates the potential of the village to regenerate as in (a), though perhaps to a lesser degree.
- (c) Continued decline: Kebioka. A secular decline in the population has been experienced and is likely to continue. While the village at present consists mainly of "children and old people", school leavers continue to outmigrate and few are retained or attracted back. Present trends indicate an imminent and rapid ageing of the population, after which population loss is likely to be predominantly due to the death or outmigration of old people.

In the case of Kebioka, being such a large village at present, it is likely to continue to survive under present trends for a further generation or so, but with considerably reduced numbers.
- (d) Absolute decline (likely or imminent): Yokoyuki and Kojō. Depopulation has been extremely severe. Outmigration of whole

households has been experienced even in recent years. Few or no children remain among the residual population, which is extremely aged. Those who do remain or return have dim marriage prospects. Returnees recorded (in the case of Yokoyuki only) are predominantly lacking in initiative, not actively engaged and thus are unlikely to remain in the village for long. Population loss is due primarily to deaths and outmigration of old people. There is little or no likelihood of the continued survival of the village beyond the lifespan of the present cohort of middle-aged inhabitants.

(iv) The economy of the villages

Until shortly after the Second World War, the way of earning a living for all households in all villages had changed little for decades - and in all probability had remained much the same since the Meiji Restoration of 1868. Indeed, in many respects it had probably undergone little fundamental change since the Tokugawa period.

Primarily, village inhabitants engaged in subsistence agriculture: they grew rice and vegetables for household consumption, on holdings of approximately 0.3 to 0.5 hectares, and any surplus of rice was sold. It appears, especially from the villages of Marumi and Tsukuriyama, that it was chiefly those households with inadequate arable land which engaged primarily in charcoal burning instead of farming, though the distinction between farmers and charcoal burners was evidently not clear-cut. Most households with sufficient arable land kept one or two cows for draught purposes and in some cases also for breeding and sale. Likewise, most farming households in all the villages practised sericulture during the summer as a further source of cash income.

Although an extremely large proportion of the land area of the villages in question - generally 90 per cent or more - was forest, the great majority of village inhabitants privately owned only three or four hectares of forest land, and even then it was often a fragmented holding. Each village seems to have had one or two households which owned considerably larger forest holdings, but even these were not more than twenty hectares (see Table A28). Thus, apart from a few inhabitants, especially in Tsukuriyama and Kojō, who engaged in casual forestry day labour, forestry played a surprisingly small role in the lives of the village inhabitants.<sup>19</sup>

Thus far did the seven villages share a common economic base. In Yokoyuki, basket willow was a common cash crop for sale to the wicker-work industry of Toyooka; and in Misaki, located as it is on the coast, a majority of households engaged in some fishing.

For all the villages, the severity of the climate in winter placed restrictions on the economic activities it was possible to carry on during the winter months. In the five villages of Muraoka-chō, this problem was overcome almost exclusively by the sending out of *dekasegi* migrants - that is, all healthy males - to work in *sake* breweries in the Keihanshin region or *kōridōfu* manufactories in Nara Prefecture.<sup>20</sup> In Misaki, due to the availability of work even in winter in fishing, only a few left for *dekasegi*. And in Yokoyuki, most households spent their winters making chopsticks; only a few males left for *dekasegi*, at least one of whom specialized in the making of Indian ink blocks in Nara Prefecture.

The first marked change in this traditional economic pattern in the sample villages occurred around five years after the end of the war, with the slump in demand for charcoal due to rapidly increasing competition from fossil fuels.<sup>21</sup> Households which had hitherto depended primarily on charcoal burning, who owned little or no arable land and were thus unable to convert to some other form of primary production, had virtually no alternative but to uproot and seek a livelihood elsewhere. It would appear that some outmigration of whole families from the villages occurred in the immediate post-war period, chiefly on account of the bottom falling out of the charcoal market. Several Japanese commentators have noted a greater prevalence for outmigration of whole families (*kyōka rison*) in south-western than in north-eastern Japan,<sup>22</sup> but it is to be added that although this may be true (and the present study does not attempt to draw comparisons between the two parts of the country), it may be asserted with a considerable degree of confidence that such outmigration occurred chiefly among former charcoal burners and almost exclusively only in the early stages of the depopulation process.

Charcoal burning as a source of cash income declined very rapidly during the early 1950s. Thereafter, though in a less dramatic fashion, all the primary sources of production except fishing in Misaki, including arable farming, began to decline, beginning with cattle rearing. Throughout the mid- and late 1950s, draught cattle were completely replaced by small, motor-powered cultivators. The inhabitants of the villages them-

selves no longer had need of draught cattle and the market for the sale of calves for that purpose was completely eliminated by mechanization. In all of the villages, especially Kojō, Kebioka, Marumi and Ōsasa, a considerable number of households continued to keep one or two cows, but now it was for the sale of calves for fattening for the expanding beef market. However, fluctuations in the cost of fodder and the value of calves, uncertainty with regard to the calving of the one or two cows kept, in addition to increasing distaste for the keeping of cows on the part of younger household members, resulted in a steady withdrawal of households from traditional-style cattle raising during the 1960s and 1970s.<sup>23</sup>

Furthermore, from the 1950s onwards, the small-scale sericulture of households in all seven villages and the basket willow production in Yokoyuki suffered almost absolute decline due to competition from synthetic fibres.

Largely coincident with the decline in markets for the products which had traditionally provided farmers with a cash income, the early 1960s saw the beginning of active recruitment in the villages by firms of the Keihanshin region.<sup>24</sup> Thus the declining prospects for making a living from farming and increasing prospects for more stable job opportunities in the urban areas of the Keihanshin region resulted in an almost universal exodus of school leavers from all seven villages from the early 1960s onwards.<sup>25</sup>

In all villages there has been a notable decline in both the total acreage of arable land and of paddy land, since at least 1960. Tables A23 and A24 show that the decline has been most marked in Misaki and Yokoyuki. In Misaki, this greater propensity to abandon arable land reflects the extent to which the inhabitants were already less dependent upon farming than those of the other villages.<sup>26</sup> In Yokoyuki, on the other hand, it reflects primarily the extreme ageing of the residual population.<sup>27</sup>

As in Japan in general, the decline in the acreages of total arable and paddy land has not resulted in a substantial increase in the average size of holding.<sup>28</sup> In Tsukuriyama alone did the average size of arable holdings increase markedly, but even so this was by only 0.1 ha. In Marumi, Kojō and Kebioka the average size of arable holdings changed little; in Ōsasa there was a decline, and in Yokoyuki and Misaki the acreage was at least halved.

It is also noteworthy that the acreage of paddy land had declined somewhat less than the total for arable land, and the average size of paddy holdings had remained virtually unchanged in all but Yokoyuki. This, it is to be remembered, is in spite of the government's policy both to reduce the rice acreage and to diversify into other crops.<sup>29</sup> Not only does rice remain overwhelmingly the staple food in the diet of the inhabitants of remoter areas, but it remains a lucrative crop which requires less labour and fewer other inputs than virtually any other in these marginal conditions. From Tables A26 and A27 it is clear that the majority of residual households which abandoned arable land did so during the early 1970s, and that the rice production adjustment policy was the most common reason for its abandonment. To a considerable extent, though, a high rate of responses such as "inadequate or aged labour" and "fields too distant or too inaccessible" reflects the rapid ageing of the residual labour force in the villages. In Yokoyuki, the blame was laid, literally, mainly at the feet of wild boars.<sup>30</sup>

The predominantly middle-aged and older inhabitants, who generally chose to remain in the villages in question,<sup>31</sup> and who formed the major active portion of the residual population, were thus increasingly forced to consider from the early 1960s onwards what alternative opportunities were open to them for securing a cash income. The case studies showed a wide variation among the villages in the predominant response of their inhabitants to depopulation and the collapse of their traditional economic bases.

To begin with, it should be pointed out that in all villages, including Misaki and Ōsasa, there were some households which had failed to adapt to changing circumstances and which continued to scrape a living along traditional lines. Nevertheless, it emerges that a majority of households in each village responded in a particular way, so it is possible to identify a prevailing trend for each of the villages.

The first and most fundamental distinction which may be drawn is between those villages which departed from, or substantially modified, the traditional way of life and those which failed to do so. The former included Ōsasa, Misaki, Tsukuriyama, Marumi and Yokoyuki, and the latter included Kebioka and Kojō.

In the case of Kebioka and Kojō, the majority of households in the late 1970s continued to depend chiefly upon *dekasegi* and rice production - despite the lack of flat land for efficient rice cultivation and adverse changes in government policy towards it. A large number of households in

Kebioka continued to keep one or two cows along traditional lines, but even this practice had died out in Kojō. Some inhabitants engaged in forestry day labour locally during the summer months. In Kojō, only one of the fourteen households had diversified, by specializing in *shiitake* production.

The response of the five villages of which the economy had been substantially modified differed each from the other.

In Misaki, there had been increasing specialization in fishing and in 1979 fishing formed at least a third of the total household income (see Table A52). Fishing had been able to attract young men of the village, and other young people had been retained in recent years by opportunities for full-time employment within commuting distance, including white-collar work (see Table A35). This full-time employment accounted for a further third of incomes in Misaki.

Tsukuriyama had developed in a broadly similar fashion to Misaki, only with a modified form of farming rather than fishing. Farming was the chief source of income, again accounting for approximately a third of the total. Around 40 per cent of the farm income was derived from *shiitake* cultivation, and there had also been some specialization in sericulture, on a larger scale than had been customary (see Table A32). In Tsukuriyama, this kind of farming, together with *dekasegi* was prevalent among the middle-aged members of the village. As in Misaki, a relatively large proportion - again, nearly a third - of total income was derived from full-time employment, but it was mainly blue-collar work on the part of younger adults (see Tables A34 and A35).

Marumi, too, derived its income chiefly from farming, around half of the total. It had increasingly specialized in cattle breeding, which accounted for around 80 per cent of its farm income (see Table A32), and had attracted young men.<sup>32</sup> As in Tsukuriyama, *dekasegi* continued to be practised on the part of older farmers, but had been completely abandoned by the younger men of the village (see Table A37). (The proportion of income derived from full-time employment in Marumi, 12.5 per cent, was largely owing to the presence of one household, whose head was a *sarariiman* in Himeji, with a high income.)

The two villages whose economies had been the most modified were Ōsasa and Yokoyuki.

In Yokoyuki, the chief source of cash income had become casual day labour (see Tables A41-A44). Virtually all day labourers in

Yokoyuki were chief breadwinners, that is, heads of households, their wives and eldest sons, and day labour accounted for approximately one-third of the total income of the village. Nearly all of the casual day labourers in Yokoyuki were employed on road construction and repair sites. Farm income accounted for only 15 per cent of the total, and nearly half of that was derived from the cultivation of *shiitake* mushrooms (see Table A32). In other words, primary production had largely declined, but what production there was had been converted mainly to specialization in *shiitake*. It was noted earlier that from the mid- to late 1960s onwards the roads of the Tajima region began to undergo improvements.<sup>33</sup> In the face of declining cash income from traditional sources in Yokoyuki, and with limited alternative job opportunities, the inhabitants turned to day labouring on such construction sites. Wages from this source were relatively low and the work hard; and from the fact that few inhabitants of the other villages, where there were equally as many opportunities for day labouring but where there were other preferable sources of cash income, sought such employment, it seems clear that day labour on road construction sites was a "last resort" occupation. However, once the current programme of investment in road construction is complete, such employment opportunities will inevitably retract to those necessary for mere routine maintenance works.

Moreover, for those in Yokoyuki who were unable to be so employed, home piecework (*nai-shoku*) in bag-making provided a meagre supplementary income. Of course, without opportunities for day labour and home piecework, it is likely that economic decline would have been all the more severe in Yokoyuki. In a sense, though, the conversions which had taken place in Yokoyuki's economy were not only a necessity on account of the degeneration of the traditional economy but were also a contributory factor in the dissolution process. This is entirely different from the situation in Ōsasa.

In Ōsasa, the change from the traditional way of life to the management of guest houses occurred swiftly upon the development of Hachikita Kōgen as ski slopes after improvements to National Route 9. All households which had direct access onto the road took up guest house management, leaving only a handful of the less well-sited households to continue to make a living in the traditional fashion. The men of all households which established a guest house immediately gave up *dekasegi* migration. Thus, unlike in Yokoyuki, the changes in Ōsasa's economy did

not act merely as a partial brake on virtual total economic collapse, but instead caused economic regeneration and unprecedented prosperity.

The above discussion has drawn attention to two aspects of the response of the seven villages to depopulation and economic decline (which are closely interrelated). The first is that the economy of some villages has remained almost unchanged while that of others has been considerably modified. The second point is that in all of those which have undergone conversion, it has consisted of some sort of specialization within each village. The types of specialization for the villages studied for this research comprised chiefly fishing, cattle breeding, *shii*take cultivation, full-time local employment, guest house management, road construction day labour and home piecework. Basically, two types of conversion are identifiable: those (the first five types of specialization above) which are conducted with the positive and conscious aim of raising the standard of living of the inhabitants and increasing their prosperity; and those (that is, road construction day labour and home piecework) which are makeshift occupations, only to be resorted to when there are no other alternatives, and which are insufficiently lucrative as to reverse economic decline.

The type of specialization, fishing, which took place in Misaki was, needless to say, not a choice open to the inhabitants of the inland villages. But since Ōsasa enjoyed considerable success as a result of its conversion into a ski resort, why did the other villages not follow suit? The reason is a simple matter concerning the physical environments of the villages. Ōsasa is located, it will be remembered, on the north face of Mt. Hachibuse (see Map VII-9), one of the highest mountains not only in the Tajima region, but also in the Chūgoku Mountain Range. At this latitude of the Japan Sea coast side of Japan, the altitude and snow conditions of the Mt. Hachibuse-Mt. Hyōnosen region (see Map VI-3) are the minimal for the commercial development of ski resorts. While the other inland sample villages were located high in mountains, the mountains behind them were simply not high enough and extensive enough for such commercial development.

Then given that Ōsasa was exceptionally well-favoured in this respect, and the other villages not, why was it that some of the other villages diverted from traditional production - for example, into cattle breeding in Marumi - and others, Kebioka and Kojō, did not? It is understandable in the case of Kojō, which was particularly remote, exceptionally small and, moreover, dispersed. But it is rather surprising when we consider Kebioka, a large and compact settlement. The chief reason seems to be that

Kebioka was relatively well-endowed with terraced paddy fields, and that, despite a national policy of discouragement towards rice cultivation, it was still a lucrative source of income for Kebioka inhabitants. Combined with *dekasegi* migration in winter - which, for the experienced middle-aged and older participants could provide a substantial supplementary income - the traditional lifestyle had continued to be able to furnish a satisfactory income for the residual population to a greater degree than in any of the other villages.

One further aspect which is extremely important to the discussion of the village economies is the role played in each case by cooperatives. In Misaki the inhabitants had formed a fishing cooperative for fixed net fishing together with the inhabitants of two neighbouring villages. In Ōsasa the households which had converted to guest house management had formed their own guest house cooperative. Those households which had specialized in cattle breeding in Marumi had formed their own livestock cooperative. Tsukuriyama evidently had an active village cooperative, including a communal shed for cooperative rice grading and polishing, and availed itself of the services of Muraoka Agricultural Cooperative, especially with regard to rice, *shitake* and sericulture. Kebioka also used to good advantage the Muraoka Agricultural Cooperative and the Mikata-gun Livestock Cooperative. In Yokoyuki and Kojō, however, there was little evidence of assertive cooperative participation, at least none beyond nominal, somewhat "passive", membership of the Rural District's Agricultural Cooperative.

There was thus a striking correlation between the prosperity of the village and cooperative economic organization. The households of villages which formed their own cooperative, as in Ōsasa and Marumi, or belonged to a small cooperative, as in Misaki, were without doubt the most prosperous overall. Those, as in Tsukuriyama and Kebioka, which primarily "actively" availed themselves of the rural district agricultural cooperative, were able to make a satisfactory living. In those in which the cooperative was regarded "passively", as in Yokoyuki and Kojō, and where there was little or no village cooperative initiative, there had been almost total economic collapse.

To recapitulate, the case studies of the seven villages show a clear distinction between those in which the response to depopulation and economic decline was a conversion of the traditional economic base and those in which no such conversion took place.

Of the former, conversion in all cases involved some degree and type of specialization, which differed in all the villages. Furthermore, while it was in most cases a "positive" conversion, bringing renewed prosperity to the participating households, in Yokoyuki it was what may be termed a "negative" conversion, which merely attenuated a little the almost total economic dissolution of the village economy.

Last but not least, there was a clear correlation between the general level of prosperity and the degree of active participation in a village cooperative venture.

(v) Social aspects of the villages

The social effects of rural depopulation are of two sorts. First, there are those which are quantifiable, inasmuch as they are manifest and readily comparable with other villages or areas. They include expressions of the social functions of the villages, such as shops, schools, village halls, places of worship and festivals. Second, there are those aspects of rural depopulation which are unquantifiable, involving what is most often referred to as "community spirit".

First, an important socio-economic impact had been the closure of village shops.<sup>34</sup> The general stores of Marumi and Yokoyuki closed during the 1970s. Tsukuriyama and Kojō had no shop, and that of Misaki supplied very little. Only in Ōsasa, with its renewed prosperity and inflated winter population due to visitors, and Kebioka, with its considerably larger population than the other villages, had the village shop survived. The lack of a permanent shop placed considerable inconvenience upon the village inhabitants, which was only partially alleviated by periodic visits from mobile shops to Marumi, Yokoyuki and Tsukuriyama. The inconvenience was felt especially by the older, non-vehicle-owning sector of the communities, and particularly by aged households. It was precisely those villages with a high proportion of such households, notably Kojō and Yokoyuki, and thus those that had the greatest need for a shop, which had lost it or never had one. In winter, the mobile shops were unreliable due to weather conditions, and in Kojō, which was in effect cut off during the winter, supplies were unobtainable without braving the treacherous path to the nearest shop in Yamada.<sup>35</sup>

The villages had also been adversely affected by the closure of their primary school (or branch primary schools) upon amalgamation with those of neighbouring villages.<sup>36</sup> The general outmigration of young

people from the early 1960s onwards in all the seven villages had resulted in the retention of few of that and succeeding cohorts. The effects are most clearly demonstrated in the population pyramid of Kebioka (Figure VII-2). Of the increasingly few under-30-year-olds who *had* remained then, they had had smaller families on average than in former generations. Their children were rapidly approaching or passing school leaving age by the late 1970s, and leaving the village. Thus since the early 1960s there had been a very steady fall in the numbers of children being born in each village, to the point where there were only one or two children enrolled in primary school - as, for example, in Yokoyuki, Kojō and Marumi, and none at all in Tsukuriyama.

The schoolhouses of the villages had been built at a time when not only were there larger numbers of households but when women bore larger numbers of children.<sup>37</sup> Thus by the early 1970s the numbers of primary school children in the villages had become too few to justify the maintenance costs of the schools. In Misaki alone had the branch school been retained, and even then only for the first three grades (6- to 9-year-olds). All other primary school children in the seven villages were required to commute to school by school bus, and for all villages except Kojō the distances were from 3.0 to 6.25 kilometres. In the case of Kojō, primary school children were required to walk the 4.25 kilometres to Yamada merely in order to catch the school bus, and travel a further 11.5 kilometres to Kawai. In Yokoyuki, the only case of whole-family outmigration in recent years had been chiefly stimulated, according to neighbours, by concern for the children's education, including especially anxiety over the journey to and from school.<sup>38</sup> For older children, no such direct village-to-school bus was provided, and they were obliged to walk - or cycle if the terrain allowed - to school or to the nearest regular bus stop on a main road.

All the villages had some sort of public meeting place (*kōminkan*). On rare occasions in Kojō the thatched, unrenovated, former branch schoolhouse was used for that purpose. In Tsukuriyama, likewise, the former schoolhouse had been partially renovated for use as a meeting hall, which appeared to be fairly frequent. All the other villages had halls which were purpose-built, though not generally kept very clean and in various stages of disrepair. The one exception was Kebioka, with a new hall, constructed largely with the help of funds for aid to depopulated areas,<sup>39</sup> and it was in almost daily use.

All the villages had retained their Shinto shrines and, in the case of Kebioka, a Buddhist temple which had a resident priest. The shrines, though, were all kept in a barely adequate state of repair. The village dance-drama of Kebioka and the festival of Tsukuriyama were still performed, though such communal annual festivities appeared to have largely died out in the other villages.

What is generally termed "community spirit" is notoriously difficult to define, let alone quantify.<sup>40</sup> Without having been able to observe at first hand the social life before depopulation took place, it is extremely hard to fully assess the social impact of depopulation upon the community spirit of the villages in question. A complete social anthropological study was beyond the scope of the present research; but it was possible to gain some impression from the present older inhabitants of what life used to be like, and to note the general behaviour of villagers at present.

One indicator of the extent to which the villages were formerly "closed" and to which intermarriage was common<sup>41</sup> is the small number of family names in each of the villages.<sup>42</sup> In Kebioka, for example, with over 100 households, there were only 11 different family names. There were 26 households with the name Takumi, 16 Kishi, 16 Kishimoto, 15 Odani and 14 Tanaka. In Tsukuriyama, 12 of the 18 households were named Yamamoto. In Ōsasa, there were 12 Tabuchi, 11 Nishimura, 9 Tanabe and 8 Nishi. Yokoyuki had only four family names: 25 households called Kobayashi, 16 Adachi, 7 Kishihara and 1 Sakaguchi. In Marumi there were 9 households named Tainaka, 8 Nagase, 6 Moriwaki and 6 Tanaka. In Kojō, all the households of Ōkiri and Hontani had the same family name as the name of their hamlet, and in Kojō hamlet 4 households were Nakayama, one was Katayama and one was Yamamoto. In Misaki alone was there a considerably wider variety of family names, there being 16 among the 21 households, and the largest number with the same name, Asada, was only three. This is indicative of the traditional characteristic of greater mobility in Japanese fishing villages than in purely farming communities: the limited availability of arable and other land in farming villages was a strong deterrent to the entry of newcomers, whereas this constraint was less important in predominantly fishing villages, in which there were resources other than the land from which to make a living.<sup>43</sup>

With perceptive observation, one could judge whether the general atmosphere of a village was cheerful or gloomy, extrovert or introvert, hospitable or hostile and so on, certainly at the extremes. The people

of Misaki, for example, were felt to be considerably more relaxed, easy-going and extrovert than those of any of the other villages.<sup>44</sup> Marumi was strikingly split between those who were cooperative and forthcoming, and those who were less hospitable. This appeared to be as a result of tension among the inhabitants themselves, and, one suspects, may have been aroused by jealousy towards the more successful sector of the community. In Ōsasa, inhabitants gave the impression of being incessantly busy and pressed for time, and though polite they were less inclined than elsewhere to spend time discussing the questionnaire and the subject of this research. In both Tsukuriyama and Kebioka, though very different in size, the inhabitants were socially well-integrated and amiable. In Yokoyuki and Kojō there was a clear conviction that their villages were bound not to survive for many more decades, and in both cases this was accepted with an air of resignation. In Kojō this took the form of a quiet but cheerful fatalism, whereas Yokoyuki was pervaded in some way by a general lack of confidence and a gloomy atmosphere, and it may perhaps have characterized the generally "dark" image of depopulated villages in the minds of the Japanese public.<sup>45</sup>

Unlike the other villages, Yokoyuki contained not merely an exceptionally aged population but also a remarkably large number of inhabitants who suffered from one kind of disability or another, including deaf-muteness and mental illness. Only one other similar case was recorded in any of the other villages, that of a 60-year-old woman in Misaki, who had been blinded by measles at the age of six and who lived with her younger brother and his family.

However indefinable "community spirit" may be, there was no doubt that it was a contributory factor with regard to the response of the inhabitants to depopulation and economic decline. As with the proverbial chicken and egg, it is arguable that a lack of community spirit may have contributed to depopulation, or may have at least exacerbated it, rather than being simply a result of depopulation. This may indeed have been the case in, for example, Yokoyuki, despite its dense linear pattern of settlement. That community spirit is weak in Kojō is understandable given its small size and dispersed hamlets. On the whole, however, a fundamental lack of community spirit appears not to have been a major *cause* of depopulation in the other villages. The evidence for this is the willingness on the part of a large proportion of the inhabitants of all the other villages to participate actively to some degree in cooperative

ventures in order to overcome the collapse of their traditional economies.

An important aspect of this latter point concerns the initial impetus for the cooperative activities. It is known, for example, that in the case of Misaki the introduction of the fixed net technique and the establishment of the Amarube Fishing Cooperative were due to the initiative and leadership skills of one fisherman who had settled in Hama during the war. In Ōsasa, the establishment of the Guest House Cooperative was stimulated by the Ōsaka Tourist Development Company, in whose interests it was to play a close guiding role in the cooperative's development. In Tsukuriyama and Kebioka, cooperative work was carried on under the umbrella organization of the Muraoka Agricultural Cooperative. In all these villages a very strong initial leadership was all-important for the formation and successful execution of cooperative activities within the village; but in all cases that leadership had come from outside.

The only exception was that of Marumi. By the late 1970s the economy of Marumi had begun to revive, and - in the present economic and political climate - appeared likely to pick up further. This had undoubtedly become possible as a result of the success in cattle breeding which one young farmer in particular enjoyed. He had showed great initiative and was outstandingly the most business-like of any of the farmers interviewed in any of the villages. It was very clear that it was his prosperity and leadership skills above all which had encouraged younger men in the village to follow his example. Ultimately this had led to the formation of the livestock cooperative in Marumi.

Before the young farmer in question had emerged as a clear leader, both the demographic structure and the economy of Marumi had been in severe decline. It appeared from the lack of young adults and children that the village was doomed to eventual absolute depopulation. This may, perhaps, partially account for the somewhat grudging attitude of some of the aged households, who may be finding it hard to adjust psychologically to a new note of optimism for the village. They may resent, albeit perhaps subconsciously, the authority bestowed upon certain younger farmers,<sup>46</sup> especially, as is the perversity of human nature, since it was apparently justified.

The situation in Marumi, with its very clear and positive leadership, was in very marked contrast to that of, say, Yokoyuki, where the young and old inhabitants alike were, it may be judged, completely lacking in initiative of any sort, let alone that necessary for an ambitious project.

Earlier it was noted that village prosperity and economic renewal were closely correlated with some form of cooperative organization. It can now be added that a general willingness to cooperate, based on a strong "community spirit", is essential to the smooth and efficient operation of the cooperative.

Moreover, for the initial impetus and continued success of the cooperative, a sound and effective leadership is a prerequisite. This leadership can emerge even from within severely depopulated villages, as in Marumi, though is more likely to be directed from elsewhere.

To sum up, the studies of the seven villages of the Tajima region indicated two main social aspects of the effects of depopulation upon them.

The first was that there had been a marked retraction of social functions, most notably of shops, schools and annual festivities.

The second point was the importance of the survival of a "community spirit", especially a willingness to cooperate in the economic sphere with other village inhabitants. Furthermore, a well-defined leadership was essential for translating that community spirit into positive action.

(vi) Conclusions

The foregoing sections have attempted to indicate the chief ways in which the sample villages of the Tajima region appeared to share a common experience of depopulation and the limitations to their common ground. It was demonstrated that although all seven villages were located within a fairly small but broadly depopulated region, that although their traditional economic bases, barring Misaki, were primarily based on farming and charcoal burning, and that although their experiences of the depopulation process were all very similar, nevertheless they had all responded in their own several ways. This fact, if it does nothing else, should serve as a warning of the pitfalls of founding broad generalizations on small samples.

Despite the small number of sample villages, a distinct pattern emerges from the case studies taken together.

To begin with, the villages were all located in the mountainous peripheries of the rural administrative districts to which they belonged, and generally speaking, their population decrease rates were highest during the 1960s, especially the early 1960s. This was before main roads in the region were improved and upgraded to National Route status.

Furthermore, the retention of young people and return of former migrants has occurred most notably during the mid- to late 1970s, mainly after the improvement of village access roads. Although there are so many other contributory factors to depopulation, relative accessibility by the road network cannot be overlooked as an extremely important consideration in both depopulation and population renewal.

Second, the typical pattern of population decline was as follows. There was some outmigration of whole households in the early to mid-1950s, particularly of charcoal burners and their families. Other than in Misaki, where a relatively large number of households left en masse in the early 1960s on account of levies for infrastructural improvements, the outmigration of whole families was exceptional after the mid-1950s. From the early 1960s onwards, the villages saw the rapid outmigration of their young people to the industrialized Keihanshin region, typically upon leaving school, boys and girls alike. As a consequence, the residual populations rapidly aged. Kebioka was still at this stage in the depopulation process in the late 1970s, whereas others, especially Marumi, Tsukuriyama, Yokoyuki and Kojō, had already been virtually totally depleted of school age children. At this later stage, the loss of old people - either through death within the village, or, perhaps more usually, through their leaving to live with a child who had left earlier - became the most common cause of population decrease and the decline in the number of households.

In some of the villages, notably Ōsasa, Misaki, Tsukuriyama, Marumi and Yokoyuki, the retention or return of young adult males had occurred in recent years, and had resulted in the reappearance of infants in Ōsasa, Misaki and Tsukuriyama. This may be viewed as a clear indication that population renewal was already beginning to take place in those villages. In Marumi, the young men present were economically very active and renewal was a likelihood in the near future; but in Yokoyuki, where the majority of such young men were less gainfully employed, they were unlikely to remain in the village and, as in Kojō, absolute depopulation seemed inevitable.

Third, all seven villages had responded to the decline of their traditional economic bases in different ways. Some had substantially modified their economy, while two, Kebioka and Kojō, had not. Kebioka and Kojō had continued to suffer depopulation. Of those which had modified their economy, all had specialized in some way or another. The

Figure VIII-1. Schema of factors in depopulated villages of Tajima region.

Physical	Demographic		Economic				Social			Case Study Villages
	Population structure	Population projection	Chief source of cash income	Village Economy	Economic Organization	Functions	Community Spirit	Leadership		
Less poor	Relatively well-balanced	Growth	Self-employment Full-time employment Part-time employment	"Positive" version	Active Cooperative	Declined	Strong	Strong	Osasa Misaki	
Poor	Ageing	Potential growth	<i>Dekasegi</i>	Non Or "Negative" version	No Or Passive Cooperative	Considerably declined	Weak	Weak	Tsukuriyama Marumi Kebioka	
Very poor	Aged	Absolute depopulation	Day labour Home piecework			Totally declined			Yokoyuki Kojo	

type of conversion in Ōsasa, Misaki, Tsukuriyama and Marumi was of a "positive" kind, and was clearly helping to increase prosperity for the participating households. In Yokoyuki, it was "negative" in so far as it involved low paid, "last resort" occupations and merely attenuated continued economic decline. The difference was, so to speak, as between a curative medicine and a pain-killer. Furthermore, the villages - all but Yokoyuki and Kojō - which had responded by organizing themselves along active cooperative lines were conspicuously the more prosperous.

Fourth, depopulation had affected the social fabric of the villages by bringing about almost universal decline in their educational, commercial and cultural functions through, respectively, school closures, shop closures and the decline of village communal festivities.

With regard to "community spirit", it was evident that a reasonably strong willingness to work in a concerted effort with others of the village was a prerequisite to the success of the cooperatives. This community spirit was notably absent among the inhabitants of Yokoyuki, Kojō and certain of the less prosperous households of Marumi. It was also clear, however, that a decisive leadership was essential for stirring latent community spirit into positive action.

In short, all the factors discussed above may be schematized as in Fig. VIII-1. As with any attempt at schematization, the characteristics of elements so individualistic as villages renders them not all totally consistent with the general pattern. Ōsasa and Misaki, of which most inhabitants had retained a strong community spirit under good leadership and were able to act concertedly in a positive cooperative effort, had achieved a relatively well-balanced population structure and were beginning to experience population renewal. This was in complete contrast with Yokoyuki and Kojō. In Kebioka, for example, a reasonably active cooperative organization, combined with no conversion of the traditional economy, had resulted in a slower but continued population decline. Thus, all things considered, there is a surprisingly high degree of consistency among the villages with the pattern proposed in the schema.

CHAPTER IX: RURAL DEPOPULATION IN POST-WAR  
JAPAN: CONCLUSIONS

(i) Introduction

This thesis has attempted to analyze the process and effects of rural depopulation within remote rural settlements of Japan since the Second World War.

For this purpose, what may be termed the disciplinary context of the thesis was furnished in Chapter II, with a review of studies of rural depopulation centred upon Europe and especially the British Isles. Chapters III, IV and V provided an account of respectively the demographic, economic and social backgrounds to rural depopulation in post-war Japan. In Chapter VI, attention was focused upon one specific region, Tajima, which has suffered from rural depopulation since the war. In order to examine to what extent the disciplinary, national and regional trends are reflected in specific remote, depopulated settlements, seven such villages within the Tajima region were selected for detailed study. The results were analyzed and presented individually in Chapter VII, and some conclusions concerning them were discussed in Chapter VIII.

It now remains for this chapter to knit together the various threads of analysis pursued in the thesis, especially the relationships between the local, national and disciplinary levels of the research in question.

(ii) Accessibility

Rural depopulation, characterized by the voluntary outmigration of mainly young people and resulting in rapid ageing of residual communities, occurred in Western Europe from the mid-nineteenth century as a corollary to industrialization and the growth of cities, and the settlements most severely affected were those of remote, peripheral and mountainous regions.<sup>1</sup> The present research shows that a similar type of rural depopulation has occurred in Japan, too, although from a later date.

This is because the industrialization of Japan did not begin until well after the Meiji Restoration of 1868. Generally speaking, as is demonstrated by the example of the Tajima region,<sup>2</sup> although such remote, peripheral and mountainous areas of Japan failed to grow in population during the first half of the twentieth century - unlike the rapidly expanding urban areas - they nevertheless did not generally become depopulated, as natural increase was still high enough to offset net out-

migration. It was not until after demographic transition was completed shortly after the Second World War, around 1950,<sup>3</sup> that remote and marginal regions such as Tajima began to suffer depopulation.

Such was the general trend; but something which the case studies of specific settlements within the Tajima region show is that Kojō,<sup>4</sup> markedly the most remote of those selected, began suffering depopulation from as early as the beginning of the twentieth century.

Thus although the appearance of rural depopulation at the national, and even regional, level did not occur until the late 1950s and early 1960s, there were instances of the most remote and isolated villages suffering from depopulation as much as half a century earlier than general trends imply. While the existence of depopulating villages in Japan before the Second World War was without doubt rare (so rare, in fact, that it is almost entirely discounted by Japanese authorities), the fact that they existed at all, especially from within a relatively short time after the Meiji Restoration, is noteworthy within the historical context of Japan's industrialization process.

It should, however, be emphasized again that the Tajima region is one of those peripheral, mountainous areas relatively close to the Keihanshin region, which was one of the earliest industrialized areas of Japan. It may be conjectured that remote settlements such as Kojō which depopulated from very early on are to be found, if at all, in only such areas: that is, in the remoter rural areas which are relatively close to the industrializing centres of that period.

This conjecture is to some extent supported by the observation that rural depopulation after the Second World War in Japan appeared in a distinct spatial and temporal pattern, beginning during the mid-1950s in precisely such central rural areas as Tajima, relatively close to industrialized regions, and spreading out to the peripheries of the country as far as Hokkaidō in the 1960s, increasing in vigour as it spread.<sup>5</sup>

Moreover, it is apparent that within broadly depopulated regions of Japan, such as the Tajima region, a spatial pattern of population decline has emerged which is very similar to that observed by Thomas and others in depopulated regions of the British Isles.<sup>6</sup>

In each rural administrative district, at least one settlement - the functional centre - has continued to grow or has declined only very little throughout the post-war period, contrary to prevailing trends at the district level. The trend is particularly marked with regard to numbers

of households. Such settlements are typically located on the floors of river valleys, and are the most well-favoured of their district in terms of communications and flat land for arable farming and building construction. Such settlements correspond with the "stage I" settlements identified by Thomas. Virtually all other settlements of rural districts in depopulated areas have continued to decline. Those further up the river valleys and somewhat removed from main lines of communications correspond with Thomas's "stage II", while those on the peripheries of the rural district, remotest from the functional centre and main lines of communications, and which are typically located high in the mountains and contain very little flat land for arable farming or for building, are without doubt the most severely affected by depopulation. They correspond to "stage III" areas, and it is upon such settlements that this thesis has focused.

The spatial pattern of the distribution of depopulated - and, indeed, growing - settlements within depopulated regions of Japan adds to the body of evidence<sup>7</sup> which suggests that accessibility is by far one of the most important variables in the process of rural depopulation. While accessibility has been accepted in Western countries as a factor in depopulation, its importance has perhaps not been adequately stressed, due to the greater time lag between the appearance of rural depopulation and the arousal of academic interest in the topic.

The nature of the late development of communications within rural areas of Japan is such that the present research has been able to demonstrate that the relationship between accessibility and rural depopulation is a very close one indeed.

To begin with, inhabitants of three of the seven villages studied (Kojō, Yokoyuki and Misaki) claimed that the reason for the founding of their settlements was precisely their remoteness and inaccessibility: as mountain hide-outs for refugees of civil war. Though there is little concrete historical evidence to lend credence to this theory, it is nevertheless noteworthy that such local legends have persisted for generations. Such legends may abound more in depopulated regions of central and western Japan than elsewhere,<sup>8</sup> but whether authentic or not, they do indicate the degree of perception on the part of their inhabitants of the remoteness of their village; and, if authentic, this further underlines the obsolescence of the *raison d'etre* of such villages<sup>9</sup> in present day Japan.

Without doubt, at the regional level, the introduction of the railways had considerable impact in Japan, just as it did in European countries;<sup>10</sup> but at the local level, it was the advent of the general ownership of motor vehicles after the Second World War which had the greater impact, particularly with regard to the increase in feasible commuting distances.

In Japan, where for geographical and socio-political historical reasons, equine transport was never widely developed, the road network had also remained poorly developed.<sup>11</sup> In Britain, for example, the common use of horses as the chief means of transport, even in rural areas, encouraged the gradual development of roads over several centuries. In Japan, transition in the common means of transportation was virtually directly from foot or slow ox-cart to motor vehicles. The communications networks of rural areas, and especially the remoter rural areas, were thus extremely lagging in Japan, rendering such regions even less accessible than their Western counterparts at the onset of rural depopulation. The intrinsic problems of the physical environment of depopulated regions in Japan were thus exacerbated by the late development of the communications network.

Priority in road construction was accorded to the rapidly expanding urban areas of Japan, with the result that it was not until the late 1960s that even main roads in the remoter rural areas were improved to urban or near-urban standards.<sup>12</sup> In the Tajima region, for example, this occurred after the main exodus of rural outmigration of the early and mid-1960s. Of the villages studied, the economic development of one, Ōsasa, awaited and directly depended upon the improvements works to the local main road, National Route 9.<sup>13</sup> And although the abatement of rural depopulation from the early 1970s may be attributed to various factors (especially the depletion of the stock of potential outmigrants and general recession in the economy), at least one contributory factor is no doubt the improvements from that time onwards in the metalling, widening and straightening of the local minor roads which served the remoter settlements. This undoubtedly made such roads safer and faster for motorized traffic and facilitated the use of snowploughs for snow clearance where necessary in winter, thus increasing the feasibility of commuting to work outside the village - even, in some cases, to work beyond the rural district boundaries. Without doubt, there is a very close correlation between the distance of a settlement to a main road and the severity of its depopulation problem.<sup>14</sup>

In short, the road network of Japan's remoter rural areas developed extremely rapidly during the late 1960s and early 1970s from a near-feudal to a near modern, urban, standard; and it is surely no mere coincidence that rural depopulation was at its most severe just prior to those developments and has abated markedly since.

Thus, problems of accessibility, both in the physical and spatial sense and in the sense of the development of communications, should be considered as fundamental to the problem of rural depopulation. The former is revealed in various ways: (a) inhabitants of depopulated villages are keenly aware of the "remoteness" of their settlement; (b) the most marginal settlements, such as Kojō, began depopulating not long after the Meiji Restoration and long before the general appearance of rural depopulation; (c) once rural depopulation became widespread, it affected the peripheral regions of the country the most severely; (d) even within depopulated areas, and even at the level of the rural administrative district, it is clearly the most peripheral and mountainous settlements which have suffered the most from depopulation, and continue to decline even when trends at the rural district level may have stabilized or reversed to net growth; and (e) those which continue to depopulate are very often on "no through roads", with only one route of access.<sup>15</sup>

With regard to accessibility in the sense of the degree of development of communications, it is clear that rural depopulation in Japan was at its worst before main roads of even national and regional status were improved much beyond their early twentieth century state of development. After improvements to these and to local minor village access routes, rural depopulation began to abate. Although other factors may be cited, both for the severity of rural depopulation during the 1960s and for its abatement during the late 1970s, there seems little doubt that the degree of development of communications is an important consideration in the depopulation of remote rural areas.

(iii) Demographic aspects

Despite the entirely different historical and cultural background of Japan, the demographic processes involved in Japan's experience of rural depopulation have been consistent with that of the West to a remarkable degree. The fundamental pattern, characterized by the out-migration of school-leavers in the mid- and late teens, followed by very rapid ageing of residual communities, against a background of nationally reduced birth and death rates, does not differ essentially from the Western experience.

Several Japanese commentators have remarked that rural depopulation in south-western Japan is characterized by the outmigration of whole families at once (*kyoka rison*),<sup>16</sup> and that this is far less common in north-eastern Japan. It is beyond the scope of the present study to draw such comparisons; but on the basis of the experience of the case study villages in the Tajima region of south-western Japan,<sup>17</sup> it may be asserted that *in general* outmigration of whole families together, even in south-western Japan, has not in fact been a common characteristic of the rural depopulation process.

Where it did occur, it did so chiefly during the 1950s among households who had previously been dependent largely upon charcoal burning for their livelihood and who owned very little or no arable land to which to turn for support when charcoal burning ceased to provide a living.

It is likely that the episode of *kyoka rison* in Misaki during the early 1960s owed less to its being in south-west Japan than to its being a fishing village. It would appear that fishing villages in Japan have traditionally been characterized by greater mobility than purely farming villages,<sup>18</sup> this would tend to reduce emotional attachment to the place, and, in the case of Misaki, reduce general willingness to accept local levies. Certainly, this contention is supported by the fact that the average size of land holdings among even the residual households of Misaki were markedly smaller than in the other villages studied, and it may be surmised that those households which left held very little or no land, as in the case of charcoal burners.

From the 1960s onwards at any rate, the outmigration of whole families together has not been a common characteristic of rural depopulation in Japan, even in south-western Japan. Typically, those who leave are young people in the 15- to 19-year-old age range,<sup>19</sup> mainly either to take up employment elsewhere or to further their education. It was found that in the case of Kojō, which was markedly the most remote of the villages studied, education was by far the most important reason for outmigration, as even attendance at high school necessitated leaving the village; in Misaki, on the other hand, uncommonly few had left for furthering their education, a fact which apparently relates to the social reason that inhabitants of fishing villages place less emphasis upon academic achievement than do members of most other occupational groups, including farmers.<sup>20</sup>

The speed of demographic transition in Japan as a whole was such that the Japanese population is currently ageing more swiftly than any

other nation in recorded history. This, combined with the outmigration of young people from the remoter rural areas, has resulted in a rapidity of ageing among remote rural communities, including the populations of the case study villages in Tajima, which is unprecedented anywhere in the world.<sup>21</sup>

Even so, the villages studied displayed a wide variation in demographic structure, as a result of differential rates of demographic decline.<sup>22</sup> Kebioka, for example, had declined more slowly than the others, and was still at a stage of containing predominantly children - by now mainly only older children - and old people. Kebioka is a relatively large village, especially for the remoter mountainous areas, and its slower decline is consistent with the recognized trend in both Europe and Japan that larger settlements are more viable - under similar conditions - than smaller ones. Kojō, on the other hand, had reached the final stages of demographic decline: virtually all young people had outmigrated, there had been no returnees, and the village population was composed of almost entirely middle-aged and old people; and population loss was now chiefly attributable to the loss of old people, either through their death or their moving to join a child elsewhere. By the late 1970s, Kojō had little future.

For this kind of relatively small, remote rural settlement which has suffered recent depopulation, the retention of even a handful of young adults or the return of a few young migrants - especially males, on account of marriage customs - can mark a turning point (at least temporarily) between the prospect of absolute depopulation and that of demographic renewal. Such had occurred in Ōsasa from the late 1960s, and the village had experienced a decade of demographic renewal, resulting in a relatively large proportion of small children compared with the other villages studied. Misaki, Tsukuriyama and Marumi had begun to retain or attract back young adult males, some of whom were married. Their presence had so far resulted in the appearance of only a few infants, but a limited degree of demographic renewal seemed imminent. Yokoyuki, on the other hand, while having received a few returnees, was unlikely to enjoy a significant revival, as the majority of those who had returned were unemployed, and were thus restricted in both their marriage prospects and their likelihood of remaining in the village for long. Return migration thus appeared to be of two types: either "positive" attraction, or "pull" to the village, and "negative" attraction, meaning "push" from the migrants' previous destinations.

Generally speaking, then, return migration to these remoter depopulated villages of Japan was indeed beginning to occur by the late 1970s, but only to a very limited extent.<sup>23</sup> Certainly, where it was occurring to a considerable degree as in Ōsasa, a stabilization, and even some growth, in the number of households could not be ruled out. But even "renewal" for most of the other villages in question was more likely to imply not only reduced population in future but also continued reduction in the number of households for some time to come. In other words, "renewal" for the majority of such depopulated villages in the remoter areas of Japan is a term relative to absolute depopulation (total desertion), rather than to a return to anywhere near their original numbers of either households or population.

The chief distinguishing feature of the Japanese experience has been the rapidity with which it has occurred.<sup>24</sup> Comparisons can be made only with reservations, since it is possible and likely that we have insufficient knowledge of original populations of now-depopulated settlements in Western Europe; but it appears that in Japan rural depopulation has been accomplished within only thirty years or one generation, whereas in the British Isles, for example, it has continued for 120 years or more, over four or five generations. It is noteworthy that by the late 1970s in aggregate terms, there was evidence to suggest that depopulation might be "bottoming out", in both Japan and the British Isles.<sup>25</sup> Nevertheless, remoter settlements in both cases were continuing to depopulate; and it is still unclear whether the new trend in either case indicates the attainment of "optimal" populations, and whether it is likely to persist or is merely a temporary reversal.

That rural depopulation took place very rapidly in Japan is undeniable. This was doubtless as a corollary to the rapid industrialization and growth of the Japanese economy from the 1950s to the early 1970s, combined with the rapidity of demographic transition in the country, including in the rural areas. It is therefore not surprising that rural depopulation received a good deal of attention from the media, academic, political and administrative circles, and the concomitant rural-urban migration was frequently described as a "landslide" movement of population.<sup>26</sup>

Even so, without in any way intending to diminish the importance of the problem, it seems clear that Japanese commentators on the subject in some sense exaggerated the severity of the problem; or, more accurately, confused the *rapidity* of its occurrence with its *severity*. The distinction will become clear in the following section.

(iv) Economic aspects

Japanese critics almost universally pinpoint the failure of agriculture to provide the level of income obtainable in secondary and tertiary industries as one of the chief underlying causes of rural depopulation, and lay the blame for this with the government's lack of concern for the development of agriculture. Emotive expressions such as "the dissolution of agriculture" and "the dismissal of the peasants" are common in discussions of rural depopulation in Japan.<sup>27</sup> This perspective not only fails to comprehend the essential demographic background to rural depopulation, but also fails to appreciate that under perfect laissez-faire economics, rural depopulation in Japan would have been far more severe than it actually was. It entirely fails to recognize the braking effect of agriculture and agricultural policy in post-war Japan upon rural depopulation. In fact, agricultural policy (especially limitations on size of holdings and the rice price support policy) and the level of agricultural technology combined together on balance to *retain* farmers in remote and economically marginal areas, who would otherwise most likely have chosen to leave.<sup>28</sup>

Furthermore, although one of the stated aims of the Agricultural Basic Act<sup>29</sup> was to reduce the number of farms with the aid of mechanization in order to make farming more efficient, the actual effect was to encourage part-time farming instead. Sources of off-farm income cover a wide range: where available preference is exhibited for full-time stable jobs within the lifetime employment system, especially on the part of better educated, young adults, to whom such jobs are generally restricted; otherwise, stable commuting jobs in secondary or tertiary industries outside the lifetime employment system (often termed "temporary" (*paato*) jobs) are sought; but where such opportunities are unavailable or are insufficient, casual day labour (*hiyatoi*), typically in construction, or seasonal migration (*dekasegi*) are resorted to as the means by which farm household income is supplemented.<sup>30</sup> *Dekasegi*, in particular, is a common practice in the remoter regions of rural depopulation,<sup>31</sup> which typically have few opportunities for off-farm employment within commuting distance.

Thus, in a sense, the prevalence of part-time farming in depopulated rural areas is a transitional stage between small-scale, largely subsistence farming and the development of the option between commercial, full-time farming on the one hand and involvement in full-time non-agricultural occupations which necessitate permanent outmigration on the

other. If viewed as along a scale, the following pattern of retention of population in remote settlements emerges:

- 1) full-time subsistence or commercial farming;
- 2) farming with full-time, off-farm, local employment within the lifetime employment system;
- 3) farming with full-time or part-time, off-farm, local employment outside the lifetime employment system;
- 4) farming with local casual day labour;
- 5) farming with *dekasegi* (temporary migration to employment beyond commuting distance); and
- 6) permanent outmigration for permanent employment in non-agricultural work beyond commuting distance.<sup>32</sup>

This concept, as demonstrated by the Japanese experience, adds a fresh dimension to the understanding of the rural depopulation question, for the practice of temporary migration for employment from regions of rural depopulation is far less widespread in Western countries and has thus been largely ignored by Western case studies.<sup>33</sup> The strong link in Japan between the spatial distribution of the practice of *dekasegi* and that of rural depopulation is undeniable. Again, had *dekasegi* not become an important source of off-farm income for inhabitants of the remoter rural areas, then rural depopulation would have been considerably more severe than it actually was, or is.

Further evidence to support the view that *dekasegi* is, in a sense, the most extreme manifestation of the transition process formulated above, is found in the trend, as exhibited very clearly in the sample villages, for *dekasegi* migrants to be rapidly ageing.<sup>34</sup> *Dekasegi* is principally practised by the older generation of farmers, who were unable to benefit from further education, and who were unable to enter the lifetime system of employment. As, for example, was shown by the case of Marumi, even where young men are choosing to follow farming as their occupation, they strongly repudiate *dekasegi* migration. Thus, in areas with a long tradition of *dekasegi* migration, such as Tajima, the number of *dekasegi* migrants is steadily declining as they age, retire and withdraw from the practice, and there are very few new, young participants to take their place. It is likely that the prevalence of *dekasegi* migration in the regions of by now chronic rural depopulation will decline considerably in the relatively near future, thereby affirming its transitional role in the depopulation process.

Additionally, the lifetime employment system itself, in effectively barring entry to older, less well-educated recruits, has contributed to the retention of the rural population even in remoter regions of depopulation.<sup>35</sup> This can be seen in relation to both part-time elderly farmers and *dekasegi* migrants.

Thus, while rural depopulation occurred rapidly in Japan, and was certainly severe, its severity should not be exaggerated: the result of agricultural policy in particular, whether intentional or not, was ultimately to alleviate the potential severity of rural depopulation, mainly through stimulating the increase in part-time farming, including *dekasegi* migration.

So far the present discussion has concentrated on the salient features of the *process* of rural depopulation in Japan and what it contributes to our understanding of rural depopulation in general; but examination of the *effects* of rural depopulation upon residual communities in Japan, and their various ways of reacting to the problem, has been an equally important theme in this thesis.

As was shown in Chapter VIII, it is apparent from the case studies of seven villages in the depopulated Tajima region that those villages in which the inhabitants have begun to adjust to their new circumstances by making positive conversions from their traditional economy are emerging as those most able to continue as viable or potentially viable settlements.<sup>36</sup> Those which have failed to convert, such as Kebioka or Kojō, or where conversion has not been of a "positive" kind, as in Yokoyuki, are those which are continuing to decline demographically and, for the present, have little prospect of demographic renewal.

"Positive" conversion was displayed by those households which had become self-employed, most notably the guest house owners of Ōsasa, by those who had specialized and invested in a particular primary activity, such as fishing in Misaki or cattle breeding in Marumi, and by those who were engaged in full-time employment within commuting distance, such as was not uncommon among young people of Misaki and Tsukuriyama. Villages which had largely failed to convert - that is, Kebioka and Kojō - continued to depend mainly upon income from rice cultivation and *dekasegi* migration; and "negative" conversion meant a predominance of low-paid, "last resort" occupations, namely casual day labour on road building sites and piece-work at home, as in Yokoyuki. These latter two types continued to decline.

In the case of all the villages which had undergone, or were undergoing, positive economic conversion, reservations may be expressed as to

the particular types of specialization. For example, the guest house business of Ōsasa was largely seasonal in nature, and was unlikely to be able to develop much further than it already had by the late 1970s, on account of the prescriptions of the physical environment and the likelihood that the market was virtually saturated already.<sup>37</sup> In Misaki, the fixed net technique of fishing had proved very successful, but again, both the resources and the market had been fully exploited; the flourishing squid-fishing of Kasumi, in which several Misaki men were employed, had been declining during the 1970s due to over-fishing,<sup>38</sup> so the future of fishing as a whole in Misaki appeared set for retraction rather than expansion. Marumi, it will be remembered, was successfully specializing in cattle-rearing; but to some considerable degree that success was dependent upon preferential treatment on the part of the government, and should such policies towards cattle farming alter even only a little in future, it is inevitable that the basis of Marumi's new-found prosperity would be seriously threatened.<sup>39</sup>

In other words, in the villages which had "positively" converted their traditional economy, specialization tended to be directed towards activities which in the short term were encouraging economic renewal; but long term prospects may not necessarily prove so favourable. Much will depend on the flexibility with which the communities concerned adapt to changing economic circumstances.

Even so, the basic fact remains that at least in the short term, positive conversion has brought unprecedented prosperity to the participating households of the villages concerned. The precarious nature of the future prospects of those villages lies in the particular type of specialization which was selected. In practice, it may eventually become apparent that the inherent nature and problems of depopulated rural areas in Japan are such that no type of specialization can provide anything but short-term security. In principle, though, if a type of specialization were (or, perhaps, could be) selected which had more secure long-term prospects, the long-term reversal of depopulation would also be feasible.

For the villages studied for the present research, positive conversion of the traditional economy offered the most favourable way forward from the problems of rural depopulation. The second most promising aspect of adjustment was the participation in cooperative economic activities.<sup>40</sup> The villages which had effectively combined the two - both positive conversion and cooperative participation - were by far the more

prosperous, while those which were characterized by neither were clearly the least prosperous and appeared to be set on course for absolute depopulation.

The case of Kebioka, where there had been little conversion from the traditional economy but where the cooperatives were playing an active role, tends to suggest that while cooperatives may not be the whole solution to the economic difficulties of depopulated rural settlements, they may nevertheless be able to play an important part in at least slowing the depopulation process.

The clear evidence from the Japanese <sup>p</sup>sample villages of the positive role which cooperatives may play in depopulated <sup>^</sup>settlements adds another facet to our understanding of rural depopulation which is lacking in Western studies on the topic. Some reasons may be suggested for this. First, cooperative activities are most easily carried out, for practical reasons, where the participants are in close daily contact with each other. Generally speaking, in Western European countries, the residual population of depopulated regions is widely scattered in isolated farmsteads or, at best, in small hamlets. Even in the remoter parts of depopulated regions in Japan, it is rare for dwellings to stand entirely alone: they are most commonly grouped into small but dense villages. And while farm holdings in the depopulated regions of Western countries are typically relatively small compared with national averages,<sup>41</sup> they are still much larger than corresponding farm holdings in Japan's depopulated areas. In other words, a given population in a remote, depopulated rural area of Japan is likely to live and to work within a far smaller area than does its counterpart in Western countries; and such a situation is more conducive to carrying out the practicalities of a cooperative venture. Indeed, the example of Kojō, dispersed as it is into four separate hamlets, and in which cooperation has failed to develop, lends support to this argument. In Tsukuriyama, on the other hand, which had only four households more than Kojō but which was clustered, the residents were successfully cooperating with each other.

In short, the experience of Japan, as exemplified by the case study villages of Tajima, indicated that efficient and well-run cooperative organizations, even at the very small scale of just one or a few small villages which have suffered depopulation, can contribute greatly to the alleviation of many of the problems caused by depopulation. The success of cooperatives, even small ones, where individuals fail may be attributed to several factors: bulk purchase of the necessary inputs

reduces production costs through discounts and reduction of unit transportation costs; cooperative use of equipment and facilities reduces the tendency for over-investment;<sup>42</sup> cooperative processing of local produce (though this was not strictly applicable to the villages studied) adds value to it locally; members benefit from regular exchange of information; they may qualify for government grants and loans, for which as individuals they may not; and cooperative packaging and unit transportation costs of produce to markets may be reduced. The reduction of transportation costs is especially beneficial to the members of cooperatives in the remoter regions.

Apart from the purely business aspects of cooperatives, they may act to some extent as self-help associations in a wider sense, in which participants are able to feel that they have a far greater control over their lives in the immediate future than is the case when, say, development plans of some sort are imposed upon them by "the authorities".<sup>43</sup> Certainly, the case studies appear to suggest that cooperatives may effectively complement larger-scale infrastructural or industrial projects, especially in such remoter communities as remain beyond reasonable commuting distances and where the total population is anyway too small to supply labour for a variety of manufacturing industries.<sup>44</sup>

At the same time, it should be recognized that though such organizations may be successful, or at least helpful, in restraining the depopulation of remote rural settlements in Japan, they may not necessarily be so feasible in depopulated areas of other parts of the world, given differences in the spatial distribution of residual populations, the nature of predominant economic activities and the social and cultural background of the peoples concerned.

Thus, the foregoing paragraphs demonstrate that while depopulation did occur rapidly in Japan, particularly between 1955 and 1970, its severity should not be exaggerated. Indeed, various aspects of economic organization combined on balance to detain certain occupational groups, particularly farmers, and certain age groups, particularly the middle-aged and older, within remote rural areas, who might otherwise have been even more strongly tempted to leave.

In particular, the net result of agricultural policy was to deter farmers from leaving their farms in remote and marginal areas: (a) by encouragement of technological innovations which particularly aided the cultivation of rice in marginal conditions, (b) by maintenance of guaran-

teed rice prices and by the provision of generous subsidies, (c) by implementation of the Agricultural Basic Act, which - albeit unintentionally - stimulated a rapid increase in the proportion of part-time farming. In the remoter settlements which form the focus of this thesis, this resulted nationally in a rise in *dekasegi*, temporary (usually seasonal) migration for employment, especially on the part of heads of farm households. The case study of the Tajima region, which has a long tradition of *dekasegi*, however, showed that *dekasegi* is most likely the most extreme of the transitional stages in the conversion of the economy in depopulated rural areas, and the present cohort of middle-aged *dekasegi* migrants are likely to be virtually the last.

The lifetime system of employment selects against the older and less well-educated so that this also deters older and middle-aged farmers from leaving even remote rural settlements.

The settlements which have adjusted most successfully to the effects of rural depopulation have been those which have made "positive" conversions to their traditional economy and those which have organized themselves into efficient cooperatives.

(v) Social aspects

As shown earlier,<sup>45</sup> the social aspects of rural depopulation may be considered as basically being one of two sorts: either quantifiable and tangible, or unquantifiable and intangible. The latter will be discussed first.

The importance of the organization of village inhabitants into cooperatives for the economy of remote settlements has been demonstrated at length above.

It may also be argued that not only are the physical, spatial aspects of cooperation easier for inhabitants of depopulated areas in Japan than in Western countries, but that it is easier for the Japanese to adjust psychologically, too. This is on account of the long tradition of paddy rice cultivation in rural areas of Japan, for which - especially before the widespread use of machinery - a considerable degree of cooperation among village inhabitants was essential. It is not the intention here to over-estimate the ease with which cooperation is accomplished in Japan: cooperation of any sort depends on compromise, and it is known that many cooperatives have failed, largely through the inability of members to reach a compromise, even in Japan.<sup>46</sup> In fact, cooperation

may not be at all easy for Japanese people, but the point to be noted is that it is probably still easier than for, say, Western Europeans.

The ability to compromise and pursue successful cooperative aims is one element of what is usually referred to as "community spirit". In similar fashion to Western scholars of rural depopulation, Japanese authorities almost universally lament the loss of village functions and community spirit.<sup>47</sup> It was beyond the scope of this thesis to conduct a full social anthropological survey of the villages selected for study; but in the majority of them, the inhabitants were in the main exhibiting a spirit of social cohesion which was at any rate at least adequate for the running of cooperative ventures. Both from the general impression gained from the Japanese literature<sup>48</sup> and from the fact that in some of the villages certain annual festivals and customs had died out,<sup>49</sup> it must be recognized that there has indeed been a loss of community spirit, but as the willingness to cooperate in most of the villages demonstrates, the loss has been relative rather than absolute.

It is in fact extremely difficult to assess the relationship between community spirit and rural depopulation in terms of which stimulates the other. The Japanese literature on the subject tends to imply that on balance the breakdown in community spirit and traditional values has exacerbated rural depopulation. More likely, they interact in a vicious circle.

It may also tentatively be suggested on the basis of the case study villages in Tajima that the relationship between the two depends very largely upon the idiosyncracies of individual communities' spirit, both before depopulation began and in their reaction to depopulation. In some cases, for example in Ōsasa perhaps, community spirit may actually have strengthened after depopulation began, as the residual population rallied together to rebuild their economy in a concerted effort.

In a remote and scattered settlement like Kojō, it is most probable that social cohesion was relatively weak to begin with. The small size and scatter of population in Kojō rendered this almost inevitable. This was not the case in Yokoyuki, though, the only one of the average-sized, clustered villages in which community spirit was very noticeably lacking.

It emerged, however, that the village had an exceptional history of diseases such as leprosy, leukemia and deaf-muteness, to which there are still strong social stigmas attached. It is in fact highly probable that the prevalence of such diseases would have dulled the edge of social

cohesion in Yokoyuki long before rural depopulation became a major problem.<sup>50</sup>

In short, it may be surmised that the present atmosphere of community spirit in remote depopulated settlements - at least after taking into consideration the decline in general - in large part reflects its strength before depopulation began.

One further point to be mentioned is that in all the villages in which the community spirit had been activated and turned to advantage in a cooperative organization of some kind, some strong leadership had been essential for the initial foundation of the cooperative.<sup>51</sup> Whether this leader were an individual, as in the cooperatives in Misaki and Marumi, or a larger organization such as the Ōsaka Tourist Development Company as in Ōsasa or umbrella Agricultural Cooperative organizations as in Kebioka and Tsukuriyama, appeared to matter little. And while the leading forces were more often than not extraneous to the village, the case of Marumi demonstrates that influential leadership may also emerge from among inhabitants themselves of even severely depopulated villages.

The second aspect of the social fabric of depopulated rural areas in Japan concerns the more tangible and quantifiable prerequisites for the smooth running of rural communities.

There is little doubt that in the early stages of depopulation during the 1950s and 1960s in the rural areas of Japan, community functions of various sorts began to deteriorate, and the maintenance of certain functions began to become an inordinate burden upon residual communities.<sup>52</sup> Evidence of this appeared in the villages studied in, for example, the cessation of some village festivities, and especially in the rather exceptional case of Misaki, by outmigration of several families on account of levies for improvements to the school and water supply system.<sup>53</sup>

In many cases, even maintenance of local roads and river-banks, hedging and ditching, disposal of human waste, fire-fighting and so on, were still the responsibility of village residents in the customary fashion; but as the labour available for such projects declined and both the labour and financial burden on residual communities of depopulated settlements increased, such functions became increasingly impracticable.<sup>54</sup>

As in European countries,<sup>55</sup> rural administrative districts became increasingly unable to finance themselves as the mainstay labour force outmigrated,<sup>56</sup> and this meant that they found it increasingly difficult to provide even the minimal level of services which they had provided

hitherto, let alone carry out badly needed large infrastructural improvements.

Eventually the acuteness of the situation was recognized by the central government, but it was not until 1970 that legislation appeared in the form of the temporary "Depopulation Act".<sup>57</sup> This aimed at stemming rural depopulation, and the means adopted to that end was to empower the transfer of central government funds to local governments at both the prefectural and rural district level, primarily for the improvement of infrastructure in the rural districts which were designated under the regulations of the Act as being depopulated.

The lion's share - approximately half of the total for the decade - was expended on improvements to transport and communications in the areas designated as depopulated.<sup>58</sup> Within a short few years, infrastructural provision in the designated rural districts improved markedly. The rapid improvement to roads in particular was outstanding, but renovation of meeting halls, the construction of clinics, nursery schools, etc., also proceeded apace. By 1980, the level of provision of infrastructure in such depopulated areas of Japan was in fact undoubtedly high by international standards. The many civil servants of both central and local governments who congratulated themselves that they had indeed managed to stem depopulation can hardly be blamed entirely for their complacency.

Even so, the level of service provision in its widest meaning in the rural areas remains lagging well behind that of Japan's urban areas, and is likely to continue to do so. Medical, educational and recreational facilities are noticeably lacking,<sup>59</sup> while perhaps the most serious aspect remains, as in Western countries, the restricted field of job opportunities.<sup>60</sup>

Furthermore, there is little doubt that the fall-off in rural depopulation during the late 1970s<sup>61</sup> cannot be attributed to merely infrastructural improvements alone. 1) The populations of remoter settlements were by then already in the later stages of demographic decline, with annually fewer and fewer potential outmigrants. In many cases, the pool had already dried up. 2) The slowing in the annual rate of economic growth after the Oil crisis meant that it was no longer so easy for rural migrants to secure stable urban employment. Young people entering the labour market faced increasing competition, and many were obliged to lower their employment aspirations and accept less prestigious and less well-paid jobs nearer their home. 3) The problems of pollution, congestion

and overcrowding in Japanese cities, which were well publicized in the late 1960s, produced a public reaction of nostalgia for the rural way of life, with the so-called "back-to-the-village movement" (*furusato undō*). This doubtless inspired at least some young rural dwellers to remain in, or return to, the countryside.

Returning to the issue of infrastructure, it cannot be denied that designated depopulated districts as a whole benefited greatly as a result of the Depopulation Act. However, it became clear from fieldwork in the Tajima region that investment in such rural districts was tending to be concentrated into their functional centres, so that these in effect were serving as "key settlements".<sup>62</sup> As was shown in Chapters VII and VIII, while the villages studied were enjoying improved access roads, most of their former schools and shops had closed and those that were left were almost all under threat of closure. It was thus the most remote and peripheral settlements - those suffering the most from depopulation - which have benefited least from the general improvements.

Ultimately, the issue returns to the problem of settlement viability.<sup>63</sup> The official government stance appears to be to provide basic infrastructure and retain all settlements of depopulated districts, or else to gain the unanimous consensus of village inhabitants for complete resettlement. (As mentioned earlier,<sup>64</sup> the latter policy was virtually a total failure.) In fact, there is a considerable discrepancy between the *de jure* and the *de facto* situations.

In practice, the rural district officials charged with the duty of negotiating and executing public works projects appear to have been exercising considerable common sense with regard to public investment. They clearly recognized that each settlement had to be treated individually according to its particular circumstances in order to prevent inordinate waste of public money. In the case of Kojō, for example, there was clear understanding that the village had very little future, and that investment in it should be avoided. The rural district officials were thus faced with a dilemma: whereas they had to invest as little as possible in Kojō, they also had to service the settlement so long as it existed and not to appear unsympathetic to the needs of the inhabitants. The result was compromise: for example, they drew the line at cutting a road through to the Hiroku households but agreed to concrete the roads between the other three hamlets in order to make them safer.<sup>65</sup>

Of the three rural districts in which the study villages were situated, Kasumi-chō, Muraoka-chō and Ōya-chō, only the last two were designated as depopulated and were eligible for funds allocated under the Depopulation Act legislation. In all three, though, investment in the infrastructure for specific settlements appeared to be made according to a combination of factors: the availability of finance, the size and future prospects of the village in question and the urgency of its needs. In the three rural districts in question this system was apparently operating with a reasonable degree of common sense and fair play. But without closer general guidelines and clear criteria laid down for investment in such public works, such a system may be open to corruption and abuse by self-interested, arbitrary and partial local officials.

Even where there is no such abuse, and even where the officials exercise common sense at the rural district level, comparisons between rural districts show some discrepancies. For example, several of the settlements on the peripheries of Kasumi-chō had continued to depopulate faster than those nearby which were located on the peripheries on Muraoka-chō.<sup>66</sup> Those in Muraoka-chō had received at least some benefit from the special Depopulation Act funds, while those under originally similar circumstances in Kasumi-chō were not eligible for the funds at all. It is not clear how many rural settlements are similarly deprived of investment - or even the possibility of receiving aid - in Japan as a whole, but it is surely a considerable number.

It was shown in Chapter II that rural depopulation has occurred in response to industrialization; further, it has been most pronounced within nations which are fundamentally democratic and where the individual's freedom of choice of residence is respected: while he (or she) has the right to move to an urban area if he so wishes, the individual also has the right to remain in his rural home.<sup>67</sup> So long as he does so, he also has the right to receive equitable treatment, including service provision, with that of his urban compatriots. The paradox and dilemma for central governments is that since the cost of servicing sparse rural settlements is far higher than for urban areas, rural inhabitants may be considerably underprivileged in terms of actual service provision but considerably overprivileged in terms of expenditure *per capita* for service provision.

In Japan, it has been politically expedient to officially declare in favour of public intervention to retain all rural settlements in which any inhabitants wish to continue to live,<sup>68</sup> professedly in the interests

of protecting the democratic rights of remote rural dwellers. This fails to resolve either the fundamental dilemma considered above or the practical difficulties of most equitably redistributing public funds which are not unlimited. The result of the Japanese government's failure to recognize fully these two problems has been to fail in fulfilling those interests which it professes to pursue. Not all settlements by any means which have become depopulated have been designated as such; and of those which have, the limits to available resources and finance have meant that not all have been treated equally. It would be far more equitable to designate *all* depopulated settlements as such, consider each on its own merits, and categorize them accordingly. The limitations to available public finance would in practice dictate which were to receive extra investment and which (small number) to be phased out, through deliberate non-investment rather than compulsory eviction.<sup>69</sup>

As was shown in Chapter II,<sup>70</sup> the threshold of population required to make a particular social or economic function viable varies according to the function in question: the minimum number of people required to support a general store differs from that for a department store and again from that for a primary school, a hospital or a cinema. It became apparent from the case study of remote depopulated villages in Japan that the majority of them contained well below the threshold populations (notional, not determined) for virtually all social and economic functions. Nevertheless, their inhabitants, except perhaps in the case of Kojō, could not reasonably be denied their democratic right to remain. Ultimately, their continued existence depends on the ability of their inhabitants to make a living, and to a considerable extent this depends basically upon the demographic structure of the residual population.

It may thus be suggested that the fundamental criteria for the designation of settlements as depopulated in Japan should depend no longer primarily upon intercensal decrease rates for the populations of rural districts, but on the size, age and sex structure of the residual populations of individual settlements. Given the high level of organizational efficiency of the Japanese administrative machinery, it would not be impractical to incorporate such a reassessment with the decennial National Census of Population, or even with the quinquennial Census of Agriculture.

(vi) Summary

The chief findings of the research presented in this thesis may be summarized as follows.

As in most countries of the Western world, rural depopulation occurred in Japan as a concomitant of industrialization and demographic transition. All mountainous, marginal and peripheral regions of the country became affected, and the spatial and topographical inaccessibility of such areas were exacerbated by the late development of the communications systems, especially road links.

In such regions, rural depopulation proceeded most rapidly between 1955 and 1975. It did not typically involve the outmigration of whole families at once, except to a limited degree in the very early stages. Instead, rural depopulation in Japan has assumed a demographic pattern which is similar to that of Western countries, characterized by the outmigration of mainly young people, especially school-leavers, accompanied by unprecedentedly rapid ageing of residual populations. The structure of the population thus first becomes one of "children and old people", then "only old people". In the latter stage, population loss in depopulated settlements in Japan becomes predominantly due to the loss of old people through death or, perhaps more commonly, outmigration to join a younger relative.

Again, as in depopulated rural areas of Western countries, inhabitants of such areas in Japan consider themselves as primarily farmers, but their farm holdings are even smaller on average than the small national average. Given the typically economically marginal conditions of their farms, such farmers found it increasingly difficult to keep pace with the ever-increasing and rapid rise in the standard of living in post-war Japan, and, with the help of favourable agricultural policies, many such farmers sought off-farm sources of income. In depopulated regions where there were inadequate opportunities for jobs within daily commuting distance, *dekasegi*, temporary (usually seasonal) migration for employment, became very common. This practice is, however, strongly repudiated by young farmers, and is most likely a transitory phase in the transformations wrought by depopulation in remote rural areas. The prevalence of *dekasegi* migration among middle-aged and older farmers in depopulated rural areas is a particular characteristic of rural depopulation in Japan.

So, too, is the concerted effort on the part of the majority of inhabitants of remote, depopulated settlements to convert their economy from traditional, largely subsistence primary production to a more specialized and commercialized type of economy. In particular, the most successful villages in adjusting to the problems of rural depopulation are those which have formed themselves into cooperative organizations. Such village

cooperatives, despite their unusually small size, may be of considerable help in depopulated rural areas, especially in the remoter settlements which remain beyond commuting distance, and where populations are too small and sparsely distributed to support manufacturing industries. Clear leadership is required for the establishment of such cooperatives.

The minority of depopulated settlements in Japan which have failed to adjust their economies in such a positive way have been particularly those in which cooperation has been unable to develop sufficiently. This may have occurred for spatial reasons: where the settlement is unusually small or scattered; for historical reasons: where rural depopulation began very early and the settlement suffers a degree of demographic decline which renders the formation of a cooperative impracticable; for social reasons: where the settlement suffers some kind of social stigma and/or where social cohesion is unusually weak; or, of course, a combination of these factors.

Services and infrastructure have been greatly improved since 1970 and should continue to be provided to the greatest extent possible. This means in practice investment of social overhead capital in particularly the small local centres which have continued to grow in depopulated regions, with progressively less investment in the more peripheral settlements, unless they are endowed with exceptional resources. At the most, a policy of minimal maintenance of the remotest and most depopulated settlements is required, and compulsory resettlement is to be avoided.

APPENDIX

Table A1. No. of sample households per village.

	Total no. of households	Sample no. of households	Sample as a percentage of total
Yokoyuki	45	33	73.3
Tsukuriyama	18	14	77.8
Marumi	32	22	68.8
Misaki	21	20	95.3
[ Kojō	14	5 ]	35.7
Kojō	14	11	78.6
Osasa	51	23	45.1
Kebioka	108	48	44.4
Total	289	171	59.2

[ ] = excluded from the total.

Table A3. Proportion of households sending out migrants.

	Total no. of households	No. of migrant households	% households sending out migrants	Total no. of migrants	Average no. of migrants per migrant household
Yokoyuki	33	29	87.9	85	2.93
Tsukuriyama	14	12	85.7	24	2.0
Marumi	22	19	86.4	47	2.47
Misaki	20	18	90.0	51	2.83
Kojō (5 hh)	5	4	80.0	11	2.75
Kojō (11 hh)	11	9	81.8	20	2.22
Osasa	23	14	60.9	29	2.07
Kebioka	48	28	58.3	53	1.89

Table A2. Increase in households and population, 1955-1980.

	1955			1960			1965			1970			1975			1980			
	Hh	Pop.		Hh	Pop.		Hh	Pop.		Hh	Pop.		Hh	Pop.		Hh	Pop.		
		M	F		T	M		F	T		M	F		T	M		F	T	M
OSASA																			
Total numbers	65	354		65	170	165	335	50	133	128	261	50	126	123	249	50	117	108	225
% increase (a)				0	-5.4	-22.1	0	-23.1				0	-4.6	-9.6	2.0	2.0			
(b)																-21.5			
TSUKURIYAMA																			
Total numbers	27	154		28	84	53	137	21	49	41	90	25	50	35	85	20	34	34	68
% increase (a)				3.7	-11.0	-34.3	19.0	-25.0				19.0	-5.6	-20.0					
(b)																			
KEBIOKA																			
Total numbers	131	599		129	282	293	575	119	241	253	494	114	217	227	444	109	175	215	390
% increase (a)				-1.5	-4.0	-7.8	-4.2	-4.2				-4.2	-10.1	-12.2					
(b)																			
MARUMI																			
Total numbers	45	236		42	105	100	205	41	103	82	185	37	60	64	124	35	54	55	109
% increase (a)				-6.7	-13.1	-9.8	-9.8	-2.4				-9.8	-33.0	-12.0					
(b)																			
KOJŌ																			
Total numbers	23	135		20	49	51	100	18	40	40	80	16	29	31	60	15	23	22	45
% increase (a)				-13.0	-25.9	-20.0	-11.1	-10.0				-11.1	-25.0	-25.0					
(b)																			
MISAKI																			
Total numbers	39*	292*		36	138	121	259	22	82	79	161	22	55	54	109	22	39	54	93
% increase (a)				-7.7	-11.3	-37.8	0	-38.9				0	-32.3	-14.7					
(b)																			
YOKOYUKI																			
Total numbers	63	333		63	143	148	291	60	130	143	273	52	97	116	213	48	76	85	161
% increase (a)				0	-12.6	-6.2	-13.3	-4.8				-13.3	-22.0	-24.4					
(b)																			
TOTAL	393	2103		383	1902	1848	331	1544	1316	1316	286	299	1284	1091	286	286	286	286	286
(a)				-2.5	-9.6	-13.6	-4.5	-18.8				-5.4	-16.8	-15.0					
(b)																			

Source: Rural District Offices (unpublished data).

Notes: \* 1956 figures; (a) % increase compared with previous census figure; (b) % increase 1955-1980

Table A4. Age of migrants at migration.

Age	Yokoyuki			Tsukuriyama			Marumi			Kojō (5hh)			Misaki			Total			
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	
14	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
15	8	15	23	0	4	4	12	5	17	0	0	7	10	17	30	41	71	2	
16	1	1	2	0	0	0	0	0	0	0	0	0	0	0	1	1	2	5	
17	0	3	3	0	0	0	1	0	1	0	0	0	0	1	2	3	5	70	
18	11	19	30	7	3	10	6	10	16	1	0	1	13	13	34	36	70	15	
19	4	1	5	6	0	6	1	0	1	0	0	2	1	1	3	4	7	4	
20	2	1	3	0	0	0	0	2	2	0	0	0	0	0	1	3	4	4	
21	1	2	3	0	1	1	0	0	0	0	0	0	0	0	0	1	3	4	
22	0	1	1	0	0	0	0	3	3	3	0	0	3	3	0	7	7	7	
23	0	2	2	0	0	0	0	0	0	0	0	0	3	3	0	5	5	5	
24	0	0	0	0	2	2	0	1	1	1	0	0	1	1	0	4	4	4	
25	1	3	4	0	0	0	0	0	0	0	0	0	0	0	1	3	4	4	
26	1	1	2	0	2	2	0	1	1	1	0	0	4	4	4	2	6	6	
27																			
28																			
29																			
30																			
31																			
32																			
33				1	0	1									1	0	1	1	
34																			
35																			
36																			
37																			
38																			
39																			
40																			
Total	30 (+1)	49 (+5)	79 (85)	14	10	24	21 (+3)	21	42 (+2)	47	4	7	11	25	25 (+1)	50 (51)	94 (98)	112 (120)	206 (218)

Note: Figures in parentheses show migrants whose age was not specified.

Table A5. Reason stated for initial outmigration.

	Reason stated for initial outmigration				Total		
	Educa- tion	Employ- ment	Mar- riage	Others Unspec- ified			
Yokoyuki	M	6	19	1	0	5	31
	F	17	25	7	0	5	54
	T	23	44	8	0	10	85
Tsukuriyama	M	4	9	0	1	0	14
	F	1	6	3	0	0	10
	T	5	15	3	1	0	24
Marumi	M	5	15	0	1	3	24
	F	7	8	5	1	2	23
	T	12	23	5	2	5	47
Kojō (5hh)	M	3	1	0	0	0	4
	F	3	4	0	0	0	7
	T	6	5	0	0	0	11
Misaki	M	1	23	1	0	0	25
	F	1	18	6	0	1	26
	T	2	41	7	0	1	51
Total	M	19	67	2	2	8	98
	F	29	61	21	1	8	120
	T	48	128	23	3	16	218

Table A6. No. of migrants, by year of outmigration.

Year	Year			Year	Year		
	M	F	T		M	F	T
1938	1		1	1960	3	1	4
1939				1961	3	1	4
1940				1962	5	3	8
1941				1963	1	3	4
1942				1964	1	2	3
1943				1965	2	9	11
1944				1966	5	8	13
1945		1	1	1967	3	10	13
1946	1		1	1968	3	6	9
1947		1	1	1969	7	6	13
1948				1970	5	5	10
1949	3		3	1971	6	9	15
1950		3	3	1972	4	5	9
1951	1	1	2	1973	5	5	10
1952	1	1	2	1974	6	3	9
1953	1		1	1975	1	6	7
1954		1	1	1976	2	6	8
1955	4		4	1977	3	6	9
1956		1	1	1978	2	3	5
1957	1	1	2	1979	9	3	12
1958	1	2	3				
1959	4		4				
				TOTAL	94	112	206

Table A7. Relationship of migrants to head of household.

	Yokoyuki	Tsukuriyama	Marumi	Kojo (11 hh)	Kojo (5 hh)	Misaki	Osasa	Kebioka	Total
Eldest son	14	5	12	(9)	3	8	(6)	(18)	42 (33)
Second son	12	5	6	(2)	1	8	(7)	(10)	32 (19)
Third son	4	2	2	0	0	4	0	(4)	12 (4)
Fourth son	0	0	1	0	0	2	0	0	3
Fifth son	1	0	0	0	0	0	0	0	1
Elder brother	0	2	0	0	0	0	0	0	2
Younger brother	0	0	3	0	0	3	0	0	6
Males	31	14	24	(11)	4	25	(13)	(32)	98 (56)
Eldest daughter	26	5	10	(7)	4	11**	(9)	(13)	56 (29)
Second daughter	15	0	8	(1)	1	5	(2)	(5)	29 (8)
Third daughter	9	1	1	(1)	1	4	(1)	(1)	16 (3)
Fourth daughter	2	0	1	0	1	1	(1)	0	5 (1)
Elder sister	2	4	1	0	0	0	(1)	0	7 (1)
Younger sister	0	0	1	0	0	5	(2)	0	6 (2)
Wife	0	0	1	0	0	0	0	0	1
Females	54	10	23	(9)	7	26	(16)	(20)*	120 (44)
No response	4	2	3	2	1	2	9	20	43
Total	85	24	47	(20)	11	51	(29)	(53)*	218

\*\* one niece, adopted as a daughter; \* includes one female, relationship not specified;  
 \* includes one migrant, sex not specified.

Note: Figures in parentheses for Kojo (11 household sample), Osasa and Kebioka indicate that precise relationships were not recorded, but in most cases were self-evident or surmised.

Table A8. Destinations of outmigrants

	Yokoyuki		Tsukuriyama		Marumi		Misaki		Kojo		Total	
	A	B	A	B	A	B	A	B	A	B	A	B
Within Tajima of which, Toyooka	12	14	3	4	9	10	9	13	6	2	39	43
Outside Tajima but within Hyogo Prefecture of which, Kobe Himeji	26	21	8	6	6	9	11	8	3	5	54	49
Elsewhere in Kinki region of which, Osaka Kyoto	33	38	10	11	25	20	27	26	2	4	97	99
Outside Kinki region of which, Tokyo	4	7	3	2	4	3	3	4	0	0	14	16
Unspecified	3	4	2	1	1	1	1	2	0	0	7	8
	2											2
TOTAL	75	82	24	23	44	42	50	51	11	11	204	209

Note: A = Original destination  
B = Location at time of survey

The difference between the totals given above and the total number of migrants enumerated from the villages (218) is due to unavailability of relevant data.

Table A9. Return migrants.

	Age at time of survey	Year of (first) outmigration	Destination	Reason for (first) outmigration	Year of return	Year of second outmigration	Destination	Reason for (second) outmigration	Year of return
Yokoyuki									
*1.	34	1960	Sakai-shi	Employment	1963	-	Ōsaka-Kyōto		
2.	28	1969	Kobe	Employment	1973				
3.	27	1969	Nagoya	Employment	1973				
*4.	29	1968	Ōsaka	Employment	1974				
*5.	23	1971	Sanda-shi	Education	1977	-	Ōsaka		
6.	25	1972		Employment	1979				
*7.	24	1973	Ashiya	Employment	1977				
8.	32	1962	Kōbe	Employment	1979				
9.	21	1973	Ōsaka	Employment	1979				
10.	25	1969	Ōsaka	Employment	1978				
Tsukuriyama									
*1.	37	1960		Employment	1962	1973	Takai, Muraoka-cho Kebioka	Employment	
*2.	27	1971	Ōsaka	Employment	1974	-		Marriage	
3.	28	1970		Education	1974				
4.	26	1970		Employment	1975				
5.	23	1975	Ōsaka	Employment	1979				
6.	33	1964	Amagasaki	Employment	1968	1971	Nagoya	Employment	1974
7.	28	1970	Amagasaki	Longing for "bright lights"	1970				
Marumi									
1.	57	1949	Amagasaki	Employment	1959				
2.	35	1960	Ōsaka	Employment	1977				
3.	35	1960	Nagoya	Employment	1979				
Misaki									
1.	39	1955	Ōsaka	Employment					

\* Denotes that as the individual concerned was living elsewhere at the time of the survey, he/she was enumerated as a migrant in Tables A3-A8

Table A10. Return migrants: age at initial outmigration.

Years	15	16	17	18	26
Yokoyuki	5	-	1	4	-
Tsukuriyama	-	1	1	5	-
Marumi	2	-	-	-	1
Misaki	1	-	-	-	-
Total	8	1	2	9	1

Table A11. Return migrants: age at (first) return.

Years	18	20	21	22	24	25	32	35	36	39
Yokoyuki	1	-	3	2	2	1	1	-	-	-
Tsukuriyama	1	1	3	2	-	-	-	-	-	-
Marumi	-	-	-	-	-	-	1	1	1	-
Misaki	-	-	-	-	-	-	-	-	-	1
Total	2	1	6	4	2	1	2	1	1	1

Table A12. Return migrants: duration of (first) migration.

Years	Less than one	2	3	4	5	6	7	8	9	10	17	19	24
Yokoyuki	-	-	1	3	-	3	1	-	1	-	1	-	-
Tsukuriyama	1	1	1	3	1	-	-	-	-	-	-	-	-
Marumi	-	-	-	-	-	-	-	-	-	1	1	1	-
Misaki	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	1	1	2	6	1	3	1	-	1	1	2	1	1

Table A13. Return migrants: relationship to head of household.

	HoH S1	S2	S3	S4	D1	D2	D3
Yokoyuki	-	5	1	-	1	2	-
Tsukuriyama	2	4	-	-	-	1	-
Marumi	1	-	2	-	-	-	-
Misaki	1	-	-	-	-	-	-
Total	4	9	3	0	1	3	0

Table A14. Return migrants: reason for return.

	To succeed	Parental request	To care for parent(s)	Prefers home	Education	Marriage	Found local employment	Illness	Unemployment	No response
Yokoyuki	2	1	-	-	1	1	1	1	2	1
Tsukuriyama	4	-	2	1	-	-	-	-	-	-
Marumi	1	-	1	-	-	-	-	1	-	-
Misaki	-	-	-	-	-	-	1	-	-	-
Total	7	1	3	1	1	1	2	2	2	1

Table A15. Return migrants: occupation after return.

	Unemployed	Housewife	Day Labour	Farming and day labour	Farming day labour	Farming + forestry + day labour	Farming + <i>dekasegi</i>	Plasterer + <i>dekasegi</i>	Tiler	Local Employment
Yokoyuki	3	1	1	-	1	-	-	-	-	3
Tsukuriyama	-	-	-	1	-	1	-	-	-	5
Marumi	1	-	-	-	-	1	1	1	-	-
Misaki	-	-	-	-	-	-	-	-	1	-
Total	4	1	1	1	1	2	1	1	1	8

Table A16. Sample population: age-sex structure

Age Group	Yokoyuki		Tsukuriyama		Marumi		Kojō (11 hh)		Misaki		Ōsasa		Kebioka		Total		TOTAL POPULATION
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
0 - 4	0	0	2	1	0	3	0	0	0	0	5	1	2	0	9	8	17
5 - 9	0	0	0	1	3	1	0	0	4	1	2	6	4	4	10	18	28
10 - 14	2	1	0	2	0	0	1	0	1	4	6	4	9	13	23	20	43
15 - 19	4	0	0	3	4	3	0	1	2	4	2	1	7	6	18	19	37
20 - 24	6	5	2	1	1	0	0	0	8	4	3	1	1	4	24	12	36
25 - 29	6	2	3	2	0	2	1	0	3	1	3	3	3	3	19	13	32
30 - 34	1	0	1	0	1	0	0	0	2	2	1	3	1	7	11	10	21
35 - 39	0	0	0	0	3	0	1	1	1	2	4	3	4	3	13	9	22
40 - 44	1	1	1	2	0	5	2	1	1	2	4	2	2	5	14	23	37
45 - 49	1	6	2	2	6	3	1	2	4	5	2	5	10	11	27	32	59
50 - 54	6	6	1	5	2	2	2	1	4	5	8	7	6	8	31	32	63
55 - 59	7	3	3	2	2	3	1	3	1	2	1	4	6	3	18	23	41
60 - 64	4	6	3	0	5	4	2	0	1	4	1	1	9	3	19	24	43
65 - 69	4	3	0	1	2	1	1	2	3	3	3	3	4	4	17	16	33
70 - 74	2	2	0	1	3	2	0	1	1	1	6	2	6	6	18	18	36
75 - 79	2	5	1	3	0	2	0	0	1	2	1	1	3	3	10	15	25
80 - 84	2	2	0	0	1	2	1	0	0	2	1	0	2	0	5	8	13
85 - 89	1	3	0	1	0	0	0	0	1	1	0	1	1	1	2	7	9
90 - 94	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	3	4
95 - 100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total	49	46	19	27	33	33	15	12	34	50	53	48	86	94	289	310	599
Total	95		46		66		27		84		101		180		599		599

Table A17. Muraoka-chō sample villages:  
age/sex structure 1980.

Age	Marumi		Kebioka		Tsukuriyama		Ōsasa		Kojō	
	M	F	M	F	M	F	M	F	M	F
95-99									0	1
90-94			0	3					0	0
85-89			2	2	0	1	2	1	0	0
80-84	1	2	1	5	1	0	1	1	2	0
75-79	4	3	5	9	2	3	5	5	0	1
70-74	3	4	10	11	2	0	4	6	0	1
65-69	4	1	10	11	0	2	5	6	0	2
60-64	5	9	9	15	4	2	2	5	4	2
55-59	4	4	13	18	4	2	7	9	3	3
50-54	3	1	15	18	1	6	13	8	2	4
45-49	6	4	20	17	2	1	10	10	1	0
40-44	1	5	9	11	1	3	7	6	1	2
35-39	4	0	6	14	0	0	3	7	0	0
30-34	1	1	9	6	1	0	6	5	1	1
25-29	0	2	8	8	4	2	11	7	1	0
20-24	1	0	8	7	3	2	12	8	0	0
15-19	5	3	17	10	1	2	8	7	0	1
10-14	1	2	14	16	0	2	9	10	1	0
5-9	3	2	5	10	0	1	10	5	0	1
0-4	0	2	4	4	2	2	9	2	0	0
TOTAL	46	45	165	195	28	31	124	108	16	19

Source: Muraoka Rural District Office.

Table A18. Dependency ratio and index of ageing.

	Age			Dependency ratio	Index of ageing
	0-14	15-64	65+		
Yokoyuki	3	65	27	46.2	41.5
Tsukuriyama	6	33	7	39.4	21.2
Marumi	7	46	13	43.5	28.3
Misaki	13	57	15	49.1	26.3
Kojo	1	19	7	42.1	36.8
Osasa	24	59	18	71.2	30.5
Kebioka	34	113	33	59.3	29.2
Total	88	392	120	53.1	30.6

Table A19. No. of respondent households, by no. of household members.

	1	2	3	4	5	6	7	8	9	Total
Yokoyuki	7	8	7	6	3	2	0	0	0	33
Tsukuriyama	1	4	3	3	2	1	0	0	0	14
Marumi	4	6	5	3	2	1	0	0	0	22
[Kojo (5 hh)]	1	3	0	1	0	0	0	0	0	5]
Kojo (11 hh)	1	6	3	0	1	0	0	0	0	11
Misaki	0	3	6	4	3	2	0	1	1	20
Osasa	0	5	5	2	3	4	3	1	0	23
Kebioka	3	9	12	8	7	7	2	0	0	48
Total	16	41	41	26	21	17	6	2	1	171

[ ] = excluded from the total.

Table A20. Household structure by sex and average age.

No. of household members	No. of households	Males	Females	Total Population	Average age (years)		
					Males	Females	Total Population
1	16	5	11	16	62.6	62.7	62.7
2	41	44	38	82	60.8	59.3	60.1
3	41	59	64	123	48.0	54.0	51.1
4	26	48	56	104	39.7	45.7	42.9
5	21	53	52	105	30.4	41.4	35.9
6	17	50	52	102	35.1	34.2	34.7
7	6	21	21	42	35.2	32.7	33.9
8	2	7	9	16	25.3	30.7	28.3
9	1	2	7	9	31.5	16.6	19.9
Total	171	289	310	599	41.8	45.1	43.5

Table A21. Household composition.

	2 person households		3 person households				4 person households				5 person households				6 person households				7 person households		8 person households						
	Couple	Son & parent	Total	Aged couple + child	Middle-aged couple + child	Couple + aged parent	Others	Total	Couple + parent + child	Couple + 2 children	Middle-aged couple + young couple	Others	Total	Couple + parents + child	Couple + parent + 2 children	Couple + parent + 3 children	Others	Total	Couple + parents + 2 children	Couple + parent + 3 children	Couple + 4 children	Total	Couple + parent + 5 children	Couple + parents + 4 children	Total		
Yokoyuki	7	1	8	2	1	4	0	7	5	1	0	0	6	1	0	2	0	3	0	0	1	2	0	0	0	0	
Tsukuriyama	4	0	4	1	1	0	1	3	2	1	0	0	3	0	2	0	0	2	0	0	1	1	0	0	0	0	
Marumi	5	1	6	1	1	2	1	5	3	0	0	0	3	0	2	0	0	2	0	0	1	1	0	0	0	0	
Kojo	5	1	6	1	1	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	
Misaki	3	0	3	1	0	2	3	6	1	2	0	1	4	0	2	0	1	3	1	0	1	2	0	0	0	1	
Osasa	5	0	5	1	2	2	0	5	0	0	2*	0	2*	1	2	0	0	3	3	1	0	4	3	0	3	0	
Kebioka	8	1	9	2	5	4	1	12	5	2	1	0	8	0	6	1	0	7	3	3	1	7	2	0	2	0	
TOTAL	37	4	41	9	11	15	6	41	16	6	3	1	26	2	15	3	1	21	7	6	4	17	6	1	6	1	2

Note: Relationship between household members has been surmised for Osasa and Kebioka, but in most cases is self-evident.

\* indicates the most likely relationship in doubtful cases.

Table A22. Household successors.

	Does the household have a successor?			Will he succeed?				Total	
	Yes	Don't know		Yes	No	Don't know	Perhaps		Unlikely
		No	Unspecified						
Yokoyuki	25	4		6	10	4	4	1	33
Tsukuriyama	11	2		7	3	2			14
Marumi	16	5	1	4	9	1		2	22
Misaki	15	1		11		3		1	20
[ Kojō (5 hh)	5			1	3	1			5
Kojō (11 hh)	10	1		3	7				11
Osasa	23			13	8	2			23
Kebioka	41	2		9	27	5			48
Total	141	15	1	53	64	17	4	4	171

[ ] = excluded from the total.

Table A25. Rice Yields, 1980.

	Tonnes per hectare
Yokoyuki	3.15
Tsukuriyama	3.50
Marumi	3.80
Misaki	2.40
Kojō	3.00
Osasa	3.70
Kebioka	3.50
Tajima (1976)	3.68

Sources: Sample villages, 1980  
 Agricultural Census;  
 Tajima, Hyogo-ken  
 Kikaku-bu, 1978b,  
 p.33, Table III-5.

Table A23. Changes in arable land acreage (ha.).

	1960		1970		1975		1980		1980 x 100	
	Total	Av. per farm hh.	Total	Av.						
Yokoyuki	19.70	0.42	14.10	0.36	6.70	0.20	7.56	0.21	38.4	50.0
Tsukuriyama	9.90	0.47	9.40	0.47	8.52	0.43	8.50	0.57	85.9	121.3
Marumi	21.10	0.57	17.50	0.55	12.03	0.45	12.81	0.58	60.7	101.8
Misaki	13.50	0.44	10.00	0.50	7.48	0.44	3.03	0.20	22.4	45.4
Kojo	8.80	0.44	8.60	0.57	6.43	0.46	4.84	0.44	55.0	100.0
Osasa	38.30	0.70	36.70	0.73	32.96	0.70	29.38	0.59	76.7	84.3
Kebioka	49.20	0.45	42.90	0.44	37.83	0.42	39.34	0.45	80.0	100.0
TOTAL	160.50		139.20		111.95		105.46		65.7	

Source: Agricultural Censuses.

Table A24. Changes in paddy land acreage (ha.).

	1960		1970		1975		1980		1980 x 100	
	Total	Av. per farm hh.	Total	Av. per farm hh.	Total	Av. per farm hh.	Total	Av. per farm hh.	Total	Av.
Yokoyuki	9.00	0.19	8.45	0.22	4.74	0.18	4.00	0.13	44.4	68.40
Tsukuriyama	7.70	0.37	7.62	0.38	6.74	0.40	5.95	0.40	77.3	108.11
Marumi	13.20	0.36	11.55	0.37	8.72	0.34	7.42	0.37	56.2	102.8
Misaki	3.70	0.12	2.83	0.19	1.80	0.15	1.42	0.13	38.4	108.3
Kojo	6.50	0.32	6.38	0.42	4.95	0.35	3.87	0.35	59.5	109.4
Osasa	28.90	0.52	30.28	0.61	26.68	0.57	23.95	0.48	82.9	92.3
Kebioka	37.80	0.34	36.21	0.38	31.62	0.36	30.24	0.35	80.0	102.9
TOTAL	106.80		103.32		85.25		76.85		72.0	

Source: Agricultural Censuses.

Table A26. Abandonment of arable land.

	Yokoyuki	Tsukuriyama	Marumi	Misaki	Kojo (5)	Total
No. of households	21	12	20	17	3	73
Area formerly under rice (ha.)	3.27	2.28	2.61	0.75	0.03	8.94
Area formerly dry fields (ha.)	0.49	0.01	0.60	3.44	0.10	4.64
Area former crop unspecified (ha.)	0.88	0.00	0.90	1.22	0.00	3.00
Total area (ha.)	4.64	2.29	4.11	5.41	0.13	16.58
When abandoned (households)						
Before 1969	4	0	2	1	1	8
1969 - 1974	13	6	13	9	1	42
1975 - 1980	3	6	4	3	1	17
Unspecified	1	0	1	4	0	6
Present condition (ha.)						
Cryptomeria ( <i>sugi</i> ) forest	4.25	0.97	1.87	0.22	0.00	7.31
Cedar ( <i>hinoki</i> ) forest	0.00	0.00	0.10	0.00	0.00	0.10
Dry fields	0.30	0.42	0.35	0.04	0.03	1.14
Pasture	0.00	0.00	0.48	0.00	0.00	0.48
Left wild	(Unspecified)	0.00	0.63	5.15	0.10	5.88
Unspecified	0.09	0.90	0.68	0.00	0.00	1.67
Total area	4.64	2.29	4.11	5.41	0.13	16.58

Table A27. Reasons for abandonment of arable land.

(households)

Reason stated for abandonment	Yokoyuki	Tsukuriyama	Marumi	Misaki	Kojō (5 hh)	Total
Rice production adjustment policy	2	8	13	1	1	25
Too distant/inaccessible	3	5	2	2		12
Inadequate/aged labour	2	4	5	5		16
Gave up sericulture (mulberry)		1		3		4
Too difficult to cultivate	5	1	2		1	9
Wild boars/bears	13					13
Illness/death	2		1	2	1	6
Low yield/profit	4		2	1		7
Reduction in family size/ no longer needed	1		1	3		5
Inadequate water supply			1			1
Landslide			1			1
Unspecified				3		3

Note: Totals more than total the no. of households which abandoned arable land (73), due to dual responses.

Table A28. Forest ownership.

	0	Less than 5	5 - less than 10	10 or more	Unspecified	Total
Yokoyuki	3	21	1	3	5	33
Tsukuriyama	0	9	3	1	1	14
Marumi	2	14	5	0	1	22
Misaki	0	15	0	1	4	20
[Kojō (5 hh)	0	4	0	1	0	5]
Kojō (11 hh)	1	6	1	2	1	11
Ōsasa	3	13	7	0	0	23
Kebioka	10	25	2	2	9	48
Total	19	103	19	9	21	171

[ ] = excluded from the total

Table A29. Population engaged in farming or forestry only, Or farming or forestry and some other occupation, by age and sex.

Age	Yokoyuki		Tsukuriyama		Marumi		Misaki		Kojō (5 hh)		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
15-19					1						1	
20-24												
25-29	1		1		1	1			1		4	1
30-34					1			1			1	1
35-39								1				1
40-44												
45-49												
50-54	3	4	2	2	6	3	2	3	5		10	12
55-59	4	2	3	2	2	1	2	1	1	1	10	7
60-64	2	5	3	3	2	3	2	1	2	1	9	10
Sub-total	10	15	25	11	14	11	25	3	10	4	42	50
65-69	4	2			1	1	2	3	2	5	8	6
70-74	1	2			1	1	2				2	4
75-79	1	4						1	1	2	2	5
80-84									1			1
Sub-total	6	8	14	0	2	2	4	4	4	8	12	16
TOTAL	16	23	39	11	16	13	29	7	14	21	54	66
											9	120

Table A30. Population engaged in farming only, by age and sex.

Age	Yokoyuki		Tsukuriyama		Marumi		Misaki		Kojō (5 hh)		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
15-19												
20-24												
25-29					0	1			1	0	1	1
30-34					1	0		0	1		1	1
35-39												
40-44					0	2						0
45-49								1	0		1	1
50-54								0	1			0
55-59	0	2								2		2
60-64	0	0								0	1	0
	1	0			1	2		1	0	1	1	3
Sub-total	1	2	0	3	2	5	7	2	2	4	1	4
65-69	1	0			1	1	2	3	2	0	1	5
70-74	0	1			1	1	2					1
75-79	0	2						1	1		2	1
80-84	0	0						0	1		1	0
Sub-total	1	3	0	1	2	2	4	4	4	0	1	7
TOTAL	2	5	0	4	4	7	11	6	6	1	5	13
												6
												13
												27
												40
												22
												16
												11
												18

Table A31. Population engaged in farming and forestry, by age and sex.

Age	Yokoyuki		Tsukuriyama		Marumi		Misaki		Kojō (5 hh)		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
15-19												
20-24												
25-29												
30-34												
35-39												
40-44					0	1	1				0	1
45-49					0	2	2				0	4
50-54					2	1	3				2	2
55-59					1	1	2				1	4
60-64					0	1	1				0	2
Sub-total	3	5	8	2	1	4	5	0	1	1	0	13
65-69	1	1	2									2
70-74	0	1	1									1
75-79	1	1	2									2
80-84												
Sub-total	2	3	5									5
TOTAL	5	8	13	2	2	4	5	0	1	1	0	16
												23

Table A32. Farming, gross incomes, by source.

(¥10,000s/%)

	Yokoyuki	Tsukuriyama	Marumi	Misaki	Kojo (5 hh)	Total
<i>Village totals</i>						
Rice	35	318.6	555.7	0	100.6	1,009.9
<i>Shiitake</i>	385	501.5	0	2	5	893.5
Sericulture	0	342.5	170	8	0	520.5
Cattle breeding	320	35	3,424	35	0	3,814.0
Fruit	44.8	0	0	141	0	185.8
Others	115	41	78	34.5	0	268.5
Total	899.8	1,238.6	4,227.7	220.5	105.6	6,692.2
<i>Average per household</i>						
Rice	1.1	22.8	25.3	0	20.1	10.7
<i>Shiitake</i>	11.7	35.8	0.0	0.1	1.0	9.5
Sericulture	0.0	24.5	7.7	0.4		5.5
Cattle breeding	9.7	2.5	155.6	1.8		40.6
Fruit	1.4	0.0	0.0	7.0		2.0
Others	3.4	2.9	3.6	1.7		2.9
Total	27.3	88.5	192.2	11.0	21.1	71.2

Note: Income from *shiitake* cultivation is here included as farm income.

Table A33. Population engaged in fishing only, or fishing and some other occupation, by age and sex.

Age	Misaki		
	M	F	
15-19	1		1
20-24	3		3
25-29	1		1
30-34			
35-39	1		1
40-44	1		1
45-49	2		2
50-54	2		2
55-59			
60-64			
Sub-total	11	0	11
65-69			
70-74			
75-79			
80-84			
Sub-total	0	0	0
TOTAL	11	0	11

Table A34. Population engaged in a full-time occupation,\* by age and sex.

	Yokoyuki		Tsukuriyama			Marumi			Misaki			Kojō (5)			Total		
	M	F	M	F		M	F		M	F		M	F		M	F	
15-19						0	1	1							0	1	1
20-24	4	2	6	2	1	3			3	1	4				9	4	13
25-29	3	1	4	2	2	4			3	1	4				8	4	12
30-34				1	0	1									1	0	1
35-39							1	0	1	1	0	1			2	0	2
40-44				0	1	1	0	1	1	0	1				0	3	3
45-49	1	2	3						1	0	1				2	2	4
50-54	2	1	3				1	1	2	1	0	1			4	2	6
55-59	2	0	2							1	0	1			3	0	3
60-64										0	1	1			0	1	1
Unspec.															0	0	0
TOTAL	12	6	18	5	4	9	2	3	5	10	4	14	0	0	29	17	46

\* For definition, see note (1), Table A50.

Table A35. Population engaged in full-time occupations, by type of work.

	Yokoyuki		Tsukuriyama		Marumi		Misaki		Total						
	M	F	M	F	M	F	M	F	M	F					
	Fish processing	1	0			1	0	1	2	1	2	3	0		
Carpenter	1	0						3	5	0	3	5			
Plasterer	1	0						0	1	0	1	1			
Tiler	2	0						1	1	0	1	1			
Electrician	1	0							2	0	2	2			
Boiler maker	1	0							1	0	1	1			
Boiler attendant (hot spring)	1	0						1	1	0	1	1			
Polisher (turbines)	3	1		1					1	0	1	1			
Vehicle mechanic	0	2		0		1			1	0	1	1			
Metal parts manufacture	3	1		0					3	1	4	4			
Machine manufacture	0	2							0	2	2	2			
Gears manufacture				0		2			2	0	2	2			
Electrical goods manufacture									0	2	2	2			
Textiles manufacture	1	0		0					2	0	2	2			
Garment manufacture				2					1	2	3	3			
Electricity company	1	2		0		1			1	0	1	1			
Company (unspecified)	1	0		1					1	3	4	4			
Agricultural cooperative	1	0		1					1	2	3	3			
Hospital administration									0	1	1	1			
Social work									1	1	2	2			
Bank clerk									1	0	1	1			
Vehicle sales	0	1							1	0	1	1			
Electrical goods sales									1	0	1	1			
Taxi driver									1	0	1	1			
TOTAL	12	6	18	5	4	9	2	3	5	10	4	14	29	17	46

Table A36. Number of households sending out *dekasegi* migrants.

	No. of migrants per household		Migrants Total
	0	1	
Yokoyuki	33	0	0
Tsukuriyama	5	7	11
Marumi	10	11	13
Misaki	19	1	1
Kojo (5 hh)	2	3	3
Kojo (11 hh)	4	7	7
Osasa	20	3	3
Kebioka	16	31	33
TOTAL	107	60	4
			68

[ ] = excluded from the total.

Table A37. *Dekasegi* migrants, by age and sex.

	Tsukuriyama		Marumi		Misaki		Kojo (5)		Kojo (11)		Osasa		Kebioka		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
30-34			1										2	1	2	1
35-39															2	3
40-44	1		6								1		5	9	8	
45-49	2		2*		1						1		6	6	12	2
50-54	1	2	2				[ ]				1		3	1	9	2
55-59	3		2				[ ]			1			1	1	6	
60-64	2		1				[ ]				1		1	1	1	1
65-69													1	1	1	1
70-74													1	1	1	1
Unspec.														1*		
TOTAL	9	2	12	1	1		[ ]			6	1	3	31	2	62	6

Notes: [ ] = excluded from the total.

\* Marumi figures include 53-year-old male who works permanently in Himeji and intends to return upon retirement. Returns every other weekend. Was included in questionnaire response.

Also, wife of 57-yr-old male works as teacher permanently in Nishinomiya. Was not included in questionnaire response.

Kebioka figures include husband of 48-yr-old female who works as civil servant permanently in Nishinomiya. Was not included in questionnaire response.

Table A38. Relationship of *dekasegi* migrants to head of household.

	Head of household (male)	Head of household (female)	Wife	Husband	Father	Eldst son	Second son	Adopted son/son-in-law	TOTAL
Yokoyuki	9		2						0
Tsukuriyama	10		1		1				11
Marumi	1								13
Misaki	3								1
[ Kojo (5 hh)	4	1					2		3
Kojo (11 hh)	3								7
Osasa	29	1	1	1			1		33
Kebioka									
TOTAL	56	2	4	1	1	0	3	1	68

[ ] = excluded from the total.

Table A39. Number of *dekasegi* migrants, by type of work.

	Sake Brewing	Construction	Other	Unspecified	TOTAL
Yokoyuki	0	0	0	0	0
Tsukuriyama	8	0	2	1	11
Marumi	11	0	2	0	13
Misaki	1	0	0	0	1
[ Kojo (5 hh)	3	0	0	0	3
Kojo (11 hh)	7	0	0	0	7
Osasa	3	0	0	0	3
Kebioka	28	0	5	0	33
TOTAL	58	0	9	1	68

[ ] = excluded from the total.

Table A40. Destinations of *dekasegi* migrants.

	Tsukuriyama	Marumi	Misaki	Kojō (5)	Kojō (11)	Ōsasa	Kebioka	Total
Unspecified	3	2	1	(2)	1			7
Akashi-shi							3	3
Ayabe-shi (Kyōto-fu)	2	1					1	1
Himeji-shi								3
Hyogo-ken							5	5
Itami-shi (Ōsaka-fu)							1	1
Izumi-shi (Ōsaka-fu)							1	1
Kagawa-ken							1	1
Kashihara-shi (Nara-ken)	1					1	3	3
Kōbe-shi								2
Kōchi-ken							1	1
Kyoto-shi		1			1	1	2	5
Mie-ken							1	1
Nara-ken	1	2				1		4
Nishinomiya-shi	1	1					3	5
Tenri-shi (Nara-ken)								3
Tokushima-ken					3			1
Tondabayashi-shi (Ōsaka-fu)					1		1	1
Wakayama-ken		6		(1)	1		10	17
Yoka	1							1
Hachibuse	2							2
TOTAL	11	13	1	(3)	7	3	33	68

Note: Kojō 5hh sample, figures are excluded from Total.

Table A41. Number of households, by number of day labourers.

	No. of day labourers					Total households	Total no. of labourers
	0	1	2	3	Unspecified		
Yokoyuki	20	8	3	2	0	33	20
Tsukuriyama	9	5	0	0	0	14	5
Marumi	16	6	0	0	0	22	6
Misaki	7	12	1	0	0	20	14
[ Kojō (5 hh)	5	0	0	0	0	5	0
Kojō (11 hh)	7	2	2	0	0	11	6
Ōsasa	17	4	0	0	2	23	6
Kebioka	27	11	1	0	9*	48	15
TOTAL	103	48	7	2	11	171	72

Note: [ ] = excluded from the total.

\* For 7 hh in Kebioka it is not clear whether any member is engaged in day labour or not. Two more hh clearly are, but the number of members engaged in day labour is not specified.

Table A43. Relationship of day labourers to head of household.

	Head of household (male)	Head of household (female)	Wife	Mother	Eldest son	Second son	Fourth son	Adopted son /son-in-law	Unspecified	TOTAL
Yokoyuki	10	1	5		2	1	1			20
Tsukuriyama	1		3		1					5
Marumi	1		2		2	1				6
Misaki	1		7	4	2					14
Kojō (5 hh)	0									0
Kojō (11 hh)	1		2			2			1	6
Ōsasa	2			1		1			2	6
Kebioka	8		3					1	3	15
TOTAL	24	1	22	5	7	5	1	1	6	72

Table A42. Number of day labourers, by age and sex.

	Yokoyuki		Tsukuriyama		Marumi		Misaki		Kojō (5 hh)		Kojō (11 hh)		Ōsasa		Kebioka		TOTAL									
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F								
15-19					1												1	0	1							
20-24	1				1		2						1				5	0	5							
25-29	2		1														3	0	3							
30-34	1				1										2		3	0	3							
35-39					1		1				1	2			1		3	2	5							
40-44	1			1			1				1				2	1	4	3	7							
45-49				1	1	1	3			1	1				3	2	6	7	13							
50-54	2	2		1		1	3	4									3	6	9							
50-59	4	1					2	2				1	1		1		5	4	9							
60-64	1	2	1		1		1	1									2	4	6							
65-69	1	1										1					2	1	3							
70-74	1										1						1	1	2							
75-79												1					0	0	0							
Unspec.													2		3				6							
TOTAL	14	6	2	3	5	4	2	6	3	11	14	0	0	0	3	2	6	3	1	6	9	3	15	38	28	72

Table A44. Number of day labourers, by type of work.

	Forestry	Fish Processing	Construction	Carpentry/ Plastering	Manufacturing	Agricultural/ fishing cooperative	Guest House	Ski Lifts	Unspecified	TOTAL
Yokoyuki			17		3					20
Tsukuriyama	1						3	1		5
Marumi			3	1	1			1		6
Misaki		9*	1	2		1	2*			14
Kojō (5 hh)										0
Kojō (11 hh)	3								3	6
Ōsasa			4		1*	1	1*			6
Kebioka	8		4		3					15
TOTAL	12	9	29	3	8	2	6	2	3	72

\* indicates double response.

Table A45. Population engaged in home piecework only or home piecework and some other occupation, by age and sex.

Age	Yokoyuki		
	M	F	
15-19			
20-24		1	1
25-29			
30-34			
35-39			
40-44		1	1
45-49		1	1
50-54			
55-59			
60-64	1	3	4
Sub-total	1	6	7
65-69			
70-74			
75-79			
80-84			
Sub-total	0	0	0
TOTAL	1	6	7

Table A46. Households and population of Ōsasa, by no. of household members engaged in guest houses.

No. of household members engaged in guest houses	0	1	2	3	4	5	Unspecified	TOTAL
No. of households	4	4	6	5	1	1	2*	23
Population	0	4	12	15	4	5	3*	43

Note: \* The exact number engaged in guest house work was not specified in 2 households, but is thought to be a minimum of three household members.

Table A47. Population engaged in guest houses, Ōsasa, by age and sex.

Age	Ōsasa		
	M	F	
15-19	1	0	1
20-24	1	0	1
25-29	1	2	3
30-34	1	3	4
35-39	3	3	6
40-44	4	1	5
45-49	0	3	3
50-54	3	6	9
55-59	0	3	3
60-64	0	1	1
65-69	2	1	3
70-74	3	0	3
75-79	0	1	1
Unspecified	0	0	0
TOTAL	19	24	43

Table A48. Relationship of those engaged in guest houses, Ōsasa, to head of household.

Relationship	
Head of household (male)	12
Wife	18
Father	3
Mother	4
Son	2
Daughter	1
Adopted son/son-in-law	1
Unspecified	2
TOTAL	43

Table A49. Population unemployed (including housewives), by age and sex.

Age	Yokoyuki		Tsukuriyama		Marumi		Misaki		Kojō (5 hh)		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
15-19											0	0
20-24	1	2	3				0	1	1		1	3
25-29	1	1	2		0	1					1	2
30-34							0	1	1		0	1
35-39					1	0					1	1
40-44	0	1	1		0	1					0	2
45-49							0	1	1		0	1
50-54					0	1					0	1
55-59					0	2					0	1
60-64	1	0	1		2	1		0	1		4	2
Unspecified											0	0
TOTAL	3	4	7	0	3	6	9	4	4	0	7	14
				0	0	0	0	0	0	0	0	21

Table A50. Population, by type of occupation, and by age and sex.

	Yokoyuki		Tsukuriyama		Marumi		Misaki		Kojō (5 hh)		Total							
	M	F	M	F	M	F	M	F	M	F	M	F						
	Full-time education	4	0	4	0	3	3	5	1	5	6	0	0	8	10	18		
Farming only	1	2	3	0	3	3	7	2	2	4	1	4	9	6	16	22		
Fishing only								9	0	9			1	1	0	1		
<i>Dekasegi</i> only	6	2	8				1	5	6				7	7	14			
Day labour only	12	6	18	5	4	9	2	10	4	14	0	0	29	17	46			
Full-time employment	3	5	8	0	2	2	1	4	5	1	1		4	12	16			
Farming and forestry				2	1	3	2	0	2	0	2		6	1	7			
Farming and <i>dekasegi</i>	3	1	4	0	1	1	1	2	0	6	6		4	9	13			
Farming and day labour													0	1	1			
Farming and shop													1	0	1			
Farming, forestry and fishing				7	1	8	6	0	6				1	0	1			
Farming, forestry and <i>dekasegi</i>	3	2	5	1	2	3	1	1	2				13	1	14			
Farming, forestry and day labour				1	0	1	1	0	1				6	5	11			
Farming, forestry and <i>chō</i> councillor													1	0	1			
Day labour and <i>dekasegi</i>													1	0	1			
Farming, day labour and <i>dekasegi</i>													1	0	1			
Fishing and day labour													1	0	1			
Home piecework	1	1	2										1	1	2			
Farming and home piecework	0	2	2										0	2	2			
Forestry and home piecework	0	1	1										0	1	1			
Farming, forestry and home piecework	0	2	2										0	2	2			
Guest house owner													0	1	1			
Housewife	0	3	3										0	3	3			
Unemployed	3	1	4										0	1	1			
Unspecified	0	1	1										0	1	1			
Sub-total	36	29	65	16	17	33	24	22	46	26	30	56	4	4	8	106	102	208
0-14 years	2	1	3	2	4	6	3	4	7	2	11	13	0	0	0	9	20	29
65 years and over	11	16	27	1	6	7	6	7	13	6	9	15	0	1	1	24	39	63
TOTAL	49	46	95	19	27	46	33	33	66	34	50	84	4	5	9	139	161	300

Notes: 1) "Full-time employment" is defined as all employment excluding home piecework, farming, fishing, forestry, *dekasegi*, construction and day labour other than construction for less than 300 days per annum.  
 2) Forestry day labour is included as forestry. Some included in other tables as day labourers are thus here included in other categories.  
 3) *Shitake* cultivation is here regarded as forestry.

Table A51. Number of households, by type of occupation(s)

(HouseholdIds)

Total variety of occupations in the household	Kojō (11 hh)	Kebioka	Osasa	Total
Farming only	1	2		3
<i>Dekasegi</i> only	1	1		2
Farming and forestry	1	1		2
Farming and <i>dekasegi</i>	1	5	1	7
Farming and guest house			11	11
Farming and construction			1	1
Farming and other (unspecified)	1	2		3
Farming, forestry and <i>dekasegi</i>	5	14		19
Farming, forestry and guest house			3	3
Farming, forestry and manufacturing		1		1
Farming, forestry and other (unspecified)	1			1
Farming, <i>dekasegi</i> and construction		2		2
Farming, <i>dekasegi</i> and manufacturing		2		2
Farming, <i>dekasegi</i> and other (unspecified)		4		4
Farming, guest house and manufacturing			1	1
Farming, guest house and agricultural cooperative			1	1
Farming, forestry, <i>dekasegi</i> and construction		1		1
Farming, forestry, <i>dekasegi</i> and other (unspecified)		1		1
Farming, forestry, guest house and construction			1	1
Farming, forestry, guest house and freight services			1	1
Farming, <i>dekasegi</i> , civil service and other (unspecified)		1		1
Farming, guest house, carpentry and manufacturing			1	1
Farming, manufacturing, communications and other (unspecified)		1		1
Farming, forestry, <i>dekasegi</i> , guest house and construction		1		1
Civil service				1
Teaching		1		1
Retailing		1		1
Construction		1		1
Other full-time employment		1		1
Retired		2		2
Unemployed		2		2
TOTAL	11	48	23	82

Note: One civil servant in Nishinomiya.

Table A52. Gross incomes, by source.

	(#10,000s/%)							TOTAL
	Yokoyuki	Tsukuriyama	Marumi	Misaki	Kojō (5 hh)			
<i>Village totals</i>								
Farming	899.8	1,238.6	4,227.7	220.5	105.6	16.4	6,692	26.6
Forestry	200	68	10	0	36	5.6	314	1.2
Fishing				2,405			2,405	9.6
Full-time employment	1,757	1,165	992	2,145	0	0.0	6,059	24.1
Day labour	2,008.3	150	342	1,121.5	0	0.0	3,621.8	14.4
Home piecework	108						108	0.4
<i>Dekasegi</i>	0	935	1,420	90	375	58.1	2,820	11.2
Unemployment benefit	10	187	250	10	75	11.6	532	2.1
Pension	825.1	148.6	613	463.4	54	8.4	2,104.1	8.4
Others	208	36	114	144	0	0.0	502	2.0
Total	6,016	3,928.2	7,968.7	6,599.4	645.6	100.0	25,158.1	100.0
<i>Average per household</i>								
Farming	27.3	88.5	192.2	11.0	21.1		71.2	
Forestry	6.1	4.9	0.5	0	7.2		3.3	
Fishing				120.2			25.6	
Full-time employment	53.2	83.2	45.1	107.2	0.0		64.5	
Day labour	60.9	10.7	15.5	56.1	0.0		38.5	
Home piecework	3.3						1.2	
<i>Dekasegi</i>	0.0	66.8	64.5	4.5	75		30	
Unemployment benefit	0.3	13.4	11.4	0.5	15		5.7	
Pensions	25.0	10.6	27.9	23.2	10.8		22.4	
Others	6.3	2.6	5.2	7.2	0.0		5.3	
Total	182.3	280.6	362.2	330.0	129.1		267.6	

Table A53. Average household expenditure, 1979

	(¥1,000s)			
	URBAN/SUBURBAN	PLAINS FARMING VILLAGES	MOUNTAIN FARMING VILLAGES	MOUNTAIN VILLAGES
Average no. household members	4.59	4.48	4.32	4.22
Disposable income	5,108.0	4,737.4	4,314.5	4,093.0
Total household expenditure	4,100.5	3,708.3	3,440.2	3,280.4
Expenditure on food	910.5	872.8	808.1	807.2
Expenditure on clothes	367.2	295.6	284.0	248.1
Expenditure on lighting, heating and water	130.7	131.0	123.2	125.6
Expenditure on housing	446.1	396.0	357.3	356.4
of which, household goods	213.3	192.9	176.9	171.9
Miscellaneous expenditure	2,246.0	2,012.9	1,867.6	1,743.1
of which, emergencies	374.0	275.8	260.1	222.9

Source: *Nihon Nōgyō Nenkan 1982*, p.447.

Table A54. Distance to a DID: sample villages, 1980.

	DID	Road distance (km)	Temporal distance (mins)
Yokoyuki	(Yōka)	(30)	(80)
Tsukuriyama	Kasumi	31	60
Marumi	Kasumi	25	60
Misaki	Kasumi	12	25
Kojō	Kasumi	10	80
Ōsasa	Kasumi	35	70
Kebioka	Kasumi	22	40

Source: 1980 Agricultural Census, for Marumi, Misaki, Kojō, Ōsasa and Kebioka; author, for Yokoyuki and Tsukuriyama.

Table A55. Distance to important establishments: sample villages, 1980.

	(km)		
	Rural District Office	Agricultural Cooperative	Medical Facilities
Yokoyuki	10.7	29.5	6
Tsukuriyama	8.0	7.9	8
Marumi	7.7	7.8	8
Misaki	12.0	12.0	13
Kojō	11.5	11.4	12
Ōsasa	11.6	11.5	4
Kebioka	9.7	9.8	10

Source: 1980 Agricultural Census.

## NOTES

### Chapter I

1. Japanese settlements in rural areas typically consist of a distinct cluster of houses in the landscape, known in Japanese as a *shūroku* or *buraku*.

In many British or American studies of Japan, the term *shūroku* or *buraku* is translated as "hamlet", and the word "village" reserved for the larger administrative district, the *shi*, *chō* or *son*, which contains several *shūroku*. In my opinion, this terminology is inappropriate, for several reasons: (1) the *shūroku* may contain over a hundred households (such as Kebioka of the case studies) and is not adequately described by the term "hamlet"; (2) villagers themselves, whatever the size of the settlement, refer to it colloquially as "*mura*", which has no other meaning than "village"; (3) some settlements have small subdivisions, called *aza* or *koaza* (such as Kojō), for which there is no other word in English than "hamlet"; and (4) *shi*, *chō* and *son* are not adequately described by the term "village". They are more aptly translated as "rural district" - as was formerly the case in England and Wales - especially since they have a rural district council.

Throughout this thesis, then, *shichōson* are generally referred to as "rural districts" (in some cases *shi* is differentiated as a "municipal district" where this is more appropriate); *shūroku* and *buraku* are translated as "village", and *aza* or *koaza* as "hamlet". "Rural area" is consistently used to denote a broader context with no administrative connotations.

### Chapter II

1. Clout, in Salt and Clout, 1976, p. 31.
2. Hoskins, 1955; Muir, 1982; Rowley and Wood, 1982.
3. Grigg, in White and Woods, 1980, p. 83.
4. Ibid., p. 74.
5. Ogden, in White and Woods, 1980, p. 154.
6. Grigg, in White and Woods, 1980, p. 71.
7. Coul, 1964, p. 144; Porteous, 1968, p. 63.
8. Rowley and Wood, 1982, p. 24.
9. White and Woods, 1980, p. 50.
10. Raeburn, in Ashton and Long, 1972, p. 7.
11. Drudy, 1978, p. 58 and Paillat, 1976, cited by White, in White and Woods, 1980, p. 200.
12. White, in White and Woods, 1980, p. 213.
13. Ibid., p. 215.
14. Turnock, 1968, p. 263.

15. Thomas, in Ashton and Long, 1972, p. 93.
16. Ibid., p. 92.
17. Ibid.; see also Salt and Clout, 1976, p. 18.
18. Cairncross, 1953, p. 75, cited by Cromer, in White and Woods, 1980, p. 130.
19. Robinson, 1963, p. 179.
20. Newby, 1979, *passim*, especially pp. 153ff.
21. Commins, 1978, p. 82.
22. White, in White and Woods, 1980, p. 199.
23. Lewis, 1979, p. 42.
24. Ibid., pp. 143-46, based on Lewis and Maund, 1976.
25. Hannan, 1970, p. 97.
26. White, in White and Woods, 1980, pp. 210-11.
27. Edwards, 1971, p. 262.
28. Commins, 1978, p. 84.
29. Hannan, 1970, p. 136.
30. Ibid., p. 247.
31. Ogden, in White and Woods, 1980, p. 164.
32. Raeburn, in Ashton and Long, 1972, p. 7.
33. Ogden, in White and Woods, 1980, p. 175.
34. Ibid., p. 176.
35. Coul, 1964, p. 168.
36. Dickinson, 1955, p. 28; Scully, 1974, p. 160; Scargill, 1968, p. 20; Moiseley, 1962, p. 85.
37. Morgan Jones, in Ashton and Long, 1972, p. 111.
38. Scully, 1974, p. 162.
39. Raeburn, in Ashton and Long, 1972, p. 21.
40. Gasson, 1967, p. 177.
41. Dickinson, 1955, pp. 74-5, 80.
42. Morgan Jones, in Ashton and Long, 1972, p. 116.
43. Ibid., p. 119.
44. Lewis, 1979, p. 25.
45. Bertrand, 1967, p. 302.
46. Lewis, 1979, p. 112.
47. Commins, 1980, p. 66.
48. Harrison, 1965, p. 335; Scargill, 1968, p. 25; Scully, 1974, p. 160.
49. Scargill, 1968, p. 25.
50. Clout, in Salt and Clout, 1976, p. 31; White, in White and Woods, 1980, p. 211.
51. Commins, 1978, p. 85.

52. Commins, 1980, p. 71.
53. Scargill, 1968, p. 3.
54. For example, Raeburn, in Ashton and Long, 1972, p. 22; Commins, 1978, p. 86.
55. Grieve, in Ashton and Long, 1972, p. 143.
56. Turnock, 1967, p. 65.
57. Matthews, Philip and Cumming, in Ashton and Long, 1972, pp. 38-39.
58. Ibid., p. 39.
59. Dower, in Ashton and Long, 1972, p. 81.
60. Garbett-Edwards, in Ashton and Long, 1972, p. 81.
61. Hansen, 1968, p. 169.
62. Scully, 1974, p. 166.
63. Garbett-Edwards, in Ashton and Long, 1972, p. 69; Spooner, 1972, p. 205.
64. Garbett-Edwards, in Ashton and Long, 1972, p. 63; Spooner, 1972, p. 205; O'Huiginn, 1972, cited by Commins, 1978, p. 89.
65. Garbett-Edwards, *ibid.*
66. Curry, 1972, cited by Commins, 1978, p. 88.
67. Lucey and Kaldor, 1969, cited by Commins, *ibid.*
68. Kelly, 1970, cited by Commins, *ibid.*
69. Commins, *ibid.*
70. Hansen, 1968, p. 15; Garbett-Edwards, in Ashton and Long, 1972, p. 54; Spooner, 1972, p. 204.
71. Gaskin, in Ashton and Long, 1972, p. 166.
72. Commins, 1978, p. 88.
73. Garbett-Edwards in Ashton and Long, 1972, p. 53.
74. Schacter, 1967, p. 402.
75. Thomas, in Ashton and Long, 1972, p. 100.
76. Edwards, 1971, p. 249; Commins, 1978, p. 91; Lewis, 1979, p. 112.
77. Mitchell, 1950, p. 84; Robinson, 1963, p. 179; Turnock, 1967, p. 63; Turnock, 1968, p. 259; Edwards, 1971, p. 255; Clout, in Salt and Clout, 1976, p. 42.
78. Mitchell, 1950, p. 85.
79. Edwards, 1971, p. 258.
80. Johnston, 1966, p. 544.
81. Clout, 1972, p. 154.
82. Thomas, in Ashton and Long, 1972, p. 100.
83. Reiter, 1972, Ruiz, 1972, and Gade, 1970, cited by White, in White and Woods, 1980, p. 200-1.
84. White, in White and Woods, 1980, p. 218.
85. Scully, 1974, p. 167; Clout, in Salt and Clout, 1976, pp. 46-7; Buttel, 1980, p. 167.

87. Thomas, in Ashton and Long, 1972, p. 101.
88. White, in White and Woods, 1980, p. 220.
89. Johnston, 1966, p. 544.
90. Mitchell, 1950, p. 85; Wibberley, 1970, p. 287; Garbett-Edwards, in Ashton and Long, 1972, p. 69.
91. Lewis, 1979, p. 120.
92. Wibberley, 1970, p. 288.
93. McLaughlin, 1976, p. 156.
94. Ibid., p. 158.
95. Commins, 1978, p. 80.
96. Ibid., p. 91.
97. Gaskin, in Ashton and Long, 1972, p. 184.
98. White, in White and Woods, 1980, p. 204.
99. Commins, 1978, p. 83.
100. Watanabe Hyōriki (1967), cited by Yoneyama, 1969, p. 18 and Ikegami, 1975, p. 49.
101. Ikegami, 1975, pp. 49-50.

### Chapter III

1. Statistics Bureau, Prime Minister's Office, 1980, p. 17.
2. Kōsei-shō Jinkō Mondai Kenkyūsho, 1980, p. 94.
3. ESCAP, 1978, p. 12.
4. In 1966, a sudden and exceptional low of 13.7 births per thousand was recorded, due to its being the year of "Fire and Horse" (*hinoueuma*) of the traditional Chinese astrological sixty-year cycle, when, it is superstitiously believed, girl children born in that year are likely to eat their husband and burn down the house.
5. ESCAP, 1978, p. 19.
6. Statistics Bureau, Prime Minister's Office, 1981, p. 18.
7. Statistics Bureau, Prime Minister's Office, 1980, p. 10.
8. Statistics Bureau, Prime Minister's Office, 1980, p. 3.
9. Kuroda, 1973, p. 2.
10. Statistics Bureau, Prime Minister's Office, 1980, p. 9.
11. See pp. 22-24.
12. Palmer, 1979, p. 8.
13. Asahi Journal, 1978; Wiltshire and Abe, 1978; Wiltshire, 1979a and 1979b; Kawabe, in Association of Japanese Geographers, 1980, p. 385.
14. Imai, 1968, p. 12; Yoneyama, 1969, p. 21; Watanabe, 1970, p. 33; Saitō *et al.*, 1976, pp. 32, 55.
15. As (14) above.

16. See Chapters VI to IX.
17. In accordance with the practice adopted by the Kokudo-chō (National Land Agency).
18. Kokudo-chō Keikaku, Chōsei-kyoku, 1978, p. 486.
19. See Glossary.
20. See p. 121.
21. Kokudo-chō Chihō Shinkō-kyoku Kaso Taisaku-shitsu, 1980, p. 16; my translation.
22. Hane, 1982, p. 44.

#### Chapter IV

1. See p. 121.
2. The Land Reform prohibited all absentee landlordism. Resident landlords were permitted to own a maximum of on average three hectares of arable land in mainland Japan and twelve in Hokkaidō, provided it was cultivated by the owner. Resident landlords were also permitted to retain or rent out a maximum of one hectare of arable land in mainland Japan or four in Hokkaidō, which they did not cultivate themselves.
3. See Glossary for definition of a farm household.
4. Ikegami, 1975, p. 81.
5. Ibid., p. 82.
6. Ike, 1957, p. 60.
7. Ibid., p. 105.
8. Ibid.
9. Ibid., p. 95.
10. Ogura, 1979, pp. 319, 462.
11. Ibid. pp. 462-64.
12. Ibid.
13. See also Shimpo, 1976, pp. 53-85.
14. Dore, 1978, p. 124.
15. Nōrin Tōkei Kyōkai, 1981, p. 79.
16. See p. 278.
17. See p. 74.
18. Ikegami, 1975, p. 93.
19. Shimpo, 1976, pp. 29ff.
20. Saitō, in Saitō, 1976, p. 36.
21. Imai, 1968, p. 61.
22. See Glossary.
23. Saitō, p. 36, and Abiko, p. 49 in Saitō, 1976.
24. Ikegami, 1975, p. 249.
25. Abiko, in Saitō, 1976, p. 47.

26. Sugano, in Saitō, 1976, p. 21.
27. Ibid. p. 17.
28. Shimpō, 1976, pp. xiv, 105-6.
29. Sugano, in Saitō, 1976, p. 21.
30. Nagaoka, Nakafuji and Yamaguchi, 1978, p. 208.
31. Ibid.
32. Ibid.
33. Saitō, 1976, p. 559.
34. Sugano, in Saitō, 1976, p. 21.
35. Nagaoka, Nakafuji and Yamaguchi, 1978, p. 209.
36. Ibid.
37. Ibid.
38. Ibid.
39. Cf. p. 29.
40. Ikegami, 1975, p. 226.
41. Ishii, in Association of Japanese Geographers, 1980, p. 212.
42. Ikegami, 1975, pp. 48, 63.
43. Ikegami, 1975, pp. 61, 62, 65, 226, 231; Saitō, 1976, p. 544.
44. Shimodaira, cited by Ikegami, 1975, p. 66; my translation.
45. Cf. p. 29.
46. Statistics Bureau, Prime Minister's Office, 1981, p. 31.
47. Imai, 1968, p. 59.
48. See Glossary.
49. Imai, 1968, p. 60.
50. Abiko, in Saitō, 1976, p. 51.
51. Statistics obtained from Nōrinshō, 1967, *Survey of Abandonment of Farming, 1960-1965*.
52. Cf. p. 30.
53. Ibid.
54. Imai, 1968, p. 62.
55. Saitō, 1976, p. 35.
56. This trend is referred to in Japanese, half humorously, as *sanchan nogyo*: "farming by the three chans." The three chans are *kachan* "Mummy"; *jiichan*, "Grandpa"; and *bachan*, "Grandma". According to Ogura, 'About twenty years ago TŌBATA Seiichi said, "Japanese agriculture is not husbandry but wifery".' (Ogura, 1979, p. 543.)
57. Imai, 1968, p. 34; cf. p. 30.
58. Yoneyama, 1969, p. 157; my translation.
59. Yoneyama, 1969, p. 14; Ikegami, 1975, pp. 39, 82.
60. Cf. p. 91.

61. See Note 2, Chapter IV.
62. Also included are products such as chestnuts, walnuts, oil camellia, sumac, *urushi* lacquer, paper mulberry, beach and oil pawlonia, provided they are cultivated and fertilizer applied.
63. Imai, 1968, p. 54; Yoneyama, 1969, p. 15; Ikegami, 1975, p. 33.
64. Imai, 1968, p. 55.
65. Yoneyama, 1969, p. 14.
66. Ōkawa, 1978, p. 177.
67. Ibid. p. 7.
68. Ikegami, 1975, p. 98.
69. Imai, 1968, pp. 49, 57; Yoneyama, 1969, pp. 14, 17; Ikegami, 1975, pp. 41, 48, 59, 77; Saitō, 1976, pp. 28-31, 37, 56; Ōkawa, 1978, p. 23.
70. Imai, 1968, p. 44; Ōkawa, 1978, pp. 11ff.
71. Ikegami, 1975, p. 41; Ōkawa, 1978, pp. 62ff; Fukutake, 1980, p. 87.
72. Ōkawa, 1978, p. 12.
73. Ikegami, 1975, pp. 59-61.
74. Saitō, 1976, p. 30.
75. See Glossary.
76. Ōkawa, 1978, p. 11.
77. Ibid., p. 15.
78. Ibid., p. 123.
79. Ibid., p. 34.
80. Ibid., p. 29.
81. Cf. p. 48.
82. Ōkawa, 1978, p. 83.
83. Ibid., p. 32.
84. Ibid., p. 31.
85. Ibid., p. 33.
86. Ibid., p. 36.
87. Ibid., p. 55.
88. Ibid., p. 38.
89. Ibid., pp. 56, 118, 124.
90. Ibid., p. 73.
91. E.g. Saitō, 1976, p. 555.
92. Ōkawa, 1978, p. 124.
93. Ibid., p. 169.
94. Satō, in Saitō, 1976, p. 38.
95. Ibid., p. 39.
96. Kokudo-chō, 1978, p. 1.

97. Ibid., p. 24.
98. See also Note 114, Chapter V.
99. Ōsaka Shiritsu Daigaku Keizai Kenkyūsho, 1979, p. 531.
100. See also Note 143, Chapter V.
101. See p. 121.
102. For a description, see Yoneyama, 1969, pp. 145-46.
103. Kokodo-chō Keizai, Chōsei-kyoku, 1978, Vol. 2, p. 554.
104. Fukutake, 1980, pp. 80-81.
105. Ibid., p. 105.
106. Imai, 1968, pp. 52, 82, 177-78; Yoneyama, 1969, pp. 145-52; Ikegami, 1975, pp. 68-69; Saitō, 1976, pp. 22-23, 44, 547-49, 558; Ōkawa, 1978, p. 96.
107. Imai, 1968, p. 53; Ikegami, 1975, p. 69.
108. Imai, 1968, p. 53.
109. Ikegami, 1975, p. 69.
110. Sugano, in Saitō, 1976, p. 22.
111. Ibid.
112. Imai, 1968, p. 53.
113. Ōkawa, 1978, p. 96.
114. Sugano, in Saitō, 1976, p. 23.
115. Imai, 1968, p. 54.
116. Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol. 3, p. 656.
117. Ibid.
118. Imai, 1968, p. 177.
119. Sugano, in Saitō, 1976, p. 24.
120. Ibid.
121. Yoneyama, 1969, p. 150.
122. See p. 31.
123. Ōuchi, in Saitō, 1976, p. 62; my translation.
124. Sugano, in Saitō, 1976, pp. 137-39.
125. Ibid., p. 137.
126. Cf. p. 35.

#### Chapter V

1. See P. 58.
2. Yoneyama, 1969; Shimpo, 1976; Dore, 1978; Smith, 1978; Fukutake, 1980.
3. Yoneyama, 1969, pp. 65ff.
4. Ibid.; Fukutake, 1980, p. 76.

5. Imai, 1968, pp. 134-35.
6. Cf. p. 34.
7. Yoneyama, 1969, p. 67.
8. Ibid., p. 68.
9. Ibid., p. 67.
10. Ikegami, 1975, p. 76.
11. *Yobai*: the ancient custom whereby young men would covertly visit young women of the same or neighbouring villages by creeping into their bedroom at night. Although such illicit conduct was, on the face of things, socially disapproved of by village society, the flimsy construction of Japanese houses meant that such liaisons could not be concealed for long and usually became an open secret. For families concerned, reprimanding the culprits was avoided, as the shame of the young couple eloping as a result was even greater than the *yobai* itself. Often formal marriages resulted from the informal liaisons. Adolescents from around the age of fourteen took part. *Yobai* is thought to have died out during the 1930s. (Yoneyama, 1969, p. 100).

*Bon* dancing: traditional folk dances held during the summer months leading up to the O-Bon Buddhist festival. Up until the war it was one of the few opportunities for young men and women to socialize with any degree of overtness. *Bon* dancing is still held in most towns and villages of Japan on a moderate scale, and has largely lost its overtones of preliminaries to courtship.

12. Yoneyama, 1969, p. 63.
13. See Glossary.
14. See, for example, Doi, 1973, *passim*.
15. Fukutake, 1980, p. 75.
16. Yoneyama, 1969, p. 29; Nakane, 1970, p. 4ff; Kawabe, in Association of Japanese Geographers, 1980, p. 384.
17. Fukutake, 1980, p. 47.
18. Yoneyama, 1969, p. 29.
19. Ikegami, 1975, p. 45.
20. Yoneyama, 1969, pp. 136-38.
21. See, for example, Ikegami, 1975, p. 77.
22. Ibid., p. 45.
23. Ibid., p. 78.
24. Imai, 1968, p. 57.
25. Ikegami, 1975, p. 72.
26. Ibid.
27. See p. 73.
28. Imai, 1968, p. 45; Ikegami, 1975, pp. 42, 65-66, 72; Saitō, 1976, pp. 35-36.
29. Imai, 1968, p. 49; Ikegami, 1975, pp. 41-42, 66; Saitō, p. 36, and Abiko, p. 48, in Saitō, 1976.

30. Yoneyama, 1969, p. 50.
31. Ibid; see also Shimpo, 1976, pp. 86-90.
32. Ikegami, 1975, pp. 65, 72.
33. Ibid., p. 63; Shimpo, 1976, p. 89.
34. Yoneyama, 1969, p. 59.
35. Shimada, in Saitō, 1976, p. 5.
36. Imai, 1968, p. 11; Yoneyama, 1969, pp. 123, 198; Shimada, Sugano, in Saitō, 1976; Ōkawa, 1978, pp. 11ff.
37. Ikegami, 1975, p. 75.
38. Saitō, 1976, p. 35.
39. Ibid.
40. Cf. p. 30.
41. Fukutake, 1980, p. 20.
42. Abiko, in Saitō, 1976, p. 53; my translation.
43. Imai, 1968, p. 55; Yoneyama, 1969, pp. 30, 135; Ikegami, 1975, p. 71.
44. Imai, 1968, p. 57.
45. Imai, 1968, p. 55; Ikegami, 1975, p. 71.
46. Dore, 1978, p. 209.
47. Yoneyama, 1969, p. 59.
48. Ikegami, 1975, p. 71.
49. In 1946 the new constitution stipulated that all children should be treated equally even with regard to inheritance. The change in the law, however, did not result in a change of common practice, since most children other than the successor relinquish their statutory rights (Fukutake, 1980, p. 39).
50. Dore, 1978, p. 138; Smith, 1978, pp. 55ff; Fukutake, 1980, p. 30.
51. Dore, 1978, p. 140-41; Fukutake, 1980, pp. 28-29.
52. See Glossary.
53. Fukutake, 1980, p. 42.
54. Imai, 1968, p. 45; Dore, 1978, p. 147.
55. Ikegami, 1975, p. 74.
56. Smith, 1978, p. 108.
57. Ibid., p. 109.
58. Ikegami, 1975, p. 193.
59. Dore, 1978, p. 151.
60. Cf. p. 28.
61. Ikegami, 1975, p. 34.
62. Palmer, 1978, p. 17.

63. This paragraph is adapted from Palmer, 1979, p. 16. The results of the programme were quite remarkable. During fieldwork in Horokanai-chō, Hokkaidō, in July 1979, it was learnt from the Mayor that in direct response to the programme the rural district office had been flooded with applications from young women seeking husbands. The Mayor himself had officiated as go-between at six or seven weddings which had resulted from the programme, three of which were held simultaneously. The brides had come from as far afield as Ōsaka, Ehime, and Kyūshū, which is perhaps significant: they were not as yet acquainted with the harsh winters of Hokkaidō and had not necessarily come from farming families. Meanwhile, the farmers' daughters of Horonkanai continue to make a bee-line for the cities.
64. Ikegami, 1975, p. 44.
65. Ibid.
66. Fukutake, 1980, pp. 45-46.
67. See p. 100.
68. Kawashima, in Association of Japanese Geographers, 1980, pp. 390-414.
69. Hama, 1977, pp. 96-100.
70. Fukutake, 1980, p. 24.
71. Ikegami, 1975, p. 217.
72. Kokudo-chō Keikaku, Chōsei-kyoku, 1978, Vol. 4, p. 953; my translation.
73. It is unclear what proportion of the labour force is included in the lifetime employment system, as even published statistics of the Ministry of Labour do not include such employees as a separate category. Such employees are differentiated in colloquial Japanese from the rest of the labour force as *sararīman* ("salaried men"). They are almost exclusively males, who enter the civil service, the professions and the larger manufacturing and service firms, as white-collar administrative, executive, managerial and higher technical staff, and they receive a monthly salary. Typically there are also annual increments for length of service (a system called *nenkō joretsu*), and a wide variety of fringe benefits.

The concept of lifetime employment is one which is commonly well understood in Japan, but (rather like the term "community spirit" in English) it is singularly difficult to define precisely when pressed to do so. In fact, one authoritative work defines it by what it is *not*, rather than what it is:

...permanent employment and the seniority system apply only to a minority of workers in Japan. They do not apply to farmers or to those employed in small commercial or industrial establishments. Nor do these concepts apply to the large groups of so-called temporary workers who are paid regular wages but are not given the same kind of assurance about permanent employment or the same rate or promotion as regular employees. For example, most young women in an organization are not permanent and are expected to retire when they marry or become pregnant with their first child. Most housewives who come back to work after children are in school are classified as temporary employees

even if they remain within the same organization for many years. Other workers in large organizations such as salesmen, special technicians, or unskilled workers are also not necessarily treated as regular employees under the seniority system. (Vogel, 1975, p. xviii.)

As Table (a) shows, large firms, in which such permanent employees form a proportion of the labour force, are a very small minority of the total number of firms; employees in the large firms also constitute a minority of the total number employed in manufacturing industries. This accounts for the strong competition among new entrants to the labour market for such jobs.

Table (a). Manufacturing firms, by number of employees (%).

	No. of firms		No. of employees	
	1955	1975	1955	1975
1 - 99	98.6	98.1	60.7	55.6
100 - 299	1.0	1.4	12.9	15.1
300 - 999	0.3	0.5	11.8	13.7
1,000 or more	0.1	0.1	14.6	15.6
TOTAL	100.0	100.0	100.0	100.0

Source: Yano Tsuneta Kinenkai, 1978, p. 322, Table 36-3.

74. Imai, 1978, p. 142; Ikegami, 1975, pp. 29, 212.
75. Defined as 4 kilometres for primary school children and 6 kilometres for secondary school children (Imai, 1968, p. 144).
76. Imai, 1968, p. 142; Ikegami, 1975, pp. 29, 212.
77. Ikegami, 1975, p. 214.
78. Ibid., p. 215.
79. Ibid., p. 212.
80. Imai, 1968, p. 145.
81. Ibid.
82. Imai, 1968, p. 142.
83. Ikegami, 1975, p. 213.
84. See p. 55.
85. Hama, 1977, p. 94.
86. Wiltshire, 1980, p. 69.
87. Kawashima, in Association of Japanese Geographers, 1980, pp. 390-414.
88. Wiltshire, 1980, p. 71.
89. Palmer, 1979, p. 14.
90. See Glossary.
91. See p. 83.

92. Myers, McGinnis and Masnik, 1967.
93. Ikegami, 1975, p. 197.
94. Imai, 1968, pp. 135-36; Ikégami, 1975, p. 36.
95. Ikegami, 1975, p. 37.
96. Ibid., p. 36.
97. Shimpō, 1976, p. 93.
98. Ibid., p. 48.
99. Ikegami, 1975, pp. 36-37.
100. Ibid., p. 192.
101. Ibid., p. 211.
102. Ibid., p. 192.
103. Ibid.
104. Abiko, in Saitō, 1976, p. 53; my translation.
105. Ikegami, 1975, p. 205.
106. Ibid., pp. 194-201.
107. Ibid., pp. 197-200.
108. Since a higher proportion of urban inhabitants are employed in manufacturing and service industries, it follows that a higher proportion of them belong to pension schemes to which many rural dwellers are ineligible for membership. Workers within the life-time employment system may, furthermore, receive extra benefits upon retirement from their employment.
109. Ibid., p. 204.
110. Smith, 1978, p. 31.
111. Ibid., p. 209.
112. See p. 101.
113. Yoneyama, 1969, p. 19.
114. Ikegami, 1975, p. 70; cf. Chapter II, p. 19; Chapter V, p. 11.
115. The Act for the Development of Offshore Islands (1953), the Act for Special Countermeasures in Regions of Deep Snowfall (1962), the Act for the Provision of Infrastructure in Remote Rural Areas (1962) and the Act for the Development of Mountain Villages (1965).
116. Ibid., p. 88.
117. Cf. p. 35.
118. See Glossary.
119. Ibid., p. 115.
120. Ibid.
121. Ibid.
122. Ibid., p. 116.
123. It may also be interpreted as a political expedient to offset the repercussions in rural areas of the rice production adjustment policy of 1968 onwards.

124. The method of designation for the 1970 Act (now referred to as "*Kyū Kaso Hō*" - "Former Depopulation Act") was as follows: administrative districts (*shichōson*) in which the population declined by 10 per cent or more between 1960 and 1965, and of which the fiscal index averaged less than 0.4 over the three years 1966-1968. The method of designation was revised with the renewal of the Act in 1980 ("*Shin Kaso Hō*" - "New Depopulation Act"), to apply to administrative districts in which population declined by 20 per cent or more between 1960 and 1975, and of which the fiscal index averaged 0.37 or less over the three years 1976-1978. A total of 1,093 districts were designated under the 1970 Act; upon the new method of designation in 1980, the status of 993 of these remained unchanged, while 100 districts lost their designation as being depopulated and 126 became newly qualified. As a result, there are 1,119 designated depopulated districts at present.
125. See also Smith, 1978, pp. 15-16.
126. Ikegami, 1975, 156-57.
127. Hane, p. 14.
128. Ikegami, 1975, p. 152.
129. Imai, 1968, pp. 55, 86.
130. Smith, 1978, p. 223; Fukutake, 1980, pp. 88, 92, 119.
131. Ikegami, 1975, p. 114.
132. Yoneyama, 1969, p. 68; Dore, 1978, p. 211; Fukutake, 1980, p. 125.
133. Ikegami, 1975, pp. 156-60.
134. Ibid., p. 162.
135. Imai, 1968, p. 138.
136. Ikegami incorrectly states this figure as 100,000.
137. Ikegami, 1975, p. 169.
138. Imai, 1968, p. 138.
139. Ikegami, 1975, pp. 170, 178.
140. Kawashima, in Association of Japanese Geographers, 1980, pp. 394-98.
141. Ibid., p. 178.
142. Ibid., p. 179.
143. Ibid., pp. 181-82.
144. Rural districts (*shichōson*) were formed after 1965, on the basis of Laws Related to Special Cases of Rural District Amalgamation, by the amalgamation of the then administrative villages (now referred to as *kyūson* - "former villages"). Although *kyūson* are now no longer official administrative districts, in many cases they retain their identity as a regional unit for certain purposes, especially those functions for which the village (*shūraku*) is too small a unit but the rural district (*shichōson*) is too large: e.g., for middle schools, medical facilities. "Sub-district" in this context thus more or less corresponds with *kyūson*.
145. Kokudo-chō Chihō Shinkō-kyoku Kaso Taisaki-shitsu, 1982, p. 38.
146. Imai, 1968, p. 138; Ikegami, 1975, p. 28.

147. Ikegami, 1975, pp. 202-3.
148. According to Ikegami, for example, only just over 20 per cent of over-65-year-olds actually receive the annual medical check to which they are entitled (Ikegami, 1975, p. 202).
149. Fukutake, 1980, pp. 95, 102.
150. Imai, 1968, p. 148; Smith, 1978, p. 81.
151. Imai, 1968, p. 151.
152. See pp. 84-86.
153. Imai, 1968, p. 151.
154. Ikegami, 1975, p. 165; cf. p. 37.
155. Ōuchi, in Saitō, 1976, p. 67.
156. Kokudo-chō Chihō Shinkō-kyoku Kaso Taisaku-shitsu, 1980, p. 113.
157. Ibid., p. 116.
158. Ōuchi, in Saitō, 1976, p. 67; cf. p. 37.
159. Ibid.

#### Chapter VI

1. See p. 48.
2. See p. 57.
3. Watanabe, 1971, p. 163.
4. See p. 100.
5. Muraoka-chō, 1977b, p. 4.
6. Watanabe, 1970, p. 48.
7. Nihon Chishi Kenkyūsho, 1973, Vol. IV, p. 520.
8. See p. 104.
9. See p. 121.
10. Nihon Chishi Kenkyūsho, 1973, Vol. IV, pp. 257-58.
11. Ibid., p. 258.
12. Ibid., p. 526.
13. Ibid., p. 267.
14. Ibid., p. 522.
15. Ibid., pp. 265, 525.
16. Ibid., p. 525.
17. Ibid., p. 526.
18. Ibid., p. 267.
19. Ibid., pp. 267-68.
20. Ibid., pp. 269-70.
21. Fresh breeze, Beaufort Number 5, small trees in leaf begin to sway.
22. Nihon Chishi Kenkyūsho 1973, Vol. IV, p. 270.

23. Ibid., p. 271.
24. Statistics Bureau, Prime Minister's Office, 1980.
25. Nihon Chishi Kenkyūsho, 1973, Vol. IV, p. 331.
26. Hyōgo-ken Kikaku-bu, 1978b, p. 11.
27. Nihon Chishi Kenkyūsho, 1973, Vol. IV, p. 331.
28. Hyōgo-ken Kikaku-bu, 1978b, p. 11.
29. Kodama, 1975, p. 36, Map 1.
30. Nihon Chishi Kenkyūsho, 1973, Vol. IV, p. 532.
31. Ibid.
32. Ibid., p. 533.
33. Ibid., p. 524.
34. Ibid., p. 525.
35. Ibid.
36. Ibid.
37. Cf. p. 122.
38. Cf. Table IV-6, p. 78.
39. See Glossary.
40. Cf. pp. 67 and 68.
41. Cf. p. 78.
42. Cf. Table IV-6, p. 78.
43. Cf. p. 80 and Table IV-9, p. 82.
44. Nihon Chishi Kenkyūsho, 1973, p. 530.
45. Ibid; Watanabe, 1970, p. 82.
46. Nihon Chishi Kenkyūsho, 1973, p. 530.
47. Nara Joshi Daigaku Bunagku-bu Chirigaku Senkō Yonkaisei, 1965, p. 86.
48. Nihon Chishi Kenkyūsho, 1973, p. 530.
49. Hyōgo-ken Kikaku-bu Tōkei-ka, 1978a, pp. 49-50, Table 13.
50. Cf. p. 75.
51. Watanabe, 1970, p. 82.
52. Nihon Chishi Kenkyūsho, 1973, p. 530; Watanabe, 1970, p. 82.
53. Watanabe, 1970, p. 82.
54. Nara Joshi Daigaku Bungaku-bu Chirigaku Senkō Yonkaisei, 1965, p. 99; Watanabe, 1970, p. 83.
55. Watanabe, 1970, p. 83.
56. Ibid.
57. Nara Joshi Daigaku Bungaku-bu Chirigaku Senkō Yonkaisei, 1965, p. 85; Watanabe, 1970, p. 83.
58. Nara Joshi Daigaku Bungaku-bu Chirigaku Senkō Yonkaisei, 1965, p. 85.
59. Nihon Chishi Kenkyūsho, 1973, p. 531.
60. Cf. p. 75.
61. Watanabe, 1970, p. 55.

62. Nara Joshi Daigaku Bungaku-bu Chirigaku Senkō Yonkaisei, 1965, p. 85.
63. Cf. p. 86.
64. Cf. p. 87.
65. Hyōgo-ken Kikaku-bu, 1978b, pp. 27-28, Table III-1.
66. Cf. p. 86ff.
67. Nihon Chishi Kenkyūsho, 1973, p. 528.
68. Ibid., p. 529.
69. Ibid., p. 530.
70. Ibid., p. 522.
71. Cf. pp. 96-97.
72. Nara Joshi Daigaku Bungaku-bu Chirigaku Senkō Yonkaisei, 1965, p. 87; Watanabe, 1970, p. 90.
73. Watanabe, 1970, p. 89.
74. Nara Joshi Daigaku Bungaku-bu Chirigaku Senkō Yonkaisei, 1965, p. 87; Watanabe, 1970, p. 55.
75. Watanabe, 1970, p. 91.
76. Ibid., p. 94; cf. p. 85.
77. Watanabe, 1970, p. 94.
78. Ibid.; cf. p. 85.
79. Nara Joshi Daigaku Bungaku-bu Chirigaku Senkō Yonkaisei, 1965, p. 87.
80. Muraoka-chō, 1979, pp. 60, 71.
81. Cf. pp. 77-78.
82. Watanabe, 1970, p. 87.
83. Ibid., pp. 55-56, 96.
84. Cf. pp. 143-44.
85. See Glossary.
86. Nihon Chishi Kenkyūsho, 1973, p. 534.
87. Watanabe, 1970, p. 86.
88. Hyōgo-ken, 1979, p. 20.
89. Ibid; cf. p. 33.
90. Ibid.
91. Ibid., p. 21
92. Cf. p. 31.
93. See p. 256.
94. See pp. 35, 119-20.
95. Kokudo-chō Chihō Shinkō-kyoku Kaso Taisaku-shitsu, 1978, p. 1.
96. Hyōgo-ken Shōkō-bu Sangyō Ritchi-ka, 1974, p. 10.
97. Cf. pp. 58, 110.

98. Hyōgo-ken Shōkō-bu Sangyō Ritchi-ka, 1974, p. 56; see also pp. 110-12.
99. Cf. p. 118.
100. See p. 119.
101. Cf. Chapters III, IV and V.

#### Chapter VII

1. See Note 1, Chapter I.
2. See p. 114.
3. *Heike ochiudo buraku*. In a colourful period of Japanese history, during the twelfth century, two rival samurai houses, the Minamoto (Genji) and the Taira (Heike) fought for supremacy. When the Minamoto eventually routed the Taira camp at Fukuhara (present-day Kōbe), the Taira fled, mainly westwards, and were finally massacred by the Minamoto at Dannoura, near Kyūshū, in 1185. It is known, however, that some of the Taira escaped into the mountains and settled there in perpetuity.
4. Cf. p. 48.
5. See p. 88.
6. Cf. Kojima, 1979, p. 3.
7. See p. 183.
8. Cf. Kojima, 1979, p. 12.
9. See p. 179 and Map VI-12, p. 181.
10. See p. 183.
11. For fiscal year 1979/80, the average monthly salary for *sarariman* and female clerical staff was ¥232,000 in private firms (according to "Survey of Salaries in the Private Sector, 1979", by the Inland Revenue Office, reported in *Asahi Nenkan 1981*, p. 426.
12. Ōya Rural District statistics in 1979 record an average of 1.2 cars per household and one motorcycle per 1.8 households (Ōya-chō, *1979 Chōsei Yorān Tokai Shiryo-hen*).
13. Cf. p. 94.
14. Cf. p. 88.
15. See p. 94.
16. Cf. Dore, 1978, p. 122.
17. See p. 183.
18. See p. 84-86.
19. See p. 85.
20. Cf. pp. 107-110.
21. See also Shimpo, 1976, pp. 63-65; Dore, 1978, p. 126.
22. The fourth household was one containing a 17-year-old high school pupil who had agreed to commit himself to cattle breeding after leaving school.

23. Cf. Dore, 1978, pp. 124-27; Fukutake, 1980, pp. 170, 194.
24. Cf. less remote villages where *Bon*-festivals and other village rites have been kept alive: Smith, 1978, pp. 158-64; Dore, 1978, p. 224; Fukutake, 1980, p. 101.
25. See note 3, Chapter VII. The truth of this legend has allegedly been verified in Misaki, by the curiosity of one elderly inhabitant, who has traced back his genealogy. He found that, indeed, he was a descendant of Norimori, the younger brother of Taira Kiyomori, who had fled to Misaki in 1158 after the Battle of Dannoura.
26. Cf. Norbeck, 1978, pp. 116, 171-72.
27. Kansei Gakuin Daigaku Bungaku-bu Shigaku-ka Chirigaku Kenkyū-shitsu, 1976, pp. 130, 152.
28. It is noteworthy, however, that in response to the questionnaire survey, only one household volunteered the information that this was a source of income. No others mentioned it.
29. The only household in Misaki not covered by the questionnaire survey was reported to derive its income chiefly from farming, particularly the sale of vegetables.
30. Cf. Norbeck, 1978, p. 45.
31. Cf. Arata, Kansei Gakuin Daigaku Bungaku-bu Shigaku-ka Chirigaku Kenkyū-shitsu, 1976, p. 148.
32. See p. 176.
33. See p. 123.
34. The conditions of this road in 1980 were so poor that the Rural District Office officials declined to allow me to drive myself to Kojō in my own car. They insisted on my being driven there in the Office's Suzuki jeep.
35. Cf. Watanabe, 1970, pp. 66-68.
36. Cf. p. 116.
37. See Note 3, Chapter VII.
38. Watanabe, 1970, pp. 33-34.
39. Ibid., p. 56.
40. Cf. p. 114.
41. Ibid., p. 59; see pp. 52, 91.
42. Watanabe, 1970, p. 55.
43. Official figures. In fact there were 13 households and a population of 31.
44. Watanabe, 1970, p. 55.
45. Ibid.
46. Ibid., pp. 57, 62.
47. See Glossary.
48. See Glossary.
49. See p. 112.

50. Watanabe, 1970, p. 62; cf. Kansei Gakuin Daigaku Bungaku-bu Shigaku-ka Chirigaku Kenkyū-shitsu, 1976, p. 148.
51. Watanabe, 1970, p. 65.
52. Ibid., p. 63.
53. See Glossary.
54. See p. 107.
55. See p. 85.
56. Watanabe, 1970, p. 88.
57. Ibid., p. 87.
58. Watanabe, 1970, p. 88.
59. Cf. p. 31.
60. See p. 123.
61. See pp. 139-40.
62. Cf. p. 122.
63. See p. 100; Table V-2, p. 103.
64. Cf. p. 76.
65. Cf. p. 182.
66. Muraoka Rural District Office officials; cf. Shimpo, 1976, p. 57.

#### Chapter VIII

1. See p. 195.
2. Cf. pp. 23-25.
3. See pp. 136-144.
4. See pp. 122, 156-58.
5. Cf. p. 102.
6. Cf. p. 48.
7. See pp. 199, 201, 225, 235, 243-44.
8. Cf. pp. 48-55, 58.
9. Cf. p. 151.
10. Cf. p. 107.
11. Cf. Norbeck, 1976, p. 171.
12. Cf. Stouffer, 1970.
13. Cf. p. 55.
14. See p. 256 and Figure VII-2, p. 217.
15. Cf. p. 39.
16. Cf. Figure III-2, p. 60.
17. Cf. p. 118.
18. Cf. p. 109.

19. Cf. pp. 87, 171-72.
20. Cf. pp. 85, 182.
21. Cf. p. 88.
22. Cf. p. 57.
23. Cf. pp. 75-76.
24. Cf. p. 83.
25. Cf. p. 114.
26. Cf. p. 80.
27. Ibid; see also p. 30.
28. Cf. pp. 67, 80.
29. See p. 72.
30. See p. 207.
31. Cf. pp. 115-16.
32. Cf. p. 109.
33. See pp. 156-58.
34. Cf. p. 36.
35. The one schoolboy in Kojō was in fact competent to ski down the mountain path in winter, but the return trek was arduous, even without skis, sticks and shopping. Anyway, he was normally boarding at the school in Yamada. Obviously, this possibility was not realistically open to the older women left in the village during the winter.
36. Cf. pp. 36, 112, 189.
37. Cf. Table III-2, p. 46.
38. Cf. p. 114.
39. See p. 121.
40. Lewis, 1979, p. 29; Newby, 1979, p. 154.
41. Cf. pp. 240, 249.
42. Family names for commoners were forbidden under the Tokugawa regime, and it was not until the Meiji Restoration that family names were universally adopted. This means that households with the same name in the same village are *not necessarily* related by blood, but in practice they most often are.
43. I am indebted to Prof. Koga for confirming this point.
44. Cf. Norbeck, 1978, p. 112.
45. See p. 104.
46. Cf. p. 117.

## Chapter IX

1. See pp. 24-25.
2. See p. 144.
3. See pp. 42-44.
4. See p. 243.
5. See p. 48.
6. See p. 25.
7. See pp. 25-27.
8. See Note 3, Chapter VII.
9. Cf. p. 34.
10. Cf. pp. 25-26.
11. See p. 122.
12. See p. 123.
13. See p. 255.
14. See p. 151.
15. See p. 270.
16. See p. 57.
17. See p. 271.
18. See p. 276.
19. See pp. 58, 272.
20. See p. 272.
21. See p. 45.
22. See pp. 273-76.
23. See p. 55.
24. See pp. 22-24, 46-55.
25. See pp. 39, 55.
26. Ishii, in Association of Japanese Geographers, 1980, p. 199.
27. Ōkawa, 1978, p. 96; Abiko, in Saitō *et al.*, 1976, p. 53; Ogura, 1979, p. 447.
28. See pp. 98-99.
29. See p. 69.
30. See pp. 83-86.
31. See pp. 84, 179-83.
32. See p. 86.
33. See Chapter II.
34. See pp. 85, 182-3 and Chapters VII, VIII, *passim*.
35. See pp. 112, 115-16.
36. See pp. 279-82.

37. See pp. 256-57.
38. See p. 176.
39. See p. 230.
40. See p. 283.
41. See pp, 28-29.
42. See pp. 74, 105.
43. See p. 100.
44. See p. 32.
45. See p. 284.
46. Fukutake, 1980, p. 106.
47. See pp. 100-104.
48. See pp. 100-104.
49. See p. 286.
50. While the relationship between rural depopulation and community spirit may not be very clear, the relationship between depopulation and the existence of some sort of strong social prejudice against a particular village community most certainly is. None of the seven villages studied was a Buraku, that is to say, a village of people traditionally (though no longer officially) of outcaste status, of which there is a far higher proportion in the Kinki region than elsewhere. However, discussions on various occasions with officials at both prefectural and rural district offices clearly indicated that, generally speaking, the population decrease rate of Burakumin (outcaste) populations had been higher than that of non-Burakumin villages. Other reasons may also be suggested for this, but at least one reasons appears to be the attempt to "pass" in society as a whole as "ordinary" Japanese, by outmigrating to facilitate concealing their origins.
51. Cf. Shimpo, 1976, pp. 55-58.
52. See p. 101.
53. See p. 253.
54. See p. 120.
55. See p. 35.
56. See pp. 119-120.
57. See p. 121.
58. See p. 121.
59. See pp. 101, 110-15, 123-27.
60. See Chapter IV.
61. See p. 55.
62. *Kikan shūraku* ("main settlements"), to which the White Papers on Rural Depopulation frequently refer, are in practice most often the chief settlement of a rural district.

63. See pp. 34-37.
64. See p. 128.
65. See pp. 241-43.
66. See Map VI-7, pp. 152-54.
67. See p. 37.
68. See pp. 127-28.
69. See p. 129.
70. See p. 36.

GLOSSARY OF TERMS, DEFINITIONS AND COMMONLY USED ABBREVIATIONS

- Atotsugi*: Successor, the person who is expected to take over the management of the farm or family business in future: customarily the eldest son.
- Crude birth rate: Annual number of births per 1,000 of the total population.
- Crude death rate: Annual number of deaths per 1,000 of the total population.
- Dekasegi*: Temporary migration for employment. Generally, but not necessarily, seasonal in nature. Differentiated when necessary as *kisetsuteki dekasegi*, "seasonal migration for employment" and *tsūnen dekasegi*, "all-year-round migration for employment". The latter may often be regarded as long-term or semi-permanent migration.
- Dependency ratio: The proportion of dependants (0- to 14-year-olds and those aged 65 or more) to the active population (15- to 64-year-olds).
- DID: Densely inhabited district. DIDs have been included in population census statistics since the 1960 census, and are defined in Japan as census districts with a population density of 4,000 inhabitants or more per square kilometre, and which contiguously have a total population of 5,000 inhabitants or more.
- Doma*: A space inside the traditional Japanese (farm) house at ground level and with a beaten earth (or sometimes nowadays concrete) floor. Outdoor footwear is worn in the *doma*, and some agricultural activities may be carried out here.

**Farm household:** The official definition of a farm household in Japan is one which cultivates 0.1 ha. or more in eastern Japan (that is, Hokkaidō and Aomori, Iwate, Miyagi, Akita, Yamagata, Fukushima, Ibaraki, Tochigi, Gunma, Saitama, Chiba, Niigata and Toyama Prefectures) and 0.05 ha. or more in western Japan (all other prefectures); or other households whose sales of agricultural produce amounted to ¥20,000 or more for the purposes of the 1960 agricultural census, ¥30,000 or more for the 1965 agricultural census, or ¥50,000 or more for the 1970 agricultural census.

**Farming mountain village:** Designated by the Ministry of Agriculture and Forestry in 1957-8, at the level of the *kyūson*. Defined as an administrative district in which from 10 to less than 30 per cent of the total area is arable land, from 50 to less than 80 per cent is afforested, and in which 40 per cent or more of farm households are engaged in farming only and from 5 to less than 10 per cent of farm households are engaged also in forestry.

**Fiscal index:** An indicator of the ratio of local government revenue to expenditure, averaged over the previous three years. All local authorities with an index of less than 1.0 receive regional transfer payments. (In 1975, for example, of all the prefectures only Tōkyō, Ōsaka and Aichi exceeded 1.0.)

**Gun:** Rural administrative units of the order between prefectures (*ken*) and rural districts (*chōson*).

**Hamlet:** *Koaza*, a small, distinct sub-district of a village, consisting of only a few households. (See also Chapter I, Note 1.)

**Hanshin:** The Ōsaka-Kōbe conurbation (= acronym in Chinese characters for Ōsaka and Kōbe).

- Hinoki*: Japanese cypress, *Chamaecyparis obtusa*.
- Hiyatoi*: Labour hired and paid on a daily basis; casual day labour; labour contracted for less than one month.
- Honke*: The head or primogenital family of (usually) the patrilineal group in Japanese society.
- Index of ageing: The proportion of the population aged 65-years-old or more to the active population of 15- to 64-year-olds.
- Jiba sangyō*: Localized specialization in a particular product, which is typically manufactured in a number of small and medium-sized firms, and which supplies a substantial proportion of the national market for that particular product.
- Kaso chiiki*: Districts designated by the government as suffering from rural depopulation.
- Keihanshin: The Kyōto-Ōsaka-Kōbe conurbation (= acronym in Chinese characters for Kyōto, Ōsaka and Kōbe).
- Keihin: The Tōkyō-Yokohama conurbation (= acronym in Chinese characters for Tōkyō and Yokohama).
- Kengyō*: "Dual occupation", usually as *kengyō nōgyō*, i.e., part-time farming, but sometimes used to describe other occupations, especially fishing or forestry. *Kengyō nōgyō* is commonly divided for statistical purposes into type I *kengyō*, in which farming provides the household's main income, and type II *kengyō*, in which the other occupation(s) provides the household's main income.
- Kōridōfu*  
(*Kōyadōfu*): A type of soya bean curd processed by freezing.

- Kyōka rison:* An entire family leaving their village, either at once or within a very short space of time.
- Kyūson:* Former unit of local government, before reorganization and amalgamations took place in the early 1960s.
- LDP: Liberal Democratic Party.
- Mountain village: Designated by the Ministry of Agriculture and Forestry in 1957-8, at the level of *kyūson*. Defined as an administrative district in which less than 10 per cent of the total area is arable land, 80 per cent or more is afforested, and 10 per cent or more of farm households are engaged also in forestry.
- Naishoku:* An occupation pursued at home; in particular that of household members other than the household head (chiefly housewives), in between doing housework (or farm work), which generally differs from the occupation of the head of the household.
- Nenkō joretsu:* The system of earnings related to number of years of service to the firm.
- NHK: Nippon Hōsō Kyōkai (Japan Broadcasting Corporation).
- Paato:* Properly, means "part-time" employment; colloquially, means *rinji koyō*, temporary employment, outside the lifetime employment system; labour contracted for from one to less than four months.
- Plain village: Designated by the Ministry of Agriculture and Forestry in 1957-8, at the level of the *kyūson*. Defined as an administrative district in which 30 per cent or more of the total area is arable land, less than 50 per cent is afforested, and more than 40 per cent of farm households are engaged in farming only.

- Prefecture: *Todōfuken*, the larger unit of local government: one *to* (Tōkyō), one *dō* (Hokkaidō), two *fu* (Ōsaka and Kyōto) and forty-three *ken* (other prefectures).
- Rinō*: Abandonment of farming.
- Rison*: Leaving the village.
- Sake*: Alcoholic beverage made from rice.
- Sengyō*: "Sole occupation", usually as *sengyō nōgyō*, full-time farming, but sometimes used to describe other occupations.
- Sex ratio: Number of males per 100 females.
- Shichōson*: The smaller unit of local government: *shi* being the municipal districts, and *chō* and *son* being rural districts. (See also Chapter I, Note 1.)
- Shiitake*: An edible brown fungus, *Cortinellus shiitake*.
- Tsūkin kengyō*: Commuting to a job in the non-primary sector whilst also running a farm.
- Ujigami*: Originally the tutelary deity of the clan, but generally identified with the village.
- Village: The *buraku* or *shūraku*, a small settlement of ten to a hundred or more households, which typically forms a distinct cluster or line on the landscape. (See also Chapter I, Note 1.)
- Wasabi*: *Eutrema wasabi*, a root vegetable grated into a hot relish for raw fish delicacies.

*Yōshi:*

Son-in-law who usually lives with the family and is adopted as the successor to the household, especially in families which have no suitable male successor. The *yōshi* assumes his wife's family name.

*Zaison:*

Remaining in the village.

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### Primary Materials

In addition to the above sources, unpublished primary materials and documents were also consulted. These include: statistics relating to the enumeration of households and populations for all villages of each of the administrative districts of Tajima; agricultural census cards for each of the villages surveyed; various maps drawn up for planning purposes.