MIGRATION AND SETTLEMENT:
13. JAPAN

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RR-82-5
February 1982

INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS
Laxenburg, Austria

International Standard Book Number 3-7045-0027-5

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FOREWORD

Interest in human settlement systems and policies has been a central part of urban-related work at the International Institute for Applied Systems Analysis (IIASA) from the outset. From 1975 through 1978 this interest was manifested in the work of the Migration and Settlement Task, which was formally concluded in November 1978. Since then, attention has turned to dissemination of the Task's results and to the conclusion of its comparative study, which, under the leadership of Dr. Frans Willekens, is focusing on a comparative quantitative assessment of recent migration patterns and spatial population dynamics in all of IIASA's 17 National Member Organization countries.

The comparative analysis of national patterns of interregional migration and spatial population growth is being carried out by an international network of scholars who are using methodology and computer programs developed at IIASA.

In this report, authors from three Japanese institutions discuss changing migration patterns in their country. Emphasizing the current population shifts away from metropolitan areas, they analyze recent demographic dynamics in Japan, first with a 15-region and then an 8-region disaggregation of national population data. The report ends with a brief survey of major population policies that have been adopted in the last 30 years.

Reports summarizing previous work on migration and settlement at IIASA are listed at the end of this report.

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ACKNOWLEDGMENTS

The authors are very grateful to Dr. Andrei Rogers and Dr. Luis Castro for their valuable comments and kind suggestions for this study. We are also deeply obliged to Mrs. Maria Rogers for having taken the trouble of combining our drafts into one report. Dr. Yoichi Okazaki, Professor Keisuke Suzuki, and Mr. Tomomi Otsuka, members of our research group with whom we have studied jointly, have given useful advice, and Professor Sadao Kimijima has kindly helped in writing earlier drafts. This report could not have been completed if it had not been for the cooperation of these people.

CONTENTS

1 INTRODUCTION

With roughly 300 people per square kilometer, Japan is the largest country in the world exhibiting such a high population density. The difficulty of finding enough living space for its population of 115 million is intensified by the mountains that cover most of the country, leaving only 15 percent of the land suitable for farming and forcing the people to dwell in flatland areas.

Other natural phenomena also influence the distribution of the country's population. For example, the island of Kyushu is heavily populated, containing 12 percent of Japan's inhabitants. The primary reason for its popularity is its warm climate, although the pleasant landscape is also an important factor. Other than Okinawa (which has been a part of Japan except for the years of the United States occupation, 1939–1972), Kyushu has the mildest weather in the country. The west coast of the Tohoku region and the island of Hokkaido, however, are not so fortunate. Strong winds from Siberia bring yearly snowfalls that keep the ground white the entire winter.

How have the Japanese distributed themselves spatially within their relatively confined area? This study begins with a brief history of recent economic growth and internal migration in Japan, adopting a 15-region aggregation. It then uses 1970 census data, which have been aggregated into 8 regions, to analyze in greater detail the fertility, mortality, and migration patterns within the country.

For centuries the Japanese people have located in the only flatland areas available to them. In the past as the number of inhabitants grew, their concentration increased. As the industrial areas developed, rural-to-urban migration flourished. It was not until 1965 that this traditional pattern began to evolve into a new reverse flow of people away from the principal cities. It is generally believed that the final phase of internal migration is population redistribution and decentralization (see, for example, Long and Boertlein 1976), and it appears that Japan has entered this phase.

Internal migration and settlement patterns have been the focus of important government policies in Japan for many years. Research into the association between socioeconomic development and regional population change, however, has lagged behind. Consequently, theories of population and development are urgent topics of research, both in Japan and internationally.

1.1 Economic Growth and Internal Migration

Historically, modernization has been associated with industrialization and urbanization. In terms of demographic variables, the basic factor that fosters urbanization and industrialization is internal migration. It has been said that modernization cannot be achieved without internal population redistribution; therefore, the history of modernization is inscribed in a history of internal migration. When studying this phenomenon, particular attention should be given to long-term regional patterns of internal migration from rural communities to cities.

The basic characteristic of modernization in Japan, which began in 1868 with the Meiji era, has been rural-to-urban migration, though there have been substantial differences in the numbers of migrants over the years. This migration from the rural communities (where population reproduction rates have been high) to urban areas (where reproduction rates have been low) alleviates the problem of over-population in rural areas and redistributes the regional population throughout the country. It also supplies the necessary labor force needed for industrialization and urbanization, contributes to an increase in the GNP, and affects living standards.

Rural-to-urban migration continued during the reconstruction period immediately following the end of the Second World War, after which it accelerated at an unusual rate during the period of high economic growth, commonly called the "great movement of population in the Japanese archipelago". The highest concentration of this phenomenon was in the two industrial centers (Tokyo–Yokohama and Kyoto–Osaka–Kobe, the locations of heavy chemical and manufacturing industries), thus creating an enormous accumulation of population in a relatively narrow area called the Pacific Industrial Belt.

The primary sector was the main source of labor supply for the rapidly developing secondary and tertiary sectors, which were housed in these industrial centers. The number of employed in primary industries (agriculture, forestry, etc.) quickly dropped from 17 million to 11.7 million during the period 1950–1965. The other major sources of the extensive labor force needed for the industrial growth were the more than 6 million overseas civilian military repatriots and the many soldiers who were demobilized in Japan after the war.

An examination of the trends in internal migration based on statistical data available for the postwar period reveals the change in migration patterns from the classical rural-to-urban flow to the new urban-to-rural mobility transition. This behavior is a result of migrants responding to new stages of economic

development within the country. (For a more complete description of population and development in Japan, see Okita et al. 1979.)

1.2 Characteristics of Interregional Migration

The first section of this report uses migration data derived from basic resident registers (Bureau of Statistics, 1971, 1974, 1976, 1978). They are collected annually and are useful for a general view of migration in Japan. These data are different in character and date of collection from the census data used in sections 2–4. The register data count moves, the census data report changes in place of residence between two points in time. A discussion of the implications for modeling of these two alternative ways of obtaining migration data appears in Ledent (1980) and in the final appendix of this report.

The postwar period of high economic growth in Japan started around 1957. Since this year, the number of internal migrants has been increasing, although by varying rates. The number of these migrants (from register data), the annual increase in this number, and the annual migration rate between 1954 and 1977 are listed in Table 1. The yearly average of internal migrations was 5.2 million during the latter half of the 1950s, from 6.5 to 7.6 million during the 1960s, over 8 million in the 1970s, and 8.5 million in 1973. The migration level peaked in 1973, the year of the unprecedented increase in the price of oil. The 8.5 million figure reached in that year decreased to 7.5 million in 1975 and to 7.4 million in 1976 and 1977.

It is widely believed that the new phase in internal migration in Japan started in the 1970s, soon after the peak level was reached. To examine the patterns of these population flows, we aggregate the 46 prefectures of Japan (excluding Okinawa) into 15 regions (Figure 1). Net migrations (in-migrants minus out-migrants) between these regions over 5-year periods from 1955 to 1977 are shown in Table 2. For the last period, totals for the three years between 1975 and 1977 have been used.

Table 2 suggests the following observations. First, the Tokyo (E in Figure 1) and Osaka (I) metropolitan areas have been high population-absorbing regions in the past, drawing almost all of their inhabitants from the other regions. Second, the pattern of internal migration started to change around 1965; the excess of in-migrants over out-migrants in all three of the metropolitan areas of Japan (the third being Chukyo (H)) decreased rapidly, and in Osaka (I) a trend toward more out-migrants could already be seen. This pattern has been referred to as the "U turn" by Kuroda (1976, 1980). Several nonmetropolitan regions have changed from being regions of long-term population outflow to regions of population inflow (for example, North Kanto, North Kyushu, and South Kyushu). Still others have experienced drastic reductions in the number of departing migrants (for example, North Tohoku, South Tohoku, Hokuriku, Tosan, San'in, and Shikoku). Such changes in migration patterns within Japan indicate a new trend that shows a decrease of population flow into big cities and an increase of

TABLE 1 Internal migration trends in Japan.

Year	Number of migrants (in thousands)[a]	Percent increase	Annual rate of internal migration (in percent)
1954	5498	–	6.27
1955	5141	−6.5	5.80
1956	4860	−5.5	5.43
1957	5268	8.4	5.83
1958	5294	0.5	5.81
1959	5358	1.2	5.82
1960	5653	5.5	6.09
1961	6012	6.4	6.42
1962	6580	9.4	6.95
1963	6937	5.4	7.26
1964	7257	4.6	7.51
1965	7381	1.7	7.56
1966	7432	0.7	7.55
1967	7479	0.6	7.51
1968	7775	4.0	7.72
1969	8126	4.5	7.97
1970	8273	1.8	8.02
1971	8360	1.1	8.01
1972	8225	−1.6	7.78
1973	8539	–	7.90
1974	8027	−6.0	7.34
1975	7544	−6.0	6.78
1976	7392	−2.0	6.58
1977	7395	0.0	6.52

[a]The number of internal migrants refers to those who migrated between cities, wards, towns, and villages from January 1 through December 31. These data are based on the registration system and differ from the data used in the subsequent multiregional analysis, which are from the 1970 Census. (The number of migrants to and from Okinawa is included after 1973.)
SOURCE: Bureau of Statistics (1978).

population flow from metropolitan to nonmetropolitan areas. A large proportion of the outward mobility from cities is to surrounding areas; therefore, the definition of what is meant by a metropolitan or nonmetropolitan area becomes important in any analysis of urban deconcentration. Many delineations have been proposed to date; a brief look at one, *functional urban regions* (FUR), will verify the recent migration behavior in Japan. FURs are similar to the Bureau of Economic Analysis regions delineated by De Graff (Hansen 1975), to the Daily Urban Systems defined by Berry (1973) although these regions are not completely exhaustive nationally, and to the Metropolitan Economic Labor Areas introduced in the study of Hall et al. (1973).

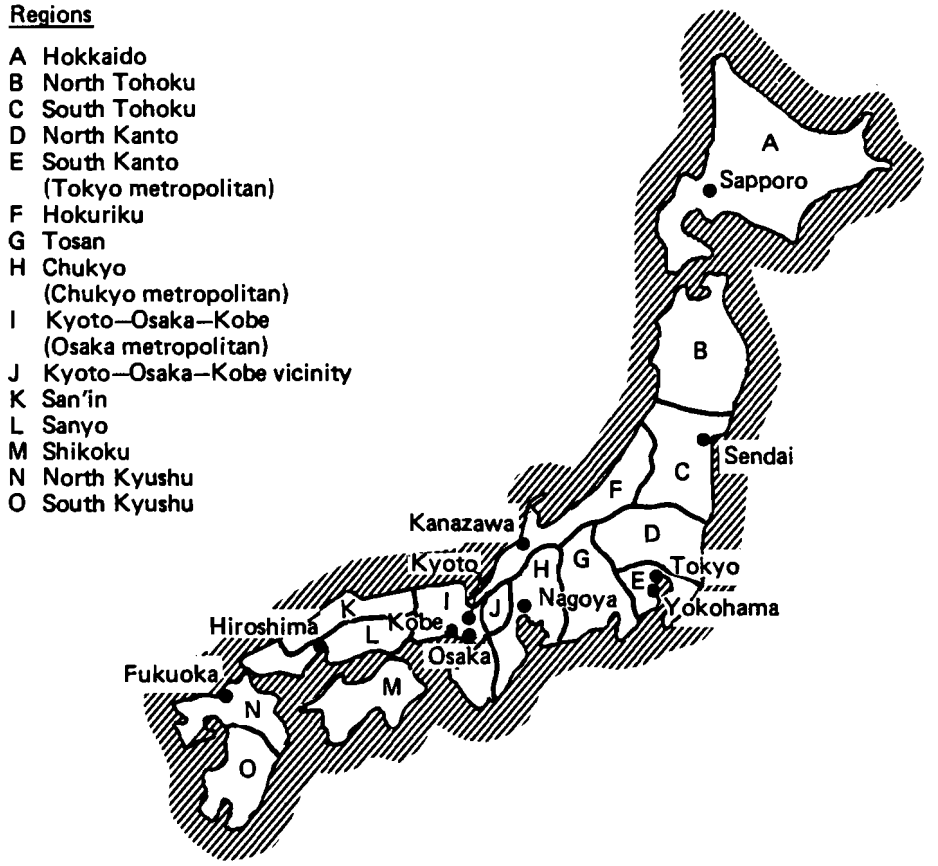

FIGURE 1 Regions and major cities of Japan. (Okinawa is not included on this map.)

The FUR is divided into two areas: the functional urban core and the hinterland. The functional urban core is an urban unit that covers the entire urban area in and around an administratively defined city where various types of activities form a functionally integrated economic and social subsystem. It is composed of a core-city and its commuting field and generally corresponds to the concept of the metropolitan area (or that of the Standard Metropolitan Statistical Area adopted by the US Bureau of the Census). The hinterland is the area that surrounds and is economically linked to a functional urban core. The FURs together make up the total area of the national territory. They are contiguous spatial units and are designated in such a way as to be mutually exclusive and collectively exhaustive. A more complete explanation of the divisions and a detailed analysis of Japan's FURs may be found in Kawashima (1982).

TABLE 2 Internal net migration between regions in postwar Japan (per thousand).[a]

Region	1955–1959	1960–1964	1965–1969	1970–1974	1975–1977
A Hokkaido	+23	−151	−199	−217	−10
B North Tohoku	−160	−298	−250	−204	−30
C South Tohoku	−280	−361	−219	−79	−8
D North Kanto	−285	−201	−90	+95	+53
E South Kanto	+1422	+1854	+1452	+876	+169
F Hokuriku	−245	−254	−212	−121	−30
G Tosan	−222	−137	−87	−20	−22
H Chukyo	−70	+311	+157	+111	−24
I Kyoto–Osaka–Kobe	+633	+929	+526	+62	−164
J Kyoto–Osaka–Kobe vicinity	−57	−37	+22	+107	+62
K San'in	−88	−115	−93	−46	−4
L Sanyo	−127	−185	−53	+25	−19
M Shikoku	−212	−289	−199	−79	−3
N North Kyushu	−177	−606	−407	−241	+25
O South Kyushu	−293	−461	−349	−228	+9

[a] + indicates a gain in population due to migration.
− indicates a loss in population due to migration.
SOURCE: Bureau of Statistics (1978).

Table 3 shows examples of urban decline as opposed to continuous urban growth, depending on the criteria used for delineating urban areas. The cities of Tokyo and Osaka (1 and 4 in Table 3) show an absolute urban decline beginning after 1965. On the other hand, if we use functional urban cores as spatial units, a continuous growth has occurred for both Tokyo (2) and Osaka (5), although the rate of this growth has been declining. Note also that the growth rates of the hinterland areas for both Tokyo (3) and Osaka (6) have been continuously increasing since 1960.

The above analysis reinforces the concept of the "U turn" trend in Japan, but unfortunately, this trend is not sufficient in itself to eliminate the many problems that are created by the over-crowding of cities.

1.3 Net Migration in Japan's Three Metropolitan Areas

Let us now look at net migration in Japan's three metropolitan areas (Tokyo (E), Osaka (I), and Chukyo (H) in Figure 1), where changes in patterns of internal migration appear most clearly (Table 4). In 1961, 1962, and 1963, the total excess of in-migrants over out-migrants exceeded the 600 000 mark every year. Subsequently, the number of excess in-migrants decreased. In 1973, the

TABLE 3 Population and growth rate of core city, functional urban core, and hinterland for the functional urban regions of Tokyo and Osaka.

Spatial unit	1960	1965	1970	1975	Growth rate (in percent) 1960–1964	1965–1969	1970–1974
(1) Tokyo special-ward area	8 310 027	8 893 094	8 840 942	8 642 800	7.02	−0.59	−2.24
(2) Functional urban core of Tokyo FUR	13 388 959	15 844 973	18 005 893	19 955 814	18.34	13.64	10.83
(3) Hinterland of Tokyo FUR	1 773 261	1 716 658	1 757 307	1 888 959	−0.96	2.37	7.49
(4) Osaka city	3 011 563	3 156 222	2 980 487	2 778 975	4.80	−2.48	−6.76
(5) Functional urban core of Osaka FUR	6 855 068	8 298 236	9 521 577	10 374 705	21.05	14.74	8.96
(6) Hinterland of Osaka FUR	218 787	209 063	202 004	203 403	−4.44	−3.38	0.69
Total population of Japan	94 301 623	99 209 137	104 665 171	111 933 818	5.20	5.50	6.94

Note: The functional urban core of the Tokyo FUR is composed of 120 administratively defined areas including the Tokyo special-ward area. The Tokyo special-ward area consists of 23 wards and corresponds to Tokyo city. The functional urban core of the Osaka FUR is composed of 69 administratively defined areas including Osaka city.
SOURCE: Kawashima (1982).

TABLE 4 Levels of net migration (in-migrants minus out-migrants, in thousands) in the three metropolitan areas of Japan.[a]

Year	Metropolitan Area			Total
	Tokyo	Osaka	Chukyo	
1955	235	95	23	353
1956	247	112	42	401
1957	295	169	44	507
1958	273	123	26	422
1959	300	145	45	490
1960	333	189	72	594
1961	359	221	75	655
1962	364	211	72	647
1963	354	185	80	619
1964	327	174	76	578
1965	298	131	52	481
1966	266	103	37	406
1967	255	107	42	404
1968	259	112	48	418
1969	250	121	55	426
1970	248	91	54	393
1971	206	47	37	289
1972	159	24	24	207
1973	97	−5	22	114
1974	53	−21	7	39
1975	45	−30	−4	11
1976	26	−41	−7	−23
1977	35	−45	0	−9

[a]Figures are rounded for the metropolitan areas, and, therefore, the sums of the first three columns do not always equal the numbers in the final column.
SOURCE: Bureau of Statistics (1978).

year of the oil embargo, net migration fell to a low of 114 000 and ultimately became negative in 1976; internal migration for these areas had reached a decisive transitional stage.

The considerable change in the relative contribution of internal migration to population increase in the metropolitan areas is another important point. The ratio of natural increase to total population growth (natural increase plus migration) for the two metropolitan areas of Tokyo and Osaka is shown in Table 5. Until 1965, as much as 50 percent of total population growth could be attributed to migration in both metropolitan areas. A transition point, however, was reached in 1965. After that year and in the 5-year period between 1970 and 1975, this percentage steadily decreased, reaching a minimum of 3 percent

TABLE 5 Changes in natural increase and net in-migration (per thousand) in two major metropolitan areas of Japan, 1950–1975.

Period	Tokyo metropolitan area				Osaka metropolitan area			
	Population increase (A)	Natural increase (B)	Net in-migration (C)[a]	(C/A)100 (in percent)	Population increase (A)	Natural increase (B)	Net in-migration (C)[a]	(C/A)100 (in percent)
1950–1955	2374	901	1473	62.0	1175	557	618	52.6
1955–1960	2440	877	1563	64.1	1230	510	721	58.6
1960–1965	3153	1294	1859	59.0	1665	758	907	54.5
1965–1970	3096	1740	1356	43.8	1469	973	495	23.7
1970–1975	2926	2039	887	30.3	1157	1122	35	3.0

[a]Net in-migration was calculated by subtracting total natural increase (vital statistics) from total growth of the population for the 5-year periods in the prefectures (census data) that make up the metropolitan area. (The prefectures for the Tokyo metropolitan area are Saitama, Chiba, Tokyo, and Kanagawa, and those for the Osaka metropolitan area are Kyoto, Osaka, and Hyogo.)

SOURCE: Bureau of Statistics (1976), Ministry of Health and Welfare (1976).

in the Osaka metropolitan area, where 97 percent of the growth was attributable to natural increase. For the Tokyo metropolitan area, the corresponding percentage during the 1970–1976 period reached a low of 30 percent. In the Third National Comprehensive Development Plan (Land Agency of the Japanese Government, 1977, 1979), the government assumes zero net migration for the above areas, a reflection of the reversal experienced in recent times of the ratio of internal migration to natural increase described above.

1.4 The Mobility Transition in Japan

The statistics shown in the previous pages indicate that there is a new trend in Japan's internal migration (see also Kuroda 1977). They suggest that Japanese now have different preferences regarding their places of residence than in earlier times. Many people have reevaluated the lure of the big cities. Especially at the young labor force ages, Japanese have decided that rising housing costs, deterioration of living conditions, pollution, and an increased distance to the countryside are making large cities less attractive. This change of attitude, coupled with governmental policies, has led to a counterflow from the metropolitan areas.

The first trend that can be seen in this mobility transition is a redistribution of the population. This is clearly shown by: the high growth rate of the population in small- and medium-sized cities, the increase of the ratio of small- and medium-sized cities to the total national population, and the considerable drop in the demographic growth rate of the metropolitan cities (with more than one million inhabitants) and surrounding areas.

The second trend, related to the first, demonstrates a change in the regions selected by the migrating population. Tables 2 and 4 illustrate this point. It is impossible to know exactly which regions will be chosen as destinations by the migrating population; however, the preference index (*PI*)*, devised by Uchino (1976), gives an indication of such a change in trend. An analysis of the years between 1955 and 1977 (Uchino 1979) again suggests that migration tends to be out of metropolitan areas and into nonmetropolitan areas.

The flow of out-migrants has increasingly tended to be from metropolitan areas to rural communities. For example, migrants have recently decided to leave the Tokyo metropolitan area and move to the North Kanto, South Tohoku, North Tohoku, and Hokuriku regions, with the strongest preference being to

*To calculate the preference index, the following equation is used:

$$PI = \frac{Mod(\Sigma\, Pi - Po)}{mPoPd}\,100$$

Mod denotes the observed flow of out-migrants
m denotes the ratio of interregional migration to the national population
Po denotes the population of the region of departure
Pd denotes the population of the region of destination
$\Sigma\, Pi$ denotes the total population

TABLE 6 The destination preference indexes of migrants from the Tokyo and Osaka metropolitan areas.

Region	Year					
	1955	1960	1965	1970	1975	1977
From E South Kanto (Tokyo metropolitan)						
To D North Kanto	235	203	213	245	229	229
C South Tohoku	153	126	145	140	175	170
B North Tohoku	80	79	108	114	161	151
F Hokuriku	128	95	96	87	99	136
G Tosan	193	155	148	144	153	159
From I Kyoto–Osaka–Kobe (Osaka metropolitan)						
To J Kyoto–Osaka–Kobe vicinity	469	385	489	522	556	637
K San'in	208	196	224	225	251	268
M Shikoku	239	186	230	221	243	245
O South Kyushu	138	110	163	158	229	223
L Sanyo	167	148	176	176	182	175
N North Kyushu	70	63	104	107	144	133

SOURCE: Uchino (1976) for 1955–1970 and (1979) for 1975–1977.

the North Kanto region (as can be seen by the index of 200+ on Table 6). The *PI* for South Tohoku, however, increased from 126 in 1960 to 175 in 1975, and for North Tohoku it stayed below 100 through 1960, went over the 100 mark in 1965, and reached 161 in 1975. The index for Hokuriku reached a low 95 in 1960 and then gradually increased to 136 in 1977.

Out-migrants from the Osaka metropolitan area generally have chosen its vicinity, region J, as well as San'in, Shikoku, and South Kyushu as new places of residence. The preferred region J has a high *PI* of over 500 after 1970 and as high as 637 by 1977. The San'in region then follows with a low in 1960 of 196 to a high of 268. The Shikoku region is a similar case with an index of 186 in 1960 and 245 in 1977. In the South Kyushu region, the preference index of 110 in 1960 doubled after 1974. These figures seem to indicate a migratory trend to surrounding nonmetropolitan regions and a return migration to rural areas.

The preference index also shows a considerable increase in the selective migration between adjacent nonmetropolitan regions. For example, migration between such regions as North and South Tohoku and San'in and Sanyo is becoming more frequent than the selective migration to metropolitan areas (Table 7). Until 1960, most of the out-migrants from South Tohoku chose South Kanto (the Tokyo metropolitan area) as their destination. After 1965,

TABLE 7 The destination preference indexes of migrants from the South Tohoku, North Tohoku, San'in, and Sanyo regions.

Region	Year					
	1955	1960	1965	1970	1975	1977
From C South Tohoku						
To B North Tohoku	170	189	211	231	333	349
E South Kanto	418	472	355	278	247	233
D North Kanto	112	154	123	139	136	140
A Hokkaido	129	106	70	70	79	80
From B North Tohoku						
To C South Tohoku	198	249	267	310	381	401
E South Kanto	217	294	292	289	243	230
A Hokkaido	267	250	196	135	152	182
From K San'in						
To L Sanyo	380	382	498	557	598	608
I Kyoto–Osaka–Kobe	469	566	491	389	303	278
J Kyoto–Osaka–Kobe vicinity	104	185	167	147	123	122
From L Sanyo						
To K San'in	316	296	323	394	522	551
M Shikoku	190	155	171	204	219	232
N North Kyushu	158	136	168	158	220	210
I Kyoto–Osaka–Kobe	321	354	280	222	190	190

SOURCE: Uchino (1976) for 1955–1970 and (1979) for 1975–1977.

however, there was a rapid decrease in the *PI* to one-half the 1960 figure. Recently, North Tohoku has become the most popular destination of out-migrants from the South Tohoku region, thus replacing the South Kanto region in preference by a steadily increasing amount. The same is also true for the relationships between the North Tohoku, South Kanto, and South Tohoku regions. Most out-migrants from North Tohoku have preferred South Tohoku to South Kanto since 1965.

As can be seen in Table 7, a noteworthy trend of internal migration in Japan since 1965 has been the change from selecting metropolitan areas to selecting adjacent local, nonmetropolitan areas as destinations.

The third trend in the mobility transition in Japan is the change in the age profile of the migrants. Generally, most migrants are to be found in the younger age groups. It is impossible, however, to describe fully the changes in age composition since information on the age structure of migrants is limited to census years.

From census data an examination can be made of population changes within age groups in certain prefectures. The most notable finding is that the

migration of those males who were 20–24 years old in 1965 was predominantly out of the large-city prefectures of Tokyo, Osaka, Kyoto, and Fukuoka by 1970; in Tokyo and Osaka, this net out-migration was more than 20 percent. Conversely, in most of the prefectures other than the four mentioned above, there was a net in-migration of the same male age group. This clearly shows a reverse flow of the younger-aged male population from the large-city prefectures to the local prefectures (Nishikawa 1973, 1975). The 20–24-year-old male population in 1970 in the Tokyo, Osaka, and Chukyo metropolitan areas decreased by 1975 (9.3 percent, 7.1 percent, and 0.2 percent, respectively), whereas all other regions witnessed an increase of these males, especially Shikoku (17.8 percent) and San'in (19.1 percent) (based on unpublished calculations by Uchino). Furthermore, males 25–29 years old in 1970 (30–34 years old in 1975) were less numerous in the three metropolitan areas and increased in all other regions (except Hokkaido). This clearly shows that return migration is spreading from the 20–24 to the 25–29 age group.

The fourth mobility transition trend in Japan is reflected in the various regional employment opportunities, which are directly related to migration and are important factors in the explanation of internal migration change among the younger working ages. The recent drop in the number of males employed in the highly urbanized and industrialized regions and the alternative increase in the number of males employed in rural, community-type regions, reflect the change in the national distribution structure of employment opportunities that has accelerated the trend of local distribution away from the traditional large cities.

2 CURRENT PATTERNS OF SPATIAL POPULATION GROWTH

2.1 Regional Units and Data

The four recent, interrelated trends in Japan's internal migration, which were discussed in the previous section, have all occurred since 1965 and warrant further research. An examination of spatial population growth in the last 10 years is one possible path for this research.

In this report, for convenience the analysis of spatial population growth in Japan begins with a consolidation of the 15-region aggregation described in the Introduction into the 8-region aggregation used by the Land Agency of the Japanese Government. The eight regions include Hokkaido, Tohoku, Kanto, Chubu, Kinki, Chugoku, Shikoku, and Kyushu. Figure 2 illustrates the boundaries of Japan's prefectures (the administrative areas of cities, towns, and villages) and shows the eight-region boundaries.

The base year of 1970 was chosen for this analysis because the census of this year had the most recent migration data by age and sex. The data for the interprefectural migration are for the period beginning October 1, 1969 and ending September 30, 1970 (Bureau of Statistics 1974). They were collected

Region
Prefecture

Hokkaido
1 Hokkaido

Tohoku
2 Aomori
3 Iwate
4 Miyagi
5 Akita
6 Yamagata
7 Fukushima
15 Nigata

Kanto
8 Ibaraki
9 Tochigi
10 Gunma
11 Saitama
12 Chiba
13 Tokyo
14 Kanagawa
19 Yamanashi

Chubu
16 Toyama
17 Ishikawa
18 Fukui
20 Nagano
21 Gifu
22 Shizuoka
23 Aichi
24 Mie
25 Shiga

Kinki
26 Kyoto
27 Osaka
28 Hyogo
29 Nara
30 Wakayama

Chugoku
31 Tottori
32 Shimane
33 Okayama
34 Hiroshima
35 Yamaguchi

Shikoku
36 Tokushima
37 Kagawa
38 Ehime
39 Kochi

Kyushu
40 Fukuoka
41 Saga
42 Nagasaki
43 Kumamoto
44 Oita
45 Miyazaki
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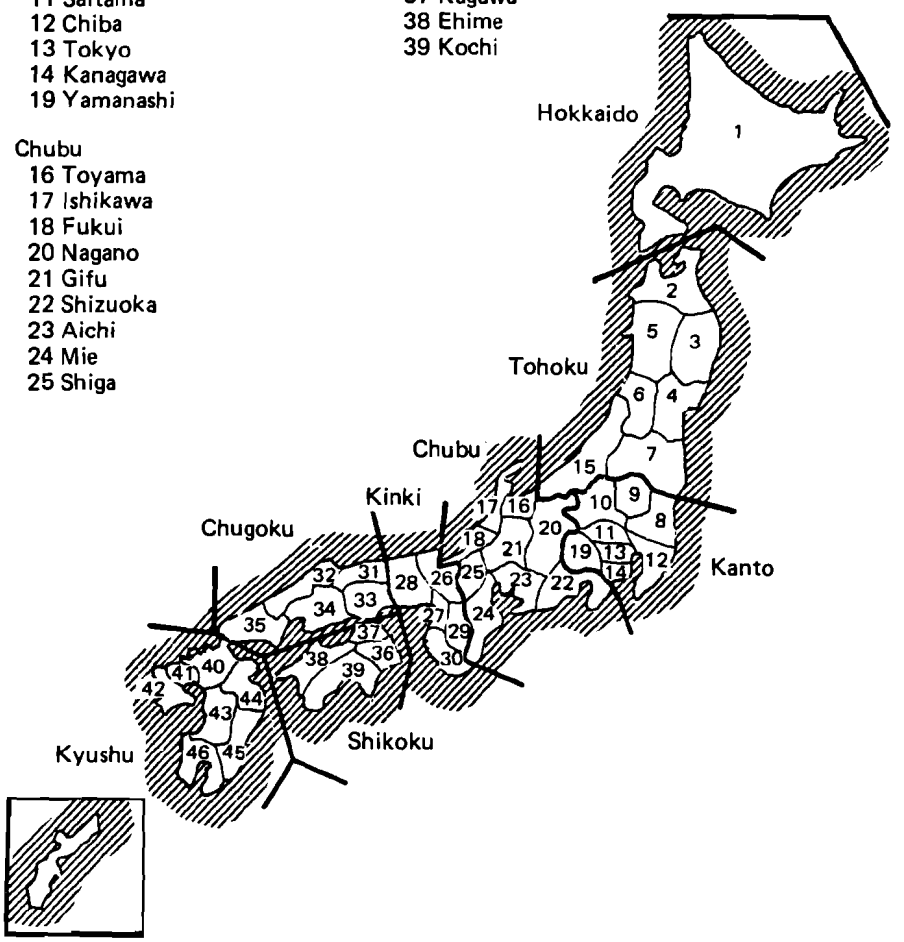

FIGURE 2 The 8 regions (—) and 47 prefectures (—) of Japan. The Okinawa prefecture (600 kilometers south of Kyushu) has been included in the Kyushu region.

for each of the 47 prefectures and were then aggregated into the regions defined above. All migration data are those of the census, which was held on October 1, 1970 (Bureau of Statistics 1971). They are based on a 20 percent sample and are obtained from the census question: If you moved to your present residence within the last year, where did you move from and when? These migration data have been used instead of the data from the registration system because they are age-specific and origin–destination-specific.

The birth and death data, however, are derived from the vital statistics and refer to the period from January 1 through December 31, 1970 (Ministry of Health and Welfare 1970, 1976, Bureau of Statistics 1971, Department of Welfare 1972).

In 1970, the total population of Japan was 104.7 million people. The average population in each of the regions was 13 million (Table 8) with Shikoku in the southwest having the smallest number of people (4 million), and Kanto – the region containing the major cities of Tokyo and Yokohama – having the largest number of people (30 million). Of these populations the island of Shikoku had the highest mean age (34.2 years), followed by the Chugoko, Kyushu, and Tohoku regions. The Kanto region was on the other end of the scale, with a mean age of 30.4 years, as were the regions of Hokkaido, Kinki, and Chubu. Appendix A gives the observed population characteristics for 1970 in 5-year age groups (open-ended after 85 years) for the male, female, and total populations, the number of births (by age of mother), the number of deaths, and the number of interregional migrations among the eight regions. Intraregional migrations are not considered in this study, although a considerable amount of migration occurs within each of the eight regions.

TABLE 8 Japan's regional total populations and associated mean ages, 1970.

Region	Total population (in thousands)	Mean age of population
Hokkaido	5 184	30.5
Tohoku	11 392	32.0
Kanto	30 258	30.4
Chubu	17 401	31.9
Kinki	16 511	31.3
Chugoku	6 997	33.7
Shikoku	3 904	34.2
Kyushu	13 017	32.3
Total	104 665	31.5

SOURCE: Calculated from Appendix A.

TABLE 9 Japan's regional fertility characteristics, 1970.

Characteristic	Region							
	Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu
Age-specific fertility rates (per thousand)								
15–19	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2
20–24	5.6	5.9	3.7	5.6	4.7	5.8	6.3	5.5
25–29	10.1	10.7	10.1	10.9	10.4	10.7	10.3	11.1
30–34	3.5	3.9	5.0	3.8	4.2	3.5	3.5	4.8
35–39	0.7	0.8	1.2	0.8	1.0	0.7	0.7	1.2
40–44	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
Mean age of childbearing	27.2	27.4	28.4	27.4	27.9	27.3	27.2	27.9
Gross reproduction rate	1.0	1.1	1.0	1.1	1.0	1.1	1.1	1.2
Crude birth rate (per thousand)	17.7	15.9	20.6	18.8	20.5	16.6	15.6	16.6

SOURCE: Appendix B.

2.2 Fertility

The age-specific fertility rates for each of the eight regions of this study are given in Table 9. Kanto and Kinki, the two regions that contain five of the seven largest cities in Japan – Tokyo, Yokohama (in the Kanto region) and Kyoto, Osaka, and Kobe (in the Kinki region) – had a relatively low fertility rate for the 20–24 age group and a higher rate for the 30–34 age group. A comparatively high fertility rate, on the other hand, existed in the Kyushu region in all but the first and last age groups.

As can be seen by the mean age of childbearing in Table 9, babies were born to slightly older mothers in the Kanto, Kinki, and Kyushu regions than in the other five regions in 1970. Education and housing are the primary reasons for the tendency of women in these highly industrialized and urbanized regions to have their children later in life. The majority of women who are earning educational degrees, postpone their time of childbearing. If, when this time comes, they choose to remain in the city where they have earned their degree, they are then faced with the problem of finding adequate housing for a family, which is obviously more difficult in a densely populated area. The patterns in Japan are no different than in the rest of the world in this respect.

Also found in Table 9 are the gross reproduction rates (GRRs), which are the sum of the age-specific fertility rates multiplied by five (the width of the age interval). These rates give the average number of children born alive to parents who have lived through their childbearing years and at the same time have conformed to the age-specific fertility rates of a given year, in this case 1970. The GRRs are close to the replacement level and are relatively uniform throughout the country, being only slightly higher in the Kyushu region.

The crude birth rates (the number of births per thousand population in a given year) also do not differ significantly across regions. The Kanto region has the highest rate of 20.6 babies per thousand, and the Shikoku region has the lowest rate of 15.6. Figure 3 gives the distribution of these rates throughout the country; the national crude birth rate in 1970 was 18.7.

2.3 Mortality

There was also a relative uniformity in the crude death rates (the number of deaths per thousand population in a given year) and life expectancies at birth among the eight regions of Japan in 1970. The observed mortality rates for males, females, and the total population can be found in Appendix B; for quick reference a summary is given in Table 10. The most striking aspects of these data are the low crude death rates and the high life expectancies.

In the Kanto region, there were 5.3 female and 6.3 male deaths per thousand population in 1970. This is not only a low rate for Japan but also an exceptionally low rate when compared with the rest of the world. The island of Shikoku, on the other hand, has the highest crude death rate: 8.0 for females and 10.6 for males.

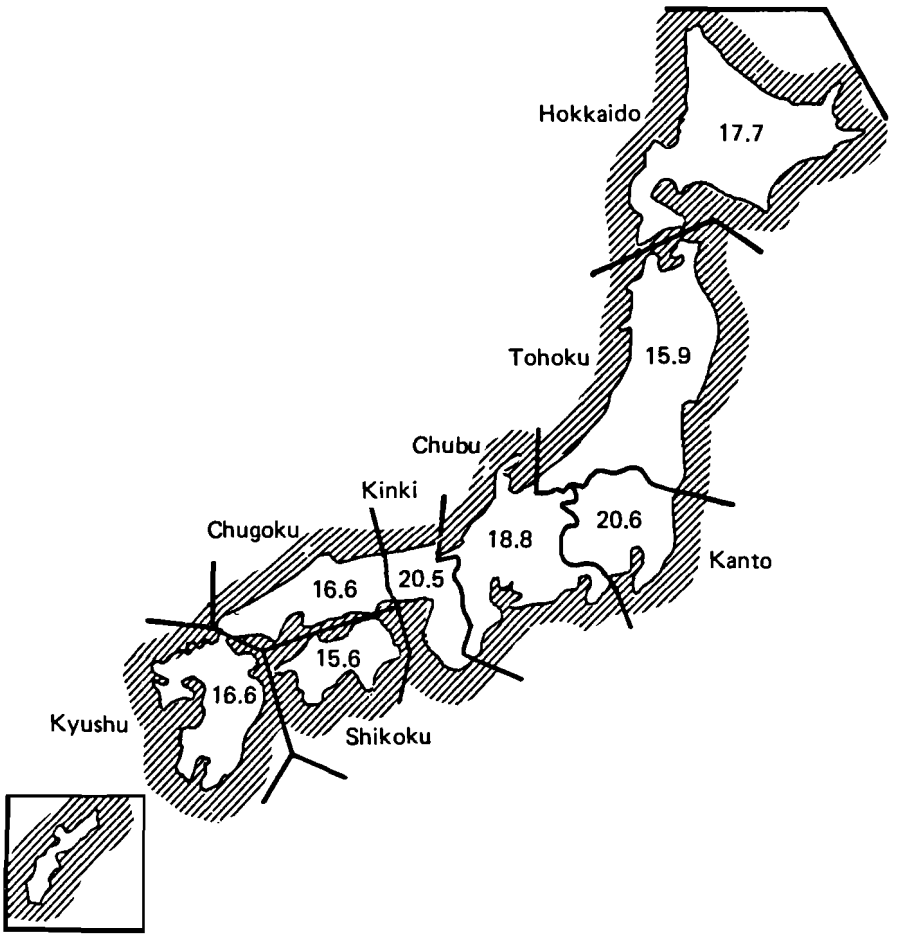

FIGURE 3 Japan's crude birth rates (per thousand) for 1970 by region.

The expectation of life at birth exhibited even less variation across regions in 1970. A male born in any region of Japan could expect to live between 68.2 and 70.1 years and a female could expect to live between 74.1 and 75.4 years.

2.4 Migration

The total number of 1970 out-migrants from each region is shown in the observed population characteristics of Appendix A. The total number of out-migrants from the Hokkaido region, for example, was 143 647. (Each person who migrated from this island was assumed to have moved to one of the other seven regions of Japan.) The region most frequently chosen by the out-migrants of Hokkaido was Kanto, and the region least frequently chosen was Shikoku. Table 11 shows that most migrants move into the Kanto and Kinki

TABLE 10 Japan's regional crude death rates and life expectancies for males and females, 1970.

Region	Crude death rates (per thousand)		Expectations of life at birth	
	Males	Females	Males	Females
Hokkaido	7.1	5.2	69.1	74.4
Tohoku	8.6	6.8	68.2	74.1
Kanto	6.3	5.3	69.9	75.0
Chubu	7.7	6.4	70.0	74.9
Kinki	6.7	5.6	70.1	75.0
Chugoku	9.4	7.3	69.5	75.4
Shikoku	10.6	8.0	68.5	74.6
Kyushu	9.1	7.0	68.5	74.6

SOURCE: The crude death rates are found in Appendix B. The life expectancies were calculated with the single-region life table using the above death rates.

regions from all regions with the exception of the out-migrants from Kanto who prefer the neighboring region of Chubu to Kinki. The island of Shikoku receives the least number of in-migrants, followed by Hokkaido and Tohoku.

The crude and the age-specific out-migration rates and the mean age of the out-migration schedule, given in Appendix B, are defined in the same way as the comparable rates for births and deaths. Let us turn first to the crude out-migration rates for the male, female, and total populations of Japan in 1970 (Table 12). A noticeable variation exists in these rates among the eight regions. In the two highly industrialized and urbanized regions (Kanto and Kinki) and in the adjacent Chubu region, a relatively low out-migration rate occurred in 1970. Roughly 12 people out of every one thousand migrated out of Kanto as compared with the 35 people per thousand who migrated out of Kyushu. During 1970, in fact, all other regions in Japan had a much higher out-migration rate than did these three central regions. As explained in the introductory section of this report, however, Japan is recently experiencing a "U turn" trend, and an analysis using 1980 census data would probably show more out-migration from these three urbanized regions.

Table 12 also gives the crude out-migration rates for males and females. Census results show that of every thousand females who lived in the Kanto region in 1969, only 9 were found to have moved out of this region by October 1, 1970, whereas almost 30 per thousand migrated out of the Kyushu region. Of every thousand males living in Kyushu, 41.6 moved out.

Age-specific out-migration rates across all eight regions of Japan are given in Appendix B. Here, however, we will briefly note only the mean age of those people who migrated in 1970. Figure 4 shows clearly that the oldest migrants tend to come from the two central regions of Kanto (34 years) and Kinki (32

TABLE 11 Number of Japanese migrating out of a region and the number of these out-migrants received by each of the remaining seven regions, 1970.

Region of origin	Total out-migration	Regions receiving migrants and number of migrants received			
		Region receiving the most migrants from region of origin	Number of migrants received	Region receiving the least migrants from region of origin	Number of migrants received
Hokkaido	143 647	Kanto	87 992	Shikoku	1 047
Tohoku	340 545	Kanto	258 622	Shikoku	925
Kanto	354 900	Chubu	99 181	Shikoku	9 642
Chubu	292 537	Kanto	151 957	Shikoku	4 905
Kinki	278 486	Kanto	95 769	Hokkaido	4 340
Chugoku	178 737	Kinki	78 857	Hokkaido	1 268
Shikoku	125 075	Kinki	66 211	Tohoku	791
Kyushu	461 374	Kinki	162 645	Tohoku	3 416

SOURCE: Appendix A.

TABLE 12 Japan's regional crude out-migration rates for the male, female, and total populations, 1970.

Region	Crude out-migration rates (per thousand)		
	Male	Female	Total
Hokkaido	32.6	23.0	27.7
Tohoku	35.2	25.0	29.9
Kanto	14.1	9.3	11.7
Chubu	19.6	14.1	16.8
Kinki	19.8	14.0	16.9
Chugoku	29.7	21.7	25.5
Shikoku	37.9	26.7	32.0
Kyushu	41.6	29.9	35.4

SOURCE: Appendix B.

years) and from the northern island of Hokkaido (33 years). The mean ages of out-migrants from the remaining eight regions all range between 27.8 and 29.5 years of age.

3 MULTIREGIONAL POPULATION ANALYSIS

Until recently, single-region life table models and single-region stable population projection models have played a principal role in population analysis. In the past decade, however, these models have been extended to include many regions, and a methodology for multiregional population analysis has been developed, which uses data on migration as well as data on births and deaths (Rogers 1975). In this section we will interpret the results produced by computer programs developed at IIASA (Willekens and Rogers 1978) for Japan, and compare them with the results produced by single-region population models using the 1970 base year and the eight-region aggregation.

3.1 Multiregional Life Table

To examine the impact of interregional migration in a multiregional population system, we begin with hypothetical groups of individuals born at the same moment and in a number of regions. These birth cohorts, representing 100 000 people in each region, say, and statistics describing their life history are at the center of the computations generating a multiregional life table. The data for the computations include age-specific mortality and origin–destination-specific migration schedules for each region during the base period. The output yields such statistics as the proportion of each cohort that is expected to survive to a specific age, the number of years expected to be lived in the various regions, and the life expectancy by region of birth and region of residence.

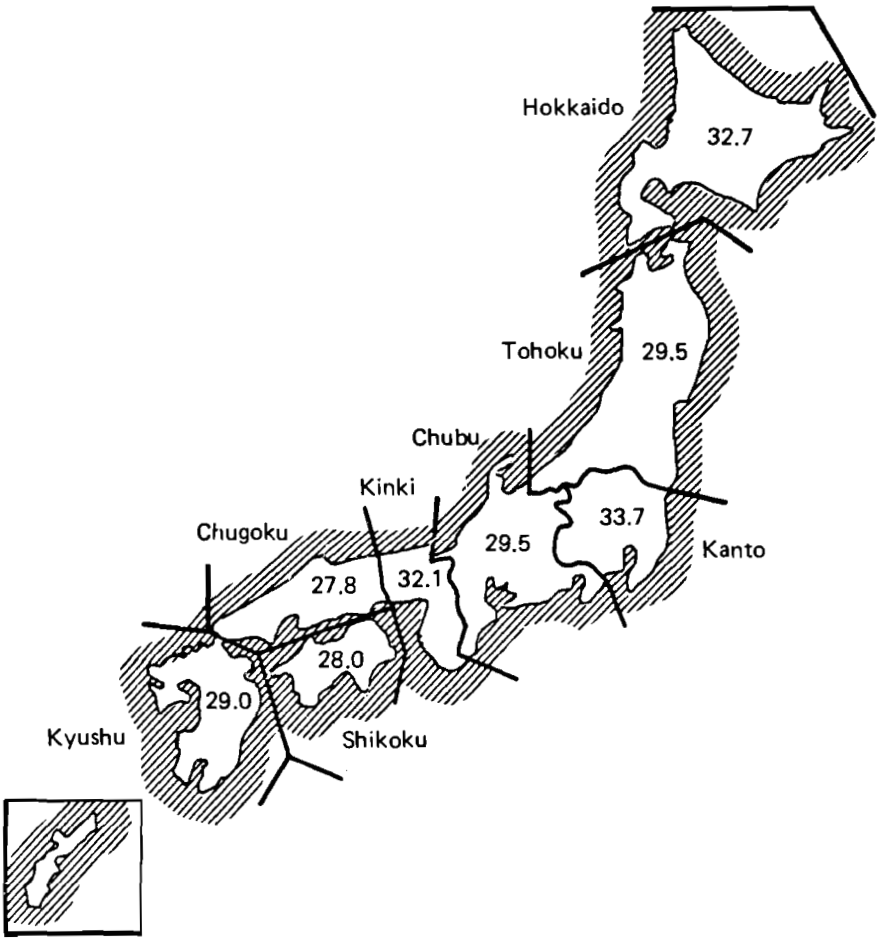

FIGURE 4 Japan's mean age of out-migrants for 1970 by region.

A full explanation of the methodology and computer programs used can be found in Rogers (1968, 1975) and Willekens and Rogers (1978) and will, therefore, not be discussed here. Instead we will turn to the results of our analysis.

Appendix C gives the expectation of life at birth by region and sex. For easy reference Table 13 summarizes these multiregional results for Japanese males aged 0, 20, and 65. According to this table, a male born in Hokkaido may expect to live 69.5 years. Out of these, he is expected to live 27.1 years in Hokkaido, 3.5 in Tohoku, 23.7 in Kanto, etc. When this Hokkaido-born male reaches the age of 20, he may expect to live another 51.6 years: 11.6 in Hokkaido, 3.3 in Tohoku, and 22.4 in Kanto. It is clear that in Japan the average number of years a person may expect to live in his place of birth is larger than the average number of years he may expect to live in any other region, especially if he is born in the Kanto or Kinki region.

TABLE 13 Expectations of life by age and region of birth for Japanese males.

Region of birth	Age	Total	Region of residence							
			Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu
Hokkaido	0	69.5	27.1	3.5	23.7	7.0	4.9	1.3	0.5	1.6
	20	51.6	11.6	3.3	22.4	6.6	4.8	1.2	0.4	1.4
	65	12.7	1.9	0.9	5.6	1.9	1.4	0.4	0.1	0.4
Tohoku	0	69.3	2.2	27.6	27.0	6.1	3.8	1.1	0.4	1.1
	20	51.5	2.1	11.2	25.9	5.9	3.8	1.1	0.4	1.1
	65	12.6	0.6	1.9	6.3	1.8	1.2	0.4	0.1	0.3
Kanto	0	69.8	1.3	3.7	50.0	6.1	5.0	1.5	0.5	1.6
	20	51.7	1.2	3.5	33.1	5.8	4.8	1.4	0.5	1.4
	65	12.7	0.3	1.0	7.2	1.8	1.4	0.4	0.2	0.4
Chubu	0	69.8	0.9	2.2	16.2	39.2	7.6	1.5	0.6	1.5
	20	51.8	0.9	2.2	15.5	22.6	7.3	1.5	0.5	1.4
	65	12.7	0.2	0.7	4.0	4.9	1.9	0.4	0.2	0.4
Kinki	0	69.9	0.7	1.5	12.5	7.5	41.0	3.1	1.3	2.3
	20	51.8	0.6	1.5	11.9	7.0	24.7	2.8	1.1	2.0
	65	12.7	0.2	0.5	3.2	2.1	5.1	0.8	0.3	0.5
Chugoku	0	69.6	0.7	1.7	14.8	6.7	13.5	28.0	1.5	2.7
	20	51.7	0.7	1.7	14.3	6.5	12.7	12.1	1.3	2.4
	65	12.8	0.2	0.5	3.7	1.9	3.1	2.4	0.3	0.6
Shikoku	0	69.3	0.7	1.6	13.9	7.3	17.1	4.1	22.8	2.0
	20	51.6	0.7	1.6	13.7	7.1	16.0	3.7	7.0	1.8
	65	12.7	0.2	0.5	3.5	2.1	3.8	1.0	1.2	0.5
Kyushu	0	69.4	0.9	1.9	17.8	8.9	12.9	3.3	0.8	23.1
	20	51.6	0.8	1.9	17.1	8.5	12.1	3.0	0.8	7.5
	65	12.7	0.2	0.6	4.3	2.4	3.0	0.8	0.2	1.2

SOURCE: Appendix C.

TABLE 14 Regional expectations of life at birth and migration levels for the total population of Japan, 1970.

Region of residence	Region of birth							
	Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu
a. Expectation of life (years)								
Hokkaido	30.2937	1.9696	1.1510	0.7433	0.5649	0.5412	0.5814	0.7439
Tohoku	3.3338	29.7494	3.4833	1.9387	1.2440	1.3609	1.2393	1.5604
Kanto	23.1294	27.8701	53.1357	15.4664	11.8585	13.6100	12.8017	17.1061
Chubu	7.2980	6.2231	5.9500	42.6213	7.1648	6.1240	6.7513	9.2193
Kinki	4.7495	3.5919	4.8951	7.7938	44.2971	14.8373	18.5540	13.8279
Chugoku	1.1323	0.9816	1.4628	1.4605	3.2505	31.1533	4.1548	3.3455
Shikoku	0.4699	0.3795	0.5416	0.5957	1.4273	1.6302	25.8061	0.8715
Kyushu	1.6856	1.1854	1.7299	1.7037	2.6578	3.0139	2.0871	25.3828
Total	72.0922	71.9506	72.3495	72.3235	72.4650	72.2708	71.9757	72.0576
b. Migration level (proportional allocation of life expectancy)								
Hokkaido	0.420208	0.027374	0.015910	0.010278	0.007796	0.007488	0.008078	0.010324
Tohoku	0.046244	0.413470	0.048146	0.026806	0.017167	0.018831	0.017219	0.021655
Kanto	0.320831	0.387350	0.734431	0.213851	0.163644	0.188319	0.177861	0.237395
Chubu	0.101231	0.086492	0.082239	0.589315	0.098873	0.084737	0.093800	0.127944
Kinki	0.065881	0.049921	0.067658	0.107763	0.611290	0.205301	0.257781	0.191901
Chugoku	0.015706	0.013642	0.020219	0.020194	0.044856	0.431063	0.057726	0.046429
Shikoku	0.006519	0.005275	0.007486	0.008236	0.019697	0.022556	0.335839	0.012095
Kyushu	0.023380	0.016475	0.023910	0.023557	0.036677	0.041703	0.028997	0.352258
Total	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

The situation changes, however, as the person grows older. The average number of years a 20-year-old male born in Hokkaido may expect to live in his region of birth is now 11.6 instead of 27.1, whereas the average number of years he may expect to live in Kanto is 22.4 instead of 23.7 (Table 13).

The expectation of life indices in the multiregional life table also include an indication of the migration levels between individual regions. The migration level, or the proportional regional allocation of a life expectancy, is the fraction of an individual's lifetime that is spent in each region. Table 14 shows the life expectancies at birth in part a and the migration levels in part b. The table is analogous to Table 13, the difference being that we are now dealing with the total population of Japan. (Expectations of life at birth and migration levels for females are given in Appendix C.)

Is this multiregional analysis similar to a single-region life table analysis? Table 15 compares results of these two life tables. The life expectancies obtained from a multiregional life table model show less variation than those obtained from a conventional single-region model. Other reports of this migration and settlement comparative study (e.g., Rees 1979) have noted that multiregional measures are regressions of the single-region measures toward the national mean. This is a consequence of the assumption that the mortality behavior of members of a cohort is determined by the region of residence. An implication of this is that the life expectancy of a person born in a low-mortality region decreases if he or she moves to a high-mortality region. The regression toward the mean is a peculiarity of any complex system that is composed of interacting subsystems in which their particular characteristics are imposed upon their members.

Figures 5 and 6 give the probabilities that a male or female child, born in a particular region, can be expected to be living in the region of birth at ages 20 and 65 – the labor force years. For example, the probability of a male born

TABLE 15 Male and female expectations of life at birth according to multiregional and single-region life tables, 1970.

	Male		Female	
Region	Multiregional life table	Single-region life table	Multiregional life table	Single-region life table
Hokkaido	69.50	69.06	74.74	74.41
Tohoku	69.34	68.23	74.60	74.14
Kanto	69.77	69.89	74.97	75.01
Chubu	69.76	69.98	74.88	74.85
Kinki	69.92	70.08	75.00	75.01
Chugoku	69.56	69.54	75.01	75.37
Shikoku	69.34	68.47	74.65	74.55
Kyushu	69.42	68.49	74.72	74.59

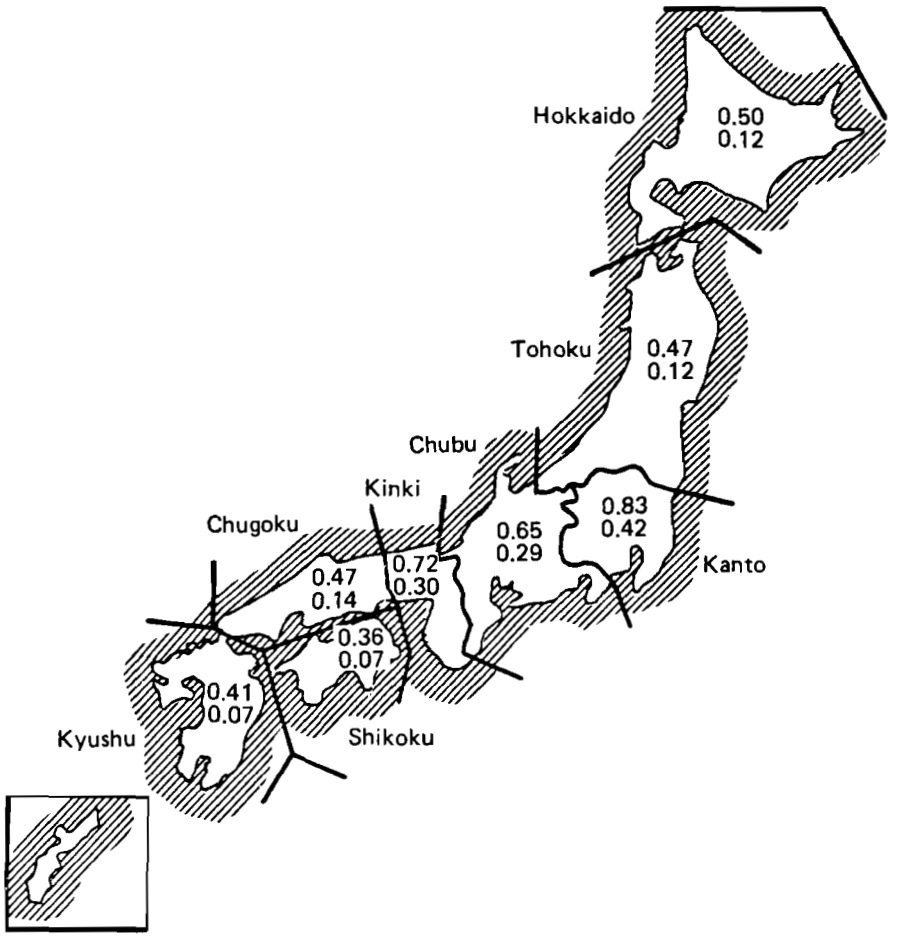

FIGURE 5 Probabilities of Japanese males surviving at exact age 20 (top probability) and 65 (bottom probability) in the region of birth.

in the Kanto region and living in that region at age 20 is 0.83; at age 65 it is 0.42. In the Kyushu region, on the other hand, the probability of a male born in the region and living there at age 20 is only 0.41, less than half of the Kanto region. At age 65 the probability is a very low 0.07.

The distribution of the probabilities of surviving in the region of birth for females is similar to that of males. The actual numbers, however, are higher for females, thus indicating a tendency of females to reside in their place of birth longer than males. This is generally due to the higher death and out-migration rates of males.

These two figures are a good indication of spatial mobility patterns in Japan in 1970, even though deaths are included in the probabilities. Based on the 1970 data the three most industrialized regions of Kanto, Kinki, and Chubu

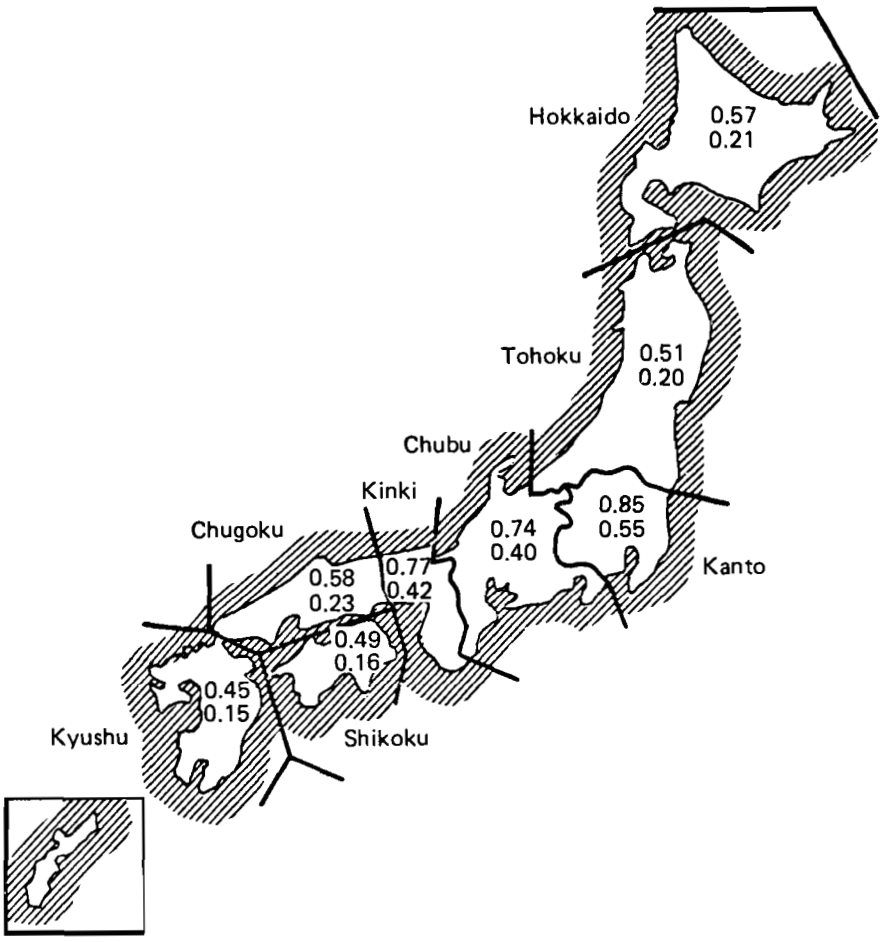

FIGURE 6 Probabilities of Japanese females surviving at exact age 20 (top probability) and 65 (bottom probability) in the region of birth.

can be expected to maintain between 65 000 and 83 000 20-year-old males of every 100 000 born in the region, whereas all other regions are expected to lose at least half of their potential male labor force. This discrepancy is quite large, especially in a country with such a high population density; it is not surprising that the present migration trends are away from the urban areas and toward the less populated areas.

3.2 Fertility and Mobility Analysis

The net reproduction rate (NRR) in the multiregional analysis is analogous to its single-region counterpart. It gives the average number of babies born to an individual during a lifetime of exposure to the age-specific fertility and mortality

rates observed during a particular year. It also includes the impact of migration on fertility, which is not incorporated in the single-region life table. For these calculations it is assumed that the parent adopts the fertility and mortality rates of the region of residence.

Table 16 shows the results of the multiregional NRRs by region of birth for Japanese females born in 1970. (Appendix C gives the NRRs for the total population as well.) The first part of Table 16 gives the expected number of daughters born in each region by the mother's region of birth. For example, every 100 women born in Hokkaido can expect to give birth to 43 daughters in Hokkaido, 3 in Tohoku, and 32 in Kanto. The total in this case represents the total number of daughters expected to be born to a woman whose region of origin is Hokkaido. The diagonal gives the number of daughters born in the mother's region of birth. The values for the Kanto (0.78), Chubu (0.61), and Kinki (0.66) regions are considerably higher than those for the rest of Japan.

The net reproduction allocations are found in part b of Table 16. The proportion of daughters born in Hokkaido to a mother born in the same region is 43.5 percent and the proportion of daughters born in Kyushu to this same woman is 1.9 percent. A comparison of the percentages in this table indicates that the largest proportion of all daughters born outside the mother's region of birth can be found in the Kanto region, followed by the Chubu region.

The mean ages of childbearing for females are given in Table 17. Among Hokkaido-born women who are living in Tohoku, this mean age is 28.06 years. All mothers who remain in their place of birth are younger than those who have out-migrated except for mothers born in Kanto, according to this table. The mean age of childbearing for Kanto-born mothers who remain in Kanto is 28.15 years.

Based on 1970 census data and a multiregional stationary population, it is possible to calculate the number of out-migrations an individual is expected to make during his lifetime. This rate is called the net migraproduction rate (NMR). The total in Table 18 (part a) shows the total number of out-migrations an individual born in each region is expected to make. As can be seen, a person born in Kanto is less mobile (0.81) than one born in any other region, followed by the Chubu (1.00) and Kinki (1.02) regions. Those regions that seem to have the most outward mobility are the Kyushu (1.47), Shikoku (1.47), and Chugoku (1.34) regions.

The net migraproduction rates are given as percentages in Table 18 (part b). Of the total number of moves a Hokkaido-born person is expected to make during his lifetime, for example, 62.4 percent are from Hokkaido, 16.2 percent from Kanto, and 3.2 percent from Kyushu.

3.3 Multiregional Population Projections

Another important contribution of the multiregional model is that it can be used to make population projections. Projections, however, should not be

TABLE 16 Multiregional net reproduction rates for the eight regions of Japan, females, 1970.

Region of birth of daughter	Region of birth of mother							
	Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu
a. Net reproduction rate								
Hokkaido	0.429428	0.020737	0.010844	0.006340	0.004899	0.003534	0.004420	0.006370
Tohoku	0.031994	0.347025	0.033550	0.015900	0.008126	0.008678	0.007796	0.010530
Kanto	0.318337	0.475766	0.782232	0.209912	0.140340	0.167690	0.163581	0.242852
Chubu	0.106547	0.088471	0.065186	0.608959	0.080086	0.067727	0.078630	0.143374
Kinki	0.056192	0.037711	0.056284	0.113488	0.656993	0.268992	0.338843	0.238424
Chugoku	0.008620	0.007049	0.013531	0.014131	0.038565	0.400689	0.052900	0.041758
Shikoku	0.004242	0.002999	0.005180	0.005798	0.017642	0.020100	0.304017	0.009235
Kyushu	0.018708	0.012705	0.021894	0.024089	0.037354	0.041130	0.025228	0.299019
Total	0.964068	0.992464	0.988700	0.998618	0.984007	0.978542	0.975414	0.991562
b. Net reproduction allocations (proportional distribution)								
Hokkaido	0.435060	0.020895	0.010967	0.006349	0.004979	0.003612	0.004531	0.006424
Tohoku	0.033187	0.349660	0.033933	0.015922	0.008259	0.008869	0.007992	0.010619
Kanto	0.330202	0.479379	0.791172	0.210203	0.142621	0.171367	0.167704	0.244918
Chubu	0.110518	0.089143	0.065931	0.609802	0.081388	0.069213	0.080612	0.144594
Kinki	0.058286	0.037997	0.056928	0.113645	0.667671	0.274891	0.347383	0.240453
Chugoku	0.008941	0.007102	0.013686	0.014151	0.039192	0.409476	0.054234	0.042114
Shikoku	0.004400	0.003022	0.005239	0.005807	0.017929	0.020541	0.311680	0.009314
Kyushu	0.019405	0.012802	0.022144	0.024122	0.037961	0.042032	0.025864	0.301564
Total	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

SOURCE: Appendix C.

TABLE 17 Mean ages of childbearing by region of birth and residence of mother, Japan, 1970.

Region of birth of daughter	Region of birth of mother							
	Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu
Hokkaido	26.7553	27.7816	28.0514	28.1457	28.1719	28.6418	28.2878	28.1272
Tohoku	28.0607	26.7023	28.1677	28.3457	28.6259	28.5948	28.7910	28.7482
Kanto	28.7438	28.6058	28.1503	28.8841	29.0478	28.9399	28.9371	28.7883
Chubu	27.7079	27.8459	28.1484	27.1107	28.0718	28.1056	27.9900	27.6712
Kinki	28.5328	28.8895	28.6078	28.3806	27.5366	28.1236	28.0522	28.0844
Chugoku	28.5113	28.7842	28.1516	28.2492	27.9460	26.7197	27.7195	27.7252
Shikoku	28.2904	28.7603	28.2709	28.3011	27.9070	27.7517	26.3958	28.1649
Kyushu	28.8810	29.3513	28.8321	28.7589	28.6647	28.5922	29.0304	27.1117
Total	28.1854	28.3401	28.2975	28.2720	28.2465	28.1836	28.1505	28.0526

TABLE 18 Net migraproduction rates for the eight regions of Japan, total population, 1970.

Region of out-migration	Region of birth							
	Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu
a. Net migraproduction rates								
Hokkaido	0.805711	0.039431	0.022305	0.014178	0.010484	0.009690	0.010952	0.014242
Tohoku	0.069696	0.857919	0.068467	0.034925	0.020647	0.023143	0.019748	0.025327
Kanto	0.209178	0.261444	0.523283	0.137928	0.101030	0.120649	0.113229	0.154936
Chubu	0.085438	0.068919	0.063125	0.643498	0.078923	0.066986	0.075607	0.112757
Kinki	0.054411	0.038368	0.055354	0.095670	0.655117	0.195238	0.250510	0.181122
Chugoku	0.016033	0.012848	0.022825	0.022364	0.056458	0.804982	0.080963	0.062651
Shikoku	0.008909	0.006347	0.010550	0.011610	0.032192	0.040081	0.867356	0.017573
Kyushu	0.041265	0.024537	0.041912	0.042018	0.068935	0.083912	0.050649	0.900902
Total	1.290642	1.309814	0.807821	1.002190	1.023785	1.344680	1.469014	1.469511
b. Net migraproduction allocations (proportional distributions)								
Hokkaido	0.624271	0.030104	0.027612	0.014147	0.010240	0.007206	0.007455	0.009692
Tohoku	0.054001	0.654993	0.084755	0.034849	0.020168	0.017211	0.013443	0.017235
Kanto	0.162073	0.199604	0.647771	0.137626	0.098682	0.089723	0.077078	0.105434
Chubu	0.066198	0.052618	0.078142	0.642092	0.077089	0.049815	0.051468	0.076731
Kinki	0.042158	0.029293	0.068522	0.095461	0.639897	0.145193	0.170529	0.123254
Chugoku	0.012422	0.009809	0.028255	0.022315	0.055147	0.598642	0.055114	0.042634
Shikoku	0.006903	0.004846	0.013060	0.011584	0.031444	0.029807	0.590434	0.011959
Kyushu	0.031973	0.018733	0.051883	0.041926	0.067333	0.062403	0.034478	0.613063
Total	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

confused with forecasting. Projections reflect the future impact of current patterns of fertility, mortality, and migration; forecasting reflects the effects of possible future events on these demographic components. Appendix D gives the results of the age-specific multiregional population projections for 1980, 2000, and 2030 for the total population of Japan and for its female population, based on 1970 data.

Table 19 shows male, female, and total projected populations by 5-year intervals for Japan as a whole. (The male population figures can be derived by subtracting those of the females from those of the total population.) According to the table, the total population will increase about 24 percent by the year 2000 and about 28 percent by 2030.

Table 20 gives the percentage distributions of the population over the eight regions for 1970 and those projected for the years 2000 and 2030. The share of the population in the Kanto region is expected to increase considerably by 2030 followed by the Kinki and Chubu regions. All other regions are expected to decrease in population. It must be remembered that these projections are based on 1970 migration data and that 1965 was the beginning of the "U turn" trend in Japan. It would be interesting to run the projections again with 1980 data to see if the migration from the metropolitan areas affects these results or if the regions are so large that the migration to the suburbs is not registered in the analysis.

The information in Appendix D allows us to compare the ages of the projected population. As in many countries, the population of Japan is aging and the ratio of the dependent population is increasing. Between 1970 and 2030

TABLE 19 Projected male, female, and total populations (in thousands) for Japan to the year 2030 based on 1970 data.

Year	Male	Female	Total
1970	51 369	53 296	104 665
1975	54 487	56 401	110 888
1980	57 274	59 151	116 425
1985	59 423	61 217	120 640
1990	61 105	62 741	123 846
1995	62 636	64 047	126 683
2000	64 158	65 283	129 441
2005	65 506	66 312	131 818
2010	66 417	66 927	133 344
2015	66 849	67 035	133 884
2020	66 988	66 844	133 832
2025	67 167	66 575	133 742
2030	67 514	66 394	133 908

SOURCE: Appendix D and calculations based on Appendix A.

TABLE 20 Japan's regional shares of male, female, and total populations (in percent) for 1970 and projected for 2000 and 2030.

Year	Population	Region								
		Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu	Total
1970	Male	5.0	10.7	29.7	16.5	15.9	6.5	3.6	12.0	100.0
	Female	4.9	11.1	28.1	16.7	15.6	6.8	3.9	12.9	100.0
	Total	5.0	10.9	28.9	16.6	15.8	6.7	3.7	12.4	100.0
2000	Male	3.4	6.8	40.2	17.6	19.2	5.2	2.0	5.5	100.0
	Female	3.4	6.8	37.6	17.6	19.5	5.4	2.5	7.3	100.0
	Total	3.4	6.8	38.9	17.6	19.3	5.3	2.2	6.4	100.0
2030	Male	2.7	6.0	44.3	17.6	19.5	4.5	1.5	4.0	100.0
	Female	2.4	4.9	42.6	17.7	21.0	4.6	1.9	5.0	100.0
	Total	2.6	5.4	43.4	17.7	20.2	4.6	1.7	4.5	100.0

SOURCE: Appendix D.

(Tables 21–23) the 0–14 age group in Japan is projected to decrease from 24.0 to 20.4 percent, whereas the 65 and over age group will increase from 7.1 to 14.8 percent. The ratio of the dependent population, then, will have increased from 45.1 percent to 54.2 percent.

In all projections, the three most industrialized regions have the lowest percent of dependent population. The 0–14 age group rises from a comparatively low percent of the population in 1970 to a high percent in 2030, whereas that of the oldest age group remains comparatively small in the Kanto, Chubu, and Kinki regions. This is a reflection of the large inflow of the labor force population, high fertility rates, and low mortality rates.

Finally, the mean age of the population is projected to increase from 31.5 in 1970 to 38.1 in 2030 with the Kanto, Kinki, and Chubu regions having the youngest mean ages of 36.9 to 38.7 years.

4 POPULATION POLICY

Although the above multiregional projections show a considerable population increase in the three metropolitan regions of Japan, a more detailed disaggregated analysis using recent data would show a decline in urban concentration. Some migration away from the urban core has occurred because of the reaction of the city's inhabitants to overcrowding, and some has been a direct result of the efforts of national policy makers to alleviate the problems that arise when a population becomes highly concentrated. The Japanese government recognized the importance of population redistribution at a fairly early stage and for many years has taken steps to encourage such deconcentration within the country. Four major regional development planning phases have evolved from these governmental policies since World War II (Fukutake 1965).

The first phase of regional planning (1950–1955) was oriented toward the development of resources and economic growth. Two major policies were initiated in 1950: the General National Land Development Act and the Hokkaido Development Act. The former focused on economic growth such as the development of agriculture, forestry management, and areas having industrial growth potential. The latter aimed at the development of the Hokkaido prefecture and encouraged migration to the island.

The period of 1956–1961 marked the second phase of regional planning in Japan. The predominant aim during these years was the development of less-developed regions. The Tohoku Development Act of 1957, the Kyushu Regional Development Act of 1959, and the Hokkaido Regional Development Act of 1960, for example, were established to bring economic growth and labor force migrants to these less-developed areas. Simultaneously, the National Capital Metropolitan Region Act of 1956 was established for the purpose of providing a more efficient use of land in the Tokyo metropolitan area. The Ten-Year Doubling Plan of 1960, on the other hand, sought to rearrange the spatial distribution of industrial firms to promote increased productivity.

TABLE 21 Japan's total population, age composition, ratio of dependent population, and mean age of population by region, 1970.

Region	Total (in thousands)	Number (in thousands) and percent of population in three age groups						Ratio of dependent population (in percent)	Mean age
		0–14 years		15–64 years		65+ years			
		Number	Percent	Number	Percent	Number	Percent		
Hokkaido	5 184	1 309	25.3	3 576	69.0	299	5.8	45.0	30.5
Tohoku	11 392	2 881	25.3	7 655	67.2	857	7.5	48.8	30.0
Kanto	30 258	7 060	23.3	21 452	70.9	1 746	5.8	41.0	30.4
Chubu	17 401	4 160	23.9	11 944	68.6	1 297	7.5	45.7	31.9
Kinki	16 511	3 858	23.4	11 587	70.2	1 066	6.5	42.5	31.3
Chugoku	6 997	1 602	22.9	4 747	67.8	648	9.3	47.4	33.7
Shikoku	3 904	900	23.0	2 618	67.1	386	9.9	49.1	34.2
Kyushu	13 017	3 383	26.0	8 540	65.6	1 094	8.4	52.4	32.3
Total	104 665	25 153	24.0	72 119	68.9	7 393	7.1	45.1	31.5

SOURCE: Appendix A.

TABLE 22 Japan's projected total population, age composition, ratio of dependent population, and mean age of population by region, 2000.

Region	Total (in thousands)	Number (in thousands) and percent of population in three age groups						Ratio of dependent population (in percent)	Mean age
		0–14 years		15–64 years		65+ years			
		Number	Percent	Number	Percent	Number	Percent		
Hokkaido	4 395	823	18.7	2 884	65.6	688	15.7	52.4	39.6
Tohoku	8 849	1 652	18.7	5 649	63.8	1 548	17.5	56.6	40.9
Kanto	50 364	10 686	21.2	34 750	69.0	4 927	9.8	44.9	35.1
Chubu	22 759	4 690	20.6	15 181	66.7	2 888	12.7	49.9	37.3
Kinki	25 031	5 233	20.9	17 048	68.1	2 749	11.0	46.8	35.9
Chugoku	6 879	1 305	19.0	4 413	64.2	1 161	16.9	55.9	40.2
Shikoku	2 867	522	18.2	1 768	61.7	576	20.1	62.1	42.1
Kyushu	8 299	1 669	20.1	4 997	60.2	1 632	19.7	66.1	40.8
Total	129 441	26 580	20.5	86 691	67.0	16 171	12.5	49.3	37.0

SOURCE: Appendix D.

TABLE 23 Japan's projected total population, age composition, ratio of dependent population, and mean age of population by region, 2030.

Region	Total (in thousands)	Number (in thousands) and percent of population in three age groups						Ratio of dependent population (in percent)	Mean age
		0–14 years		15–64 years		65+ years			
		Number	Percent	Number	Percent	Number	Percent		
Hokkaido	3421	646	18.9	2173	63.5	602	17.6	57.4	40.3
Tohoku	7273	1371	18.9	4596	63.2	1306	18.0	58.3	41.2
Kanto	58128	12030	20.7	38409	66.1	7689	13.2	51.3	36.9
Chubu	23638	4789	20.3	15155	64.1	3694	15.6	56.0	38.7
Kinki	27067	5522	20.4	17689	65.4	3857	14.2	53.0	37.6
Chugoku	6109	1176	19.3	3814	62.4	1119	18.3	60.2	40.8
Shikoku	2254	437	19.4	1386	61.5	432	19.2	62.7	41.4
Kyushu	6017	1289	21.4	3635	60.4	1093	18.2	65.5	39.7
Total	133908	27260	20.4	86858	64.9	19791	14.8	54.2	38.1

SOURCE: Appendix D.

The third phase took place between 1962 and 1976. This era began with the Comprehensive National Development Plan, which had as its main goal the alleviation of urban overcrowding by reducing interregional economic disparities and encouraging the efficient spatial allocation of capital investments. In 1969 the New Comprehensive National Development Plan was formed, emphasizing the dispersion of industrial development to developing regions.

The most recent planning phase was highlighted by the Third Comprehensive National Development Plan of 1977, which was the first postwar regional development plan for Japan that included the improvement of living environments, and which had the most notable effect on population distribution. It was established with the idea of systematically developing "human habitation zones", which would allow "harmony between people and nature, . . . with a basic understanding that the national land resource is limited" (Land Agency of the Japanese Government 1977, p. 4).

Many important concepts were set forth in the Third Comprehensive National Development Plan (hereafter referred to as the Plan), all of which were based on the prime concern of improving the living conditions of the people. These concepts were carried out by implementing four basic policies, which dealt with manufacturing industries, agriculture and fishery industries, housing, and transport.

The Plan sought to restrain industrial development in the Tokyo and Osaka areas and to promote the establishment of manufacturing industries in the Hokkaido, Tohoku, and Kyushu regions. Special efforts were made to attract industries to local cities in these areas, thus encouraging people, especially those in the younger labor force ages, to remain in these regions rather than move away because of poor employment opportunities, as they had done in the past.

The Plan's second policy was directed at the agriculture and fishery industries. Efforts were made to develop systematically and improve agricultural land and to use this land more efficiently. A regional division was established allocating specific crops to areas where the production of the crop was greatest due to land and climatic conditions. The Plan also promoted the implementation of more efficient utilization of national forests, the development of small-scale agricultural lands, and the development and improvement of coastal fishing grounds, fishing ports, and offshore fishing activities.

Housing was a third concern of the Japanese government. Although housing conditions have improved in the last 20 years, low quality housing conditions and an insufficient supply of dwelling units still are significant problems. The Plan anticipated that by 1985 17 million additional dwelling units would be required and by 1990 this number would rise to 25 million. The basic strategies for improving housing conditions focused on an increase in publicly provided housing for low-income families, financing for houses bought by the middle-income group, and high quality rental homes for transients.

The fourth major policy of the Plan dealt with transportation. In the past, the transportation system centered around the Tokyo area. In order to include

all of Japan, a new, nationwide network of railways and roads was needed. Since 1977, expressways have been constructed throughout the main island and, with the growth of marine transportation, they are now connected with the main seaports of the smaller islands of Japan. It was also planned to have both the Tohoku and Joetsu Shinkansen railway lines completed by 1985, thus facilitating the construction of the 7000 kilometer, high speed Shinkansen network approved by the National Shinkansen Railway Development Act.

With these four major policies, the Plan has been and will continue to be influential in controlling population growth in the urban centers and encouraging people to locate outside of the three major metropolitan areas, thereby improving the quality of the "human habitation zones".

5 CONCLUSION

A government needs a comprehensive demographic analysis in order to adopt informed population policies. As the quality of this analysis improves, so might the quality of the policies and their effectiveness. Until recently, single-region life tables and population projections, which focus on fertility and mortality, have played a principal role in demographic studies. It is now possible to extend these models to include the interactions of many regions and the migration that occurs between them.

Migration has played a leading role in the modernization of postwar Japan. Between 1950 and 1970, people in search of better employment migrated to the areas where new opportunities were available. In just 20 years, the population became highly concentrated in three large metropolitan areas. The old, rural ways were lost, and new standards of education and living conditions were adopted, causing the average age of marriage to rise and fertility to decline. Improved medical facilities also brought a decline in death rates. Because of the rapidity with which this demographic transition took place and because of the isolated nature of the island, Japan is an especially interesting example for demographic studies, particularly for developing countries.

On the other hand, Japan must look at the experience of other developed nations for the consequences that can be expected from the rapid demographic transition that has taken place within the country. As the population ages, a larger proportion of the people become dependent on a decreasing labor force. This labor force is then led to redirect its services from industry to the care of the aged, thus slowing down industrial development. At the same time, the labor force becomes more senior, therefore commanding increased wages, and some of the investment that previously went into raising and educating children is reoriented toward the elderly. The overall result of this aging process may be a dampening of the pace of economic growth.

Throughout Japan's recent history of massive internal migration and rapid economic growth, governmental policies have played a leading role in encouraging development. To continue this important function, advanced methods

of demographic analysis as well as the experience of other countries are needed as guidelines in order to devise and implement the most effective demographic policies. It is hoped that the methodology presented in this report will contribute to the creation of such policies for Japan.

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APPENDIXES

Appendix A

OBSERVED POPULATION AND NUMBERS OF BIRTHS, DEATHS, AND MIGRANTS DISAGGREGATED BY AGE AND REGION FOR THE TOTAL, MALE, AND FEMALE POPULATIONS: 1970

APPENDIX A

Observed population characteristics: total population.

REGION HOKKAIDO

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	438566.	0.	1666.	0.	1030.	4610.	1370.	715.	175.	100.	680.
5	436424.	0.	209.	0.	975.	4435.	1540.	670.	105.	110.	740.
10	434497.	1.	153.	0.	805.	3630.	1330.	390.	105.	75.	430.
15	499412.	1689.	371.	0.	1860.	21630.	6745.	1840.	150.	60.	240.
20	514232.	28591.	565.	0.	2325.	21670.	3835.	2390.	400.	160.	620.
25	432539.	43667.	509.	0.	1615.	9745.	2275.	1375.	330.	195.	790.
30	422693.	14592.	616.	0.	1120.	6180.	1715.	890.	210.	120.	890.
35	420657.	2888.	830.	0.	1117.	5115.	1633.	636.	143.	94.	695.
40	373007.	388.	1105.	0.	778.	3625.	1172.	440.	107.	57.	425.
45	299056.	29.	1318.	0.	415.	2355.	638.	284.	89.	15.	144.
50	241113.	1.	1595.	0.	265.	1615.	422.	206.	62.	10.	81.
55	206681.	0.	2261.	0.	205.	1110.	316.	167.	26.	9.	49.
60	166341.	0.	2931.	0.	151.	860.	234.	118.	19.	8.	41.
65	127461.	0.	3752.	0.	133.	622.	135.	58.	8.	14.	33.
70	86387.	0.	4308.	0.	80.	356.	79.	38.	5.	9.	19.
75	49117.	0.	3999.	0.	48.	205.	49.	25.	4.	7.	15.
80	24514.	0.	3176.	0.	27.	119.	25.	13.	1.	2.	4.
85	11590.	0.	2516.	0.	18.	110.	21.	13.	1.	2.	3.
TOTAL	5184287.	91846.	31880.	0.	12967.	87992.	23534.	10268.	1940.	1047.	5899.

REGION TOHOKU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM TOHOKU TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	869305.	0.	3639.	1155.	0.	7990.	1740.	520.	220.	110.	430.
5	941679.	0.	433.	635.	0.	5720.	1285.	395.	175.	60.	305.
10	1069600.	2.	344.	390.	0.	4140.	890.	175.	80.	80.	165.
15	1082462.	2405.	924.	3820.	0.	94990.	13375.	2310.	190.	35.	155.
20	933788.	55381.	1055.	5150.	0.	69115.	7500.	2860.	470.	150.	435.
25	776709.	82765.	968.	3255.	0.	24335.	3875.	1645.	375.	170.	535.
30	827305.	32571.	1214.	2395.	0.	12985.	2570.	855.	320.	95.	420.
35	903184.	7103.	1860.	2261.	0.	10206.	2246.	609.	170.	90.	286.
40	870112.	883.	2437.	1814.	0.	7615.	1718.	451.	125.	65.	210.
45	713795.	46.	2973.	1297.	0.	6175.	1201.	375.	41.	15.	91.
50	578358.	6.	3654.	993.	0.	4950.	925.	305.	31.	12.	71.
55	522469.	0.	5543.	852.	0.	4364.	893.	238.	33.	12.	45.
60	446759.	0.	8055.	543.	0.	3101.	652.	186.	30.	11.	42.
65	357698.	0.	11311.	260.	0.	1625.	215.	96.	12.	10.	18.
70	246722.	0.	12944.	96.	0.	685.	126.	56.	6.	5.	9.
75	149736.	0.	13032.	44.	0.	344.	85.	39.	6.	5.	9.
80	72638.	0.	10113.	21.	0.	172.	35.	13.	0.	0.	0.
85	29860.	0.	6813.	13.	0.	110.	24.	11.	0.	0.	0.
TOTAL	11392179.	181162.	87312.	24994.	0.	258622.	39355.	11139.	2284.	925.	3226.

REGION KANTO

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	MIGRATION FROM TOHOKU	KANTO TO KANTO	KANTO TO CHUBU	KANTO TO KINKI	KANTO TO CHUGOKU	KANTO TO SHIKOKU	KANTO TO KYUSHU
0	2757930.	0.	9848.	2040.	7590.	0.	9650.	6670.	2755.	1095.	4250.
5	2312936.	0.	1037.	1255.	4445.	0.	6215.	4410.	1740.	590.	2670.
10	1988737.	4.	633.	795.	1730.	0.	3285.	2250.	945.	295.	1245.
15	2583401.	5834.	1904.	2215.	6420.	0.	7060.	3960.	1045.	400.	2550.
20	3658955.	136519.	3038.	6620.	20425.	0.	23385.	15980.	5420.	2365.	9395.
25	3104012.	314790.	3137.	4515.	15260.	0.	19445.	13945.	4975.	1800.	7675.
30	2702178.	133773.	3310.	2450.	9730.	0.	11335.	8160.	3025.	1205.	4590.
35	2430156.	30172.	4278.	1690.	7423.	0.	6921.	5240.	1805.	672.	2777.
40	2027704.	3407.	5325.	971.	5482.	0.	4124.	3145.	1056.	430.	1661.
45	1580685.	197.	5840.	479.	3961.	0.	2329.	1781.	563.	251.	942.
50	1280197.	5.	7520.	281.	2546.	0.	1510.	1117.	367.	171.	632.
55	1152804.	0.	11232.	200.	1409.	0.	1152.	741.	250.	94.	456.
60	932140.	0.	15419.	168.	892.	0.	968.	550.	204.	79.	400.
65	735181.	0.	20872.	171.	511.	0.	808.	443.	155.	87.	365.
70	507900.	0.	24390.	103.	307.	0.	469.	256.	92.	51.	219.
75	292908.	0.	23823.	64.	192.	0.	282.	153.	60.	34.	137.
80	147963.	0.	19103.	35.	95.	0.	144.	81.	26.	14.	67.
85	62137.	0.	13669.	22.	68.	0.	99.	52.	20.	9.	49.
TOTAL	30257924.	624701.	174378.	24074.	88486.	0.	99181.	68934.	24503.	9642.	40080.

REGION CHUBU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	MIGRATION FROM TOHOKU	CHUBU TO KANTO	CHUBU TO CHUBU	CHUBU TO KINKI	CHUBU TO CHUGOKU	CHUBU TO SHIKOKU	CHUBU TO KYUSHU
0	1480500.	0.	5523.	595.	1140.	8250.	0.	4895.	1045.	490.	2140.
5	1381423.	0.	649.	305.	825.	5985.	0.	3585.	735.	365.	1160.
10	1298325.	0.	443.	175.	545.	3530.	0.	1950.	340.	190.	745.
15	1521457.	2758.	1146.	1120.	1785.	40315.	0.	18055.	1185.	430.	2040.
20	1735541.	96918.	1690.	1780.	3860.	43245.	0.	24260.	2795.	1180.	5250.
25	1508724.	163963.	1619.	880.	2370.	19745.	0.	11010.	1750.	725.	2945.
30	1374477.	52085.	1714.	540.	1565.	10290.	0.	6120.	940.	535.	1720.
35	1351893.	10555.	2435.	370.	1617.	6875.	0.	4058.	750.	372.	1127.
40	1237520.	1256.	3112.	215.	1265.	4283.	0.	2515.	469.	253.	696.
45	982054.	58.	3475.	110.	746.	2680.	0.	1567.	189.	115.	328.
50	814339.	4.	4709.	76.	533.	1872.	0.	1131.	130.	77.	234.
55	767638.	0.	7226.	79.	416.	1477.	0.	992.	116.	59.	210.
60	649954.	0.	10429.	74.	303.	1242.	0.	821.	115.	48.	190.
65	524666.	0.	14625.	63.	107.	975.	0.	554.	72.	30.	118.
70	370764.	0.	17620.	39.	63.	561.	0.	330.	41.	17.	70.
75	227777.	0.	18318.	24.	46.	337.	0.	202.	33.	15.	53.
80	119719.	0.	15628.	13.	13.	171.	0.	103.	6.	2.	14.
85	54354.	0.	12317.	10.	11.	124.	0.	80.	6.	2.	12.
TOTAL	17401125.	327597.	122678.	6468.	17210.	151957.	0.	82228.	10717.	4905.	19052.

APPENDIX A *Continued.*

REGION KINKI

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM KINKI TO						
				HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	1506579.	0.	5083.	440.	625.	8415.	6720.	0.	4525.	2220.	4880.
5	1280140.	0.	556.	335.	350.	5695.	4200.	0.	2630.	1500.	2515.
10	1071178.	3.	352.	110.	195.	3120.	2185.	0.	1275.	655.	1360.
15	1352699.	3224.	888.	325.	325.	10135.	7080.	0.	2970.	1390.	2855.
20	1886115.	87715.	1711.	1150.	1315.	23640.	16360.	0.	10475.	5585.	8600.
25	1645204.	171026.	1843.	755.	1060.	17170.	12795.	0.	7950.	3670.	7205.
30	1429555.	60218.	1844.	460.	745.	10365.	7305.	0.	4230.	2225.	4255.
35	1322104.	13833.	2544.	278.	613.	6404.	4895.	0.	2728.	1435.	2529.
40	1119190.	1629.	3016.	172.	469.	3872.	2934.	0.	1607.	881.	1520.
45	867523.	69.	3349.	107.	298.	2243.	1602.	0.	863.	494.	885.
50	709344.	4.	4202.	65.	200.	1404.	1061.	0.	598.	353.	613.
55	678863.	0.	6690.	27.	94.	900.	845.	0.	603.	323.	529.
60	576666.	0.	9128.	23.	65.	687.	716.	0.	463.	270.	444.
65	450560.	0.	12413.	41.	36.	589.	581.	0.	265.	202.	340.
70	312183.	0.	14588.	26.	20.	337.	343.	0.	154.	125.	202.
75	176945.	0.	13730.	16.	18.	202.	210.	0.	93.	76.	126.
80	87117.	0.	11144.	7.	2.	111.	107.	0.	47.	42.	63.
85	39426.	0.	8849.	5.	2.	80.	77.	0.	33.	29.	44.
TOTAL	16511391.	337721.	101930.	4340.	6432.	95769.	70016.	0.	41489.	21475.	38965.

REGION CHUGOKU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM CHUGOKU TO						
				HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	535245.	0.	2039.	55.	225.	2595.	1030.	2955.	0.	1095.	1590.
5	520166.	0.	249.	45.	180.	1895.	740.	2485.	0.	775.	1140.
10	546918.	0.	164.	10.	115.	1115.	415.	1705.	0.	620.	795.
15	582108.	1191.	479.	255.	310.	13275.	5235.	24750.	0.	1375.	3700.
20	610921.	35662.	672.	410.	520.	13625.	4530.	22735.	0.	2070.	4460.
25	536835.	57464.	660.	180.	270.	5775.	2430.	9315.	0.	1515.	2560.
30	503674.	17615.	725.	110.	235.	3060.	1155.	3925.	0.	1075.	1750.
35	548486.	3906.	1123.	83.	216.	2064.	868.	3127.	0.	804.	1279.
40	522958.	490.	1466.	47.	183.	1278.	616.	2074.	0.	472.	852.
45	439489.	28.	1714.	11.	83.	810.	465.	1493.	0.	173.	472.
50	365057.	1.	2210.	10.	61.	571.	331.	1171.	0.	124.	339.
55	343079.	0.	3353.	14.	28.	451.	219.	1036.	0.	123.	303.
60	294246.	0.	4597.	12.	24.	378.	177.	834.	0.	108.	255.
65	244647.	0.	6444.	10.	12.	290.	114.	549.	0.	64.	169.
70	190826.	0.	8464.	7.	6.	173.	67.	322.	0.	36.	97.
75	115910.	0.	8744.	5.	6.	106.	50.	195.	0.	26.	62.
80	63863.	0.	7674.	2.	0.	53.	15.	111.	0.	9.	27.
85	32533.	0.	7196.	2.	0.	36.	10.	75.	0.	6.	21.
TOTAL	6996961.	116357.	57973.	1268.	2474.	47530.	18467.	78857.	0.	10270.	19871.

REGION SHIKOKU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM SHIKOKU TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	279937.	0.	1184.	55.	45.	730.	505.	2205.	990.	0.	305.
5	294755.	0.	153.	70.	70.	580.	440.	1685.	735.	0.	210.
10	324916.	0.	137.	40.	20.	425.	290.	1215.	540.	0.	125.
15	323685.	823.	305.	210.	105.	8785.	4615.	22185.	3190.	0.	930.
20	323711.	20260.	435.	205.	195.	7740.	2850.	18475.	3190.	0.	1020.
25	270211.	27886.	399.	65.	110.	2640.	1345.	6720.	1825.	0.	610.
30	269490.	9504.	465.	75.	60.	975.	820.	3210.	1075.	0.	380.
35	305174.	2256.	730.	66.	54.	917.	749.	2753.	925.	0.	225.
40	303025.	337.	968.	55.	48.	636.	586.	2034.	626.	0.	174.
45	252206.	13.	1037.	18.	28.	463.	414.	1492.	375.	0.	122.
50	205694.	0.	1351.	12.	30.	319.	316.	1189.	244.	0.	102.
55	193776.	1.	1942.	0.	6.	238.	215.	1115.	161.	0.	81.
60	171524.	0.	2846.	0.	4.	187.	163.	877.	119.	0.	79.
65	144961.	0.	4104.	6.	8.	118.	95.	532.	102.	0.	67.
70	113864.	0.	5272.	4.	4.	73.	58.	262.	62.	0.	40.
75	68226.	0.	5233.	3.	4.	48.	40.	139.	42.	0.	29.
80	39303.	0.	5028.	1.	0.	21.	14.	70.	18.	0.	10.
85	19556.	0.	4355.	1.	0.	16.	11.	53.	14.	0.	8.
TOTAL	3904014.	61080.	35944.	886.	791.	24911.	13526.	66211.	14233.	0.	4517.

REGION KYUSHU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM KYUSHU TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	1039502.	0.	4292.	480.	320.	6005.	3520.	6605.	3020.	545.	0.
5	1099813.	0.	559.	415.	285.	4810.	3555.	6235.	2325.	430.	0.
10	1243708.	2.	449.	235.	160.	3945.	3280.	5065.	1555.	265.	0.
15	1221820.	3007.	999.	645.	280.	49205.	33285.	49085.	7925.	645.	0.
20	1064373.	58534.	1301.	990.	840.	42105.	17565.	39745.	7955.	1180.	0.
25	873964.	96912.	1250.	675.	430.	15580.	7590.	16300.	5455.	855.	0.
30	911961.	43854.	1545.	530.	340.	8585.	5280.	9725.	3585.	515.	0.
35	991188.	12302.	2235.	422.	286.	6734.	4972.	8323.	2686.	469.	0.
40	940112.	1852.	2975.	268.	223.	4725.	3878.	6303.	1878.	337.	0.
45	784889.	104.	3489.	114.	72.	3348.	2769.	4912.	1235.	212.	0.
50	647288.	3.	4368.	71.	58.	2458.	2040.	3655.	865.	163.	0.
55	589903.	0.	6317.	55.	38.	1933.	1477.	2674.	626.	114.	0.
60	514489.	0.	8732.	42.	37.	1467.	1005.	1875.	484.	99.	0.
65	420412.	0.	12049.	14.	22.	885.	490.	1053.	355.	56.	0.
70	321760.	0.	15002.	10.	12.	479.	241.	518.	200.	34.	0.
75	199812.	0.	15279.	7.	11.	282.	144.	285.	118.	25.	0.
80	101461.	0.	12326.	3.	1.	153.	61.	154.	57.	8.	0.
85	50835.	0.	11017.	3.	1.	114.	45.	133.	41.	7.	0.
TOTAL	13017290.	216570.	104184.	4979.	3416.	152813.	91197.	162645.	40365.	5959.	0.

APPENDIX A *Continued.*

Observed population characteristics: males.

REGION HOKKAIDO

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	224166.	0.	979.	0.	520.	2260.	700.	390.	110.	50.	330.
5	222706.	0.	132.	0.	530.	2345.	820.	330.	70.	50.	425.
10	221689.	0.	96.	0.	440.	1760.	635.	205.	60.	45.	210.
15	250272.	875.	263.	0.	1265.	14440.	2430.	1135.	105.	15.	135.
20	238736.	14741.	365.	0.	1545.	14385.	2325.	1570.	305.	110.	460.
25	204712.	22582.	321.	0.	825.	5250.	1310.	785.	185.	105.	405.
30	206700.	7561.	396.	0.	605.	3435.	850.	505.	105.	65.	465.
35	214338.	1466.	566.	0.	601.	2928.	945.	355.	77.	54.	435.
40	190592.	196.	723.	0.	429.	2102.	690.	246.	58.	31.	270.
45	141796.	15.	770.	0.	233.	1368.	377.	163.	56.	6.	82.
50	114136.	0.	912.	0.	152.	912.	243.	117.	39.	4.	43.
55	101054.	0.	1406.	0.	131.	570.	162.	94.	12.	3.	23.
60	83161.	0.	1838.	0.	89.	410.	113.	61.	8.	3.	17.
65	62533.	0.	2334.	0.	51.	275.	67.	21.	2.	8.	12.
70	40657.	0.	2484.	0.	30.	156.	41.	14.	1.	5.	7.
75	21861.	0.	2092.	0.	18.	90.	25.	9.	1.	4.	6.
80	9733.	0.	1486.	0.	9.	52.	14.	4.	0.	1.	1.
85	3964.	0.	950.	0.	7.	50.	12.	3.	0.	1.	1.
TOTAL	2552806.	47436.	18113.	0.	7480.	52788.	11759.	6007.	1194.	560.	3527.

REGION TOHOKU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM TOHOKU TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	445535.	0.	2088.	590.	0.	4215.	955.	255.	140.	70.	240.
5	481355.	0.	258.	295.	0.	2830.	675.	180.	100.	35.	150.
10	543510.	0.	212.	215.	0.	2080.	440.	100.	60.	45.	90.
15	542766.	1248.	658.	2550.	0.	52440.	4835.	1355.	115.	25.	100.
20	441888.	28677.	706.	3270.	0.	35945.	4105.	1840.	330.	80.	215.
25	375202.	42939.	629.	2390.	0.	12525.	2100.	895.	215.	95.	275.
30	398426.	16795.	779.	1900.	0.	8100.	1675.	550.	185.	70.	250.
35	438032.	3742.	1229.	1890.	0.	7047.	1549.	421.	98.	48.	174.
40	425251.	442.	1579.	1535.	0.	5448.	1222.	311.	73.	34.	127.
45	322346.	28.	1815.	1035.	0.	4121.	855.	228.	29.	12.	43.
50	260763.	2.	2210.	785.	0.	3258.	656.	173.	22.	10.	28.
55	240445.	0.	3397.	705.	0.	2971.	636.	154.	20.	6.	28.
60	208267.	0.	5005.	430.	0.	2001.	445.	123.	16.	5.	27.
65	164162.	0.	6910.	181.	0.	925.	137.	57.	8.	8.	8.
70	107734.	0.	7242.	56.	0.	317.	81.	34.	4.	4.	4.
75	60217.	0.	6409.	23.	0.	142.	52.	21.	4.	4.	4.
80	25655.	0.	4200.	11.	0.	65.	24.	10.	0.	0.	0.
85	8514.	0.	2088.	7.	0.	37.	16.	8.	0.	0.	0.
TOTAL	5490068.	93873.	47414.	17868.	0.	144467.	20458.	6715.	1419.	551.	1763.

REGION KANTO

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	MIGRATION FROM TOHOKU	KANTO TO KANTO	KANTO TO CHUBU	KANTO TO KINKI	KANTO TO CHUGOKU	KANTO TO SHIKOKU	KANTO TO KYUSHU
0	1413367.	0.	5751.	1075.	4015.	0.	4815.	3440.	1325.	565.	2305.
5	1184185.	0.	635.	590.	2275.	0.	3215.	2255.	850.	340.	1385.
10	1015878.	3.	410.	410.	835.	0.	1640.	1150.	480.	140.	630.
15	1346520.	2998.	1392.	1750.	4340.	0.	4875.	2725.	715.	270.	1170.
20	1956496.	70522.	2065.	4775.	12620.	0.	15160.	10940.	3885.	1335.	5325.
25	1596325.	162870.	1970.	2845.	9475.	0.	11315.	8230.	2920.	1010.	4295.
30	1391430.	69280.	2063.	1510.	6435.	0.	6655.	4770.	1800.	685.	2675.
35	1253124.	15500.	2725.	1005.	5738.	0.	4232.	3181.	1080.	450.	1660.
40	1050821.	1758.	3320.	590.	4497.	0.	2529.	1937.	652.	285.	1019.
45	732528.	92.	3293.	332.	3347.	0.	1400.	1103.	400.	158.	611.
50	584685.	2.	4378.	188.	2120.	0.	858.	673.	254.	106.	385.
55	544573.	0.	6802.	112.	1060.	0.	599.	418.	119.	54.	208.
60	447044.	0.	9642.	74.	571.	0.	457.	259.	81.	41.	155.
65	348135.	0.	12747.	41.	212.	0.	310.	127.	59.	31.	134.
70	228448.	0.	13999.	25.	125.	0.	171.	63.	36.	18.	81.
75	121004.	0.	12165.	16.	80.	0.	101.	35.	25.	13.	51.
80	53509.	0.	8137.	8.	39.	0.	47.	15.	9.	5.	23.
85	17944.	0.	4181.	5.	27.	0.	33.	10.	7.	3.	19.
TOTAL	15268016.	323025.	95675.	15351.	57811.	0.	58412.	41331.	14697.	5509.	22131.

REGION CHUBU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	MIGRATION FROM TOHOKU	CHUBU TO KANTO	CHUBU TO CHUBU	CHUBU TO KINKI	CHUBU TO CHUGOKU	CHUBU TO SHIKOKU	CHUBU TO KYUSHU
0	759182.	0.	3219.	275.	685.	4230.	0.	2435.	555.	235.	1070.
5	706815.	0.	410.	160.	350.	3095.	0.	1780.	375.	225.	625.
10	662328.	0.	276.	105.	250.	1840.	0.	990.	180.	105.	400.
15	736905.	1422.	808.	890.	1165.	25890.	0.	10900.	790.	255.	925.
20	839217.	49976.	1074.	1280.	2325.	26975.	0.	12935.	1675.	675.	2295.
25	754042.	84574.	1012.	510.	1395.	9775.	0.	5465.	875.	365.	1520.
30	690692.	27054.	1043.	320.	1065.	5625.	0.	3340.	540.	270.	935.
35	681262.	5545.	1541.	218.	1161.	3952.	0.	2409.	455.	227.	669.
40	623778.	639.	1888.	132.	967.	2505.	0.	1529.	287.	159.	404.
45	446657.	27.	1885.	77.	640.	1534.	0.	917.	111.	76.	181.
50	363731.	2.	2561.	53.	460.	1004.	0.	625.	72.	47.	128.
55	351015.	0.	4212.	44.	343.	663.	0.	484.	55.	26.	123.
60	307536.	0.	6278.	36.	231.	506.	0.	354.	56.	23.	110.
65	247460.	0.	8864.	23.	57.	356.	0.	189.	26.	12.	52.
70	169171.	0.	10020.	15.	34.	209.	0.	119.	15.	6.	30.
75	96875.	0.	9510.	10.	24.	129.	0.	77.	13.	6.	23.
80	45328.	0.	6853.	5.	8.	62.	0.	38.	2.	0.	5.
85	16636.	0.	4176.	4.	6.	45.	0.	31.	2.	0.	4.
TOTAL	8498630.	169239.	65630.	4157.	11166.	88395.	0.	44617.	6084.	2712.	9499.

APPENDIX A *Continued.*

REGION KINKI

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	TOHOKU	KINKI TO KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	773104.	0.	2891.	195.	330.	4450.	3480.	0.	2385.	1140.	2470.
5	654107.	0.	361.	135.	210.	2840.	2230.	0.	1340.	750.	1260.
10	548003.	3.	234.	70.	110.	1665.	1120.	0.	635.	315.	705.
15	685876.	1748.	620.	270.	235.	7320.	4940.	0.	1920.	800.	1410.
20	961538.	45338.	1101.	775.	915.	16685.	10405.	0.	5545.	2765.	4270.
25	826007.	88630.	1114.	460.	610.	9410.	7540.	0.	4490.	2010.	3805.
30	727574.	31213.	1136.	270.	495.	5945.	4320.	0.	2460.	1285.	2490.
35	675270.	7217.	1592.	157.	430.	3875.	2979.	0.	1676.	845.	1460.
40	567603.	860.	1860.	103.	352.	2370.	1827.	0.	999.	506.	887.
45	397473.	34.	1846.	75.	259.	1377.	1055.	0.	493.	245.	531.
50	314261.	2.	2339.	45.	172.	829.	672.	0.	333.	180.	351.
55	311446.	0.	3936.	20.	75.	476.	451.	0.	339.	201.	265.
60	270055.	0.	5505.	15.	46.	302.	342.	0.	234.	156.	194.
65	210538.	0.	7595.	12.	16.	190.	255.	0.	110.	69.	123.
70	140478.	0.	8262.	8.	9.	94.	150.	0.	64.	44.	74.
75	73650.	0.	6994.	6.	8.	50.	93.	0.	39.	27.	46.
80	31366.	0.	4741.	2.	1.	23.	47.	0.	19.	14.	21.
85	11115.	0.	2764.	2.	1.	16.	34.	0.	13.	11.	16.
TOTAL	8179464.	175045.	54891.	2620.	4274.	57917.	41940.	0.	23094.	11363.	20378.

REGION CHUGOKU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	TOHOKU	CHUGOKU TO KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	274460.	0.	1210.	25.	110.	1290.	605.	1595.	0.	545.	815.
5	265848.	0.	157.	20.	105.	980.	445.	1295.	0.	435.	580.
10	278310.	0.	97.	10.	65.	570.	225.	850.	0.	235.	430.
15	290334.	627.	363.	250.	235.	9450.	3345.	12610.	0.	840.	2615.
20	282338.	18536.	451.	310.	415.	8970.	2810.	11160.	0.	1185.	2690.
25	259107.	29691.	418.	100.	140.	2880.	1240.	4350.	0.	820.	1320.
30	244707.	9115.	464.	75.	135.	1705.	690.	2170.	0.	635.	920.
35	269312.	2048.	720.	52.	139.	1270.	524.	1851.	0.	462.	713.
40	256457.	230.	920.	28.	118.	797.	379.	1254.	0.	277.	492.
45	199379.	17.	1030.	8.	57.	483.	268.	824.	0.	85.	284.
50	163095.	0.	1266.	7.	39.	295.	192.	618.	0.	61.	200.
55	156980.	0.	2046.	9.	12.	156.	133.	547.	0.	59.	164.
60	136365.	0.	2787.	6.	9.	119.	102.	400.	0.	52.	119.
65	114416.	0.	3924.	4.	4.	88.	56.	198.	0.	25.	51.
70	87377.	0.	4950.	3.	2.	52.	33.	110.	0.	14.	30.
75	50185.	0.	4639.	2.	2.	34.	25.	65.	0.	11.	19.
80	24803.	0.	3505.	1.	0.	14.	7.	34.	0.	3.	8.
85	10458.	0.	2529.	1.	0.	9.	5.	22.	0.	2.	6.
TOTAL	3363931.	60264.	31476.	911.	1587.	29162.	11084.	39953.	0.	5766.	11456.

REGION SHIKOKU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	TOHOKU	SHIKOKU TO KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	143536.	0.	672.	15.	20.	350.	265.	1150.	570.	0.	145.
5	150137.	0.	95.	50.	35.	320.	230.	925.	370.	0.	120.
10	165242.	0.	88.	20.	10.	220.	140.	630.	300.	0.	55.
15	158030.	430.	227.	190.	75.	5700.	2800.	12065.	2090.	0.	765.
20	143184.	10401.	287.	145.	125.	4680.	1800.	8965.	1760.	0.	600.
25	127477.	14300.	256.	35.	55.	1345.	725.	3170.	965.	0.	300.
30	128465.	5025.	281.	25.	25.	530.	505.	1865.	640.	0.	210.
35	147840.	1137.	472.	48.	37.	536.	500.	1758.	565.	0.	137.
40	146079.	144.	601.	43.	32.	381.	411.	1353.	401.	0.	111.
45	113009.	4.	627.	15.	19.	273.	298.	943.	260.	0.	59.
50	90014.	0.	779.	10.	21.	179.	225.	717.	162.	0.	47.
55	86187.	1.	1162.	0.	6.	105.	153.	608.	94.	0.	46.
60	79351.	0.	1728.	0.	4.	77.	106.	427.	58.	0.	40.
65	68192.	0.	2541.	4.	2.	49.	53.	230.	24.	0.	25.
70	52112.	0.	3065.	3.	1.	30.	32.	104.	15.	0.	14.
75	29705.	0.	2731.	2.	1.	20.	22.	54.	12.	0.	11.
80	15549.	0.	2358.	1.	0.	9.	8.	24.	3.	0.	3.
85	6387.	0.	1607.	1.	0.	6.	6.	18.	3.	0.	2.
TOTAL	1850496.	31442.	19577.	607.	468.	14810.	8279.	35006.	8292.	0.	2690.

REGION KYUSHU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	TOHOKU	KYUSHU TO KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	531565.	0.	2504.	230.	150.	3130.	1885.	3395.	1550.	220.	0.
5	560750.	0.	354.	175.	155.	2385.	1655.	3185.	1195.	215.	0.
10	631611.	2.	270.	135.	80.	2100.	1700.	2535.	725.	130.	0.
15	612170.	1581.	689.	590.	225.	30120.	14695.	25010.	4730.	410.	0.
20	479488.	30273.	822.	730.	625.	25085.	9920.	20385.	4635.	735.	0.
25	402908.	49984.	784.	375.	210.	7895.	4010.	8175.	2930.	460.	0.
30	427782.	22651.	960.	315.	190.	4860.	3140.	5775.	2225.	285.	0.
35	475500.	6395.	1395.	280.	177.	4202.	3148.	5204.	1646.	258.	0.
40	450294.	942.	1847.	180.	133.	3102.	2611.	4147.	1196.	190.	0.
45	343631.	53.	1961.	81.	40.	2238.	1953.	3330.	823.	141.	0.
50	281698.	2.	2522.	49.	30.	1578.	1440.	2445.	562.	105.	0.
55	263435.	0.	3768.	30.	9.	1066.	1024.	1668.	384.	47.	0.
60	234614.	0.	5345.	20.	8.	703.	641.	1034.	273.	35.	0.
65	192434.	0.	7382.	4.	8.	351.	277.	499.	148.	21.	0.
70	142099.	0.	8467.	3.	4.	183.	114.	192.	78.	12.	0.
75	82872.	0.	7847.	2.	4.	109.	62.	91.	45.	9.	0.
80	37589.	0.	5424.	1.	0.	59.	24.	41.	21.	3.	0.
85	15326.	0.	3728.	1.	0.	44.	17.	28.	14.	2.	0.
TOTAL	6165766.	111883.	56069.	3201.	2048.	89210.	48316.	87139.	23180.	3278.	0.

APPENDIX A *Continued.*

Observed population characteristics: females.

REGION HOKKAIDO

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	214400.	0.	687.	0.	510.	2350.	670.	325.	65.	50.	350.
5	213718.	0.	77.	0.	445.	2090.	720.	340.	35.	60.	315.
10	212808.	1.	57.	0.	365.	1870.	695.	185.	45.	30.	220.
15	249140.	814.	108.	0.	595.	7190.	4315.	705.	45.	45.	105.
20	275496.	13850.	200.	0.	780.	7285.	1510.	820.	95.	50.	160.
25	227827.	21085.	188.	0.	790.	4495.	965.	590.	145.	90.	385.
30	215993.	7031.	220.	0.	515.	2745.	865.	385.	105.	55.	425.
35	206319.	1422.	264.	0.	516.	2187.	688.	281.	66.	40.	260.
40	182415.	192.	382.	0.	349.	1523.	482.	194.	49.	26.	155.
45	157260.	14.	548.	0.	182.	987.	261.	121.	33.	9.	62.
50	126977.	1.	683.	0.	113.	703.	179.	89.	23.	6.	38.
55	105627.	0.	855.	0.	74.	540.	154.	73.	14.	6.	26.
60	83180.	0.	1093.	0.	62.	450.	121.	57.	11.	5.	24.
65	64928.	0.	1418.	0.	82.	347.	68.	37.	6.	6.	21.
70	45730.	0.	1824.	0.	50.	200.	38.	24.	4.	4.	12.
75	27256.	0.	1907.	0.	30.	115.	24.	16.	3.	3.	9.
80	14781.	0.	1690.	0.	18.	67.	11.	9.	1.	1.	3.
85	7626.	0.	1566.	0.	11.	60.	9.	10.	1.	1.	2.
TOTAL	2631481.	44410.	13767.	0.	5487.	35204.	11775.	4261.	746.	487.	2572.

REGION TOHOKU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM TOHOKU TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	423770.	0.	1551.	565.	0.	3775.	785.	265.	80.	40.	190.
5	460324.	0.	175.	340.	0.	2890.	610.	215.	75.	25.	155.
10	526090.	2.	132.	175.	0.	2060.	450.	75.	20.	35.	75.
15	539696.	1157.	266.	1270.	0.	42550.	8540.	955.	75.	10.	55.
20	491900.	26704.	349.	1880.	0.	33170.	3395.	1020.	140.	70.	220.
25	401507.	39826.	339.	865.	0.	11810.	1775.	750.	160.	75.	260.
30	428879.	15776.	435.	495.	0.	4885.	895.	305.	135.	25.	170.
35	465152.	3361.	631.	371.	0.	3159.	697.	188.	72.	42.	112.
40	444861.	441.	858.	279.	0.	2167.	496.	140.	52.	31.	83.
45	391449.	18.	1158.	262.	0.	2054.	346.	147.	12.	3.	48.
50	317595.	4.	1444.	208.	0.	1692.	269.	132.	9.	2.	43.
55	282024.	0.	2146.	147.	0.	1393.	257.	84.	13.	6.	17.
60	238492.	0.	3050.	113.	0.	1100.	207.	63.	14.	6.	15.
65	193536.	0.	4401.	79.	0.	700.	78.	39.	4.	2.	10.
70	138988.	0.	5702.	40.	0.	368.	45.	22.	2.	1.	5.
75	89519.	0.	6623.	21.	0.	202.	33.	18.	2.	1.	5.
80	46983.	0.	5913.	10.	0.	107.	11.	3.	0.	0.	0.
85	21346.	0.	4725.	6.	0.	73.	8.	3.	0.	0.	0.
TOTAL	5902111.	87289.	39898.	7126.	0.	114155.	18897.	4424.	865.	374.	1463.

REGION KANTO

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	MIGRATION FROM TOHOKU	KANTO TO KANTO	KANTO TO CHUBU	KANTO TO KINKI	KANTO TO CHUGOKU	KANTO TO SHIKOKU	KANTO TO KYUSHU
0	1344563.	0.	4097.	965.	3575.	0.	4835.	3230.	1430.	530.	1945.
5	1128751.	0.	402.	665.	2170.	0.	3000.	2155.	890.	250.	1285.
10	972859.	1.	223.	385.	895.	0.	1645.	1100.	465.	155.	615.
15	1236881.	2836.	512.	465.	2080.	0.	2185.	1235.	330.	130.	1380.
20	1700459.	65997.	973.	1845.	7805.	0.	8225.	5040.	1535.	1030.	4070.
25	1507687.	151920.	1167.	1670.	5785.	0.	8130.	5715.	2055.	790.	3380.
30	1310748.	64493.	1247.	940.	3295.	0.	4680.	3390.	1225.	520.	1915.
35	1177032.	14672.	1553.	685.	1685.	0.	2689.	2059.	725.	222.	1117.
40	996883.	1649.	2005.	381.	985.	0.	1595.	1208.	404.	145.	642.
45	848157.	105.	2547.	147.	614.	0.	929.	678.	163.	93.	331.
50	695512.	3.	3142.	93.	426.	0.	652.	444.	113.	65.	247.
55	608231.	0.	4430.	88.	349.	0.	553.	325.	131.	40.	248.
60	485096.	0.	5777.	94.	321.	0.	511.	291.	123.	38.	245.
65	387046.	0.	8125.	130.	299.	0.	498.	316.	96.	56.	231.
70	279452.	0.	10391.	78.	182.	0.	298.	193.	56.	33.	138.
75	171904.	0.	11658.	48.	112.	0.	181.	118.	35.	21.	86.
80	94454.	0.	10966.	27.	56.	0.	97.	66.	17.	9.	44.
85	44193.	0.	9488.	17.	41.	0.	66.	42.	13.	6.	30.
TOTAL	14989908.	301676.	78703.	8723.	30675.	0.	40769.	27603.	9806.	4133.	17949.

REGION CHUBU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM HOKKAIDO	MIGRATION FROM TOHOKU	CHUBU TO KANTO	CHUBU TO CHUBU	CHUBU TO KINKI	CHUBU TO CHUGOKU	CHUBU TO SHIKOKU	CHUBU TO KYUSHU
0	721318.	0.	2304.	320.	455.	4020.	0.	2460.	490.	255.	1070.
5	674608.	0.	239.	145.	475.	2890.	0.	1805.	360.	140.	535.
10	635997.	0.	167.	70.	295.	1690.	0.	960.	160.	85.	345.
15	784552.	1336.	338.	230.	620.	14425.	0.	7155.	395.	175.	1115.
20	896324.	46942.	616.	500.	1535.	16270.	0.	11325.	1120.	505.	2955.
25	754682.	79389.	607.	370.	975.	9970.	0.	5545.	875.	360.	1425.
30	683785.	25031.	671.	220.	500.	4665.	0.	2780.	400.	265.	785.
35	670631.	5010.	894.	152.	456.	2923.	0.	1649.	295.	145.	458.
40	613742.	617.	1224.	83.	298.	1778.	0.	986.	182.	94.	292.
45	535397.	31.	1590.	33.	106.	1146.	0.	650.	78.	39.	147.
50	450608.	2.	2148.	23.	73.	868.	0.	506.	58.	30.	106.
55	416623.	0.	3014.	35.	73.	814.	0.	508.	61.	33.	87.
60	342418.	0.	4151.	38.	72.	736.	0.	467.	59.	25.	80.
65	277206.	0.	5761.	40.	50.	619.	0.	365.	46.	18.	66.
70	201593.	0.	7600.	24.	29.	352.	0.	211.	26.	11.	40.
75	130902.	0.	8808.	14.	22.	208.	0.	125.	20.	9.	30.
80	74391.	0.	8775.	8.	5.	109.	0.	65.	4.	2.	9.
85	37718.	0.	8141.	6.	5.	79.	0.	49.	4.	2.	8.
TOTAL	8902495.	158358.	57048.	2311.	6044.	63562.	0.	37611.	4633.	2193.	9553.

APPENDIX A *Continued.*

REGION KINKI

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM KINKI TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	733475.	0.	2192.	245.	295.	4365.	3240.	0.	2140.	1080.	2410.
5	626033.	0.	195.	200.	140.	2855.	1970.	0.	1290.	750.	1255.
10	523175.	0.	118.	40.	85.	1455.	1005.	0.	640.	340.	655.
15	666823.	1476.	268.	55.	90.	2815.	2140.	0.	1050.	590.	1445.
20	924577.	42377.	610.	375.	400.	6955.	5955.	0.	4930.	2820.	4330.
25	819197.	82396.	729.	295.	450.	7760.	5255.	0.	3460.	1660.	3400.
30	701981.	29005.	708.	190.	250.	4420.	2985.	0.	1770.	940.	1765.
35	646834.	6616.	952.	121.	183.	2529.	1916.	0.	1052.	590.	1069.
40	551587.	769.	1156.	69.	117.	1502.	1107.	0.	608.	375.	633.
45	470050.	35.	1503.	32.	39.	866.	547.	0.	350.	249.	354.
50	395083.	2.	1863.	18.	28.	575.	389.	0.	265.	173.	262.
55	367417.	0.	2754.	7.	19.	424.	394.	0.	264.	122.	264.
60	306611.	0.	3623.	8.	19.	385.	374.	0.	229.	114.	250.
65	240022.	0.	4818.	29.	20.	399.	326.	0.	155.	133.	217.
70	171705.	0.	6326.	18.	11.	243.	193.	0.	90.	81.	128.
75	103295.	0.	6736.	10.	10.	152.	117.	0.	54.	49.	80.
80	55751.	0.	6403.	5.	1.	88.	60.	0.	28.	28.	42.
85	28311.	0.	6085.	3.	1.	64.	43.	0.	20.	18.	28.
TOTAL	8331927.	162676.	47039.	1720.	2158.	37852.	28076.	0.	18395.	10112.	18587.

REGION CHUGOKU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM CHUGOKU TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	260785.	0.	829.	30.	115.	1305.	425.	1360.	0.	550.	775.
5	254318.	0.	92.	25.	75.	915.	295.	1190.	0.	340.	560.
10	268608.	0.	67.	0.	50.	545.	190.	855.	0.	185.	365.
15	291774.	564.	116.	5.	75.	3825.	1890.	12140.	0.	535.	1085.
20	328583.	17126.	221.	100.	105.	4655.	1720.	11575.	0.	885.	1770.
25	277728.	27773.	242.	80.	130.	2895.	1190.	4965.	0.	695.	1240.
30	258967.	8500.	261.	35.	100.	1355.	465.	1755.	0.	440.	830.
35	279174.	1858.	403.	31.	77.	794.	344.	1276.	0.	322.	566.
40	266501.	260.	546.	19.	65.	481.	237.	820.	0.	195.	360.
45	240110.	11.	684.	3.	26.	327.	197.	669.	0.	88.	188.
50	201962.	1.	944.	3.	22.	276.	139.	553.	0.	65.	139.
55	186099.	0.	1307.	5.	16.	275.	86.	489.	0.	64.	139.
60	157881.	0.	1810.	6.	15.	259.	75.	434.	0.	56.	136.
65	130231.	0.	2520.	6.	8.	202.	58.	351.	0.	39.	118.
70	103449.	0.	3514.	4.	4.	121.	34.	212.	0.	22.	67.
75	65725.	0.	4105.	3.	4.	72.	25.	130.	0.	15.	43.
80	39060.	0.	4169.	1.	0.	39.	8.	77.	0.	6.	19.
85	22075.	0.	4667.	1.	0.	27.	5.	53.	0.	4.	15.
TOTAL	3633030.	56093.	26497.	357.	887.	18368.	7383.	38904.	0.	4504.	8415.

REGION SHIKOKU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM SHIKOKU TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	136401.	0.	512.	40.	25.	380.	240.	1055.	420.	0.	160.
5	144618.	0.	58.	20.	35.	260.	210.	760.	365.	0.	90.
10	159674.	0.	49.	20.	10.	205.	150.	585.	240.	0.	70.
15	165655.	393.	78.	20.	30.	3085.	1615.	10120.	1100.	0.	165.
20	180527.	9859.	148.	60.	70.	3060.	1050.	9510.	1430.	0.	420.
25	142734.	13586.	143.	30.	55.	1295.	620.	3550.	860.	0.	310.
30	141025.	4479.	184.	50.	35.	445.	315.	1345.	435.	0.	170.
35	157334.	1119.	258.	18.	17.	381.	249.	995.	360.	0.	88.
40	156946.	193.	367.	12.	16.	255.	175.	681.	225.	0.	63.
45	139197.	9.	410.	3.	9.	190.	116.	549.	115.	0.	63.
50	115680.	0.	572.	2.	9.	140.	91.	472.	82.	0.	55.
55	107589.	0.	780.	0.	0.	133.	62.	507.	67.	0.	35.
60	92173.	0.	1118.	0.	0.	110.	57.	450.	61.	0.	39.
65	76769.	0.	1563.	2.	6.	69.	42.	302.	78.	0.	42.
70	61752.	0.	2207.	1.	3.	43.	26.	158.	47.	0.	26.
75	38521.	0.	2502.	1.	3.	28.	18.	85.	30.	0.	18.
80	23754.	0.	2670.	0.	0.	12.	6.	46.	15.	0.	7.
85	13169.	0.	2748.	0.	0.	10.	5.	35.	11.	0.	6.
TOTAL	2053518.	29638.	16367.	279.	323.	10101.	5247.	31205.	5941.	0.	1827.

REGION KYUSHU

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM KYUSHU TO HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	507937.	0.	1788.	250.	170.	2875.	1635.	3210.	1470.	325.	0.
5	539063.	0.	205.	240.	130.	2425.	1900.	3050.	1130.	215.	0.
10	612097.	0.	179.	100.	80.	1845.	1580.	2530.	830.	135.	0.
15	609650.	1426.	310.	55.	55.	19085.	18590.	24075.	3195.	235.	0.
20	584885.	28261.	479.	260.	215.	17020.	7645.	19360.	3320.	445.	0.
25	471056.	46928.	466.	300.	220.	7685.	3580.	8125.	2525.	395.	0.
30	484179.	21203.	585.	215.	150.	3725.	2140.	3950.	1360.	230.	0.
35	515688.	5907.	840.	142.	109.	2532.	1824.	3119.	1040.	211.	0.
40	489818.	910.	1128.	88.	90.	1625.	1267.	2156.	682.	147.	0.
45	441258.	51.	1528.	33.	32.	1110.	816.	1582.	412.	71.	0.
50	365590.	1.	1846.	22.	28.	880.	600.	1210.	303.	58.	0.
55	326468.	0.	2549.	25.	29.	867.	453.	1006.	242.	67.	0.
60	279875.	0.	3387.	22.	29.	764.	364.	841.	211.	64.	0.
65	227978.	0.	4667.	10.	14.	534.	213.	554.	207.	35.	0.
70	179661.	0.	6535.	7.	8.	296.	127.	326.	122.	22.	0.
75	116940.	0.	7432.	5.	7.	173.	82.	194.	73.	16.	0.
80	63872.	0.	6902.	2.	1.	94.	37.	113.	36.	5.	0.
85	35509.	0.	7289.	2.	1.	70.	28.	105.	27.	5.	0.
TOTAL	6851524.	104687.	48115.	1778.	1368.	63603.	42881.	75506.	17185.	2681.	0.

Appendix B

OBSERVED AGE-SPECIFIC RATES OF MORTALITY, FERTILITY, AND MIGRATION FOR THE TOTAL, MALE, AND FEMALE POPULATIONS: 1970

APPENDIX B

Mortality rates: total population.

AGE	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.003799	0.004186	0.003571	0.003730	0.003374	0.003809	0.004230	0.004129
5	0.000479	0.000460	0.000448	0.000470	0.000434	0.000479	0.000519	0.000508
10	0.000352	0.000322	0.000318	0.000341	0.000329	0.000300	0.000422	0.000361
15	0.000743	0.000854	0.000737	0.000753	0.000656	0.000823	0.000942	0.000818
20	0.001099	0.001130	0.000830	0.000974	0.000907	0.001100	0.001344	0.001222
25	0.001177	0.001246	0.001011	0.001073	0.001120	0.001229	0.001477	0.001430
30	0.001457	0.001467	0.001225	0.001247	0.001290	0.001439	0.001725	0.001694
35	0.001973	0.002059	0.001760	0.001801	0.001924	0.002047	0.002392	0.002255
40	0.002962	0.002801	0.002626	0.002515	0.002695	0.002803	0.003194	0.003165
45	0.004407	0.004165	0.003695	0.003539	0.003860	0.003900	0.004112	0.004445
50	0.006615	0.006318	0.005874	0.005783	0.005924	0.006054	0.006568	0.006748
55	0.010940	0.010609	0.009743	0.009413	0.009855	0.009773	0.010022	0.010709
60	0.017620	0.018030	0.016542	0.016046	0.015829	0.015623	0.016592	0.016972
65	0.029436	0.031622	0.028390	0.027875	0.027550	0.026340	0.028311	0.028660
70	0.049869	0.052464	0.048021	0.047523	0.046729	0.044355	0.046301	0.046625
75	0.081418	0.087033	0.081333	0.080421	0.077595	0.075438	0.076701	0.076467
80	0.129559	0.139225	0.129107	0.130539	0.127920	0.120163	0.127929	0.121485
85	0.217084	0.228165	0.219982	0.226607	0.224446	0.221191	0.222694	0.216721
GROSS	2.804943	2.960775	2.776064	2.803249	2.762185	2.684336	2.777374	2.722068
CRUDE	0.006149	0.007664	0.005763	0.007050	0.006173	0.008285	0.009207	0.008004
M.AGE	78.8207	78.9262	79.1983	79.3181	79.3048	79.1290	78.8407	78.6947

Fertility rates: total population.

AGE	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.000002	0.000002	0.000002	0.0	0.000003	0.0	0.0	0.000002
15	0.003382	0.002222	0.002258	0.001813	0.002383	0.002046	0.002543	0.002461
20	0.055599	0.059308	0.037311	0.055843	0.046506	0.058374	0.062587	0.054994
25	0.100955	0.106559	0.101414	0.108677	0.103954	0.107042	0.103201	0.110888
30	0.034522	0.039370	0.049506	0.037894	0.042124	0.034973	0.035267	0.048088
35	0.006865	0.007864	0.012416	0.007808	0.010463	0.007121	0.007393	0.012411
40	0.001040	0.001015	0.001680	0.001015	0.001456	0.000937	0.001112	0.001970
45	0.000097	0.000064	0.000125	0.000059	0.000080	0.000064	0.000052	0.000133
50	0.000004	0.000010	0.000004	0.000005	0.000006	0.000003	0.0	0.000005
55	0.0	0.0	0.0	0.0	0.0	0.0	0.000005	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROSS	1.012335	1.082071	1.023576	1.065567	1.034866	1.052801	1.060790	1.154752
CRUDE	0.017716	0.015902	0.020646	0.018826	0.020454	0.016630	0.015645	0.016637
M.AGE	27.2385	27.3775	28.4296	27.4377	27.8982	27.2585	27.1690	27.9211

Out-migration rates: total population.

		MIGRATION FROM HOKKAIDO TO						
AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.019792	0.0	0.002349	0.010512	0.003124	0.001630	0.000399	0.000228	0.001551
5	0.019648	0.0	0.002234	0.010162	0.003529	0.001535	0.000241	0.000252	0.001696
10	0.015570	0.0	0.001853	0.008354	0.003061	0.000898	0.000242	0.000173	0.000990
15	0.065127	0.0	0.003724	0.043311	0.013506	0.003684	0.000300	0.000120	0.000481
20	0.061062	0.0	0.004521	0.042141	0.007458	0.004648	0.000778	0.000311	0.001206
25	0.037742	0.0	0.003734	0.022530	0.005260	0.003179	0.000763	0.000451	0.001826
30	0.026319	0.0	0.002650	0.014621	0.004057	0.002106	0.000497	0.000284	0.002106
35	0.022424	0.0	0.002655	0.012160	0.003882	0.001512	0.000340	0.000223	0.001652
40	0.017705	0.0	0.002086	0.009718	0.003142	0.001180	0.000287	0.000153	0.001139
45	0.013175	0.0	0.001388	0.007875	0.002133	0.000950	0.000298	0.000050	0.000482
50	0.011036	0.0	0.001099	0.006698	0.001750	0.000854	0.000257	0.000041	0.000336
55	0.009106	0.0	0.000992	0.005371	0.001529	0.000808	0.000126	0.000044	0.000237
60	0.008603	0.0	0.000908	0.005170	0.001407	0.000709	0.000114	0.000048	0.000246
65	0.007869	0.0	0.001043	0.004880	0.001059	0.000455	0.000063	0.000110	0.000259
70	0.006783	0.0	0.000926	0.004121	0.000914	0.000440	0.000058	0.000104	0.000220
75	0.007187	0.0	0.000977	0.004174	0.000998	0.000509	0.000081	0.000143	0.000305
80	0.007791	0.0	0.001101	0.004854	0.001020	0.000530	0.000041	0.000082	0.000163
85	0.014495	0.0	0.001553	0.009491	0.001812	0.001122	0.000086	0.000173	0.000259
GROSS	1.857175	0.0	0.178966	1.130706	0.298202	0.133742	0.024850	0.014945	0.075764
CRUDE	0.027708	0.0	0.002501	0.016973	0.004539	0.001981	0.000374	0.000202	0.001138
M,AGE	32.7090	0.0	35.4022	32.7980	31.1726	33.0206	31.8544	36.1777	30.1123

		MIGRATION FROM TOHOKU TO						
AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.013994	0.001329	0.0	0.009191	0.002002	0.000598	0.000253	0.000127	0.000495
5	0.009106	0.000674	0.0	0.006074	0.001365	0.000419	0.000186	0.000064	0.000324
10	0.005535	0.000365	0.0	0.003871	0.000832	0.000164	0.000075	0.000075	0.000154
15	0.106124	0.003529	0.0	0.087754	0.012356	0.002136	0.000176	0.000032	0.000143
20	0.091755	0.005515	0.0	0.074016	0.008032	0.003063	0.000503	0.000161	0.000466
25	0.044019	0.004191	0.0	0.031331	0.004989	0.002118	0.000483	0.000219	0.000689
30	0.023740	0.002895	0.0	0.015696	0.003106	0.001033	0.000387	0.000115	0.000508
35	0.017569	0.002503	0.0	0.011300	0.002487	0.000674	0.000188	0.000100	0.000317
40	0.013789	0.002085	0.0	0.008752	0.001974	0.000518	0.000144	0.000075	0.000241
45	0.012882	0.001817	0.0	0.008651	0.001683	0.000525	0.000057	0.000021	0.000127
50	0.012599	0.001717	0.0	0.008559	0.001599	0.000527	0.000054	0.000021	0.000123
55	0.012320	0.001631	0.0	0.008353	0.001709	0.000456	0.000063	0.000023	0.000086
60	0.010218	0.001215	0.0	0.006941	0.001459	0.000416	0.000067	0.000025	0.000094
65	0.006251	0.000727	0.0	0.004543	0.000601	0.000268	0.000034	0.000028	0.000050
70	0.003984	0.000389	0.0	0.002776	0.000511	0.000227	0.000024	0.000020	0.000036
75	0.003553	0.000294	0.0	0.002297	0.000568	0.000260	0.000040	0.000033	0.000060
80	0.003318	0.000289	0.0	0.002368	0.000482	0.000179	0.0	0.0	0.0
85	0.005291	0.000435	0.0	0.003684	0.000804	0.000368	0.0	0.0	0.0
GROSS	1.980239	0.158000	0.0	1.480778	0.232792	0.069749	0.013667	0.005685	0.019568
CRUDE	0.029893	0.002194	0.0	0.022702	0.003455	0.000978	0.000200	0.000081	0.000283
M,AGE	29.4518	34.7711	0.0	28.5775	30.5630	32.8822	28.1246	29.4301	28.1538

APPENDIX B *Continued.*

		MIGRATION FROM KANTO TO						
AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.012346	0.000740	0.002752	0.0	0.003499	0.002418	0.000999	0.000397	0.001541
5	0.009220	0.000543	0.001922	0.0	0.002687	0.001907	0.000752	0.000255	0.001154
10	0.005302	0.000400	0.000870	0.0	0.001652	0.001131	0.000475	0.000148	0.000626
15	0.009155	0.000857	0.002485	0.0	0.002733	0.001533	0.000405	0.000155	0.000987
20	0.022845	0.001809	0.005582	0.0	0.006391	0.004367	0.001481	0.000646	0.002568
25	0.021783	0.001455	0.004916	0.0	0.006264	0.004493	0.001603	0.000580	0.002473
30	0.014986	0.000907	0.003601	0.0	0.004195	0.003020	0.001119	0.000446	0.001699
35	0.010916	0.000695	0.003055	0.0	0.002848	0.002156	0.000743	0.000277	0.001143
40	0.008319	0.000479	0.002704	0.0	0.002034	0.001551	0.000521	0.000212	0.000819
45	0.006520	0.000303	0.002506	0.0	0.001473	0.001127	0.000356	0.000159	0.000596
50	0.005174	0.000219	0.001989	0.0	0.001180	0.000873	0.000287	0.000136	0.000494
55	0.003732	0.000173	0.001222	0.0	0.000999	0.000643	0.000217	0.000082	0.000396
60	0.003498	0.000180	0.000957	0.0	0.001038	0.000590	0.000219	0.000085	0.000429
65	0.003455	0.000233	0.000695	0.0	0.001099	0.000603	0.000211	0.000118	0.000496
70	0.002947	0.000203	0.000604	0.0	0.000923	0.000504	0.000181	0.000100	0.000431
75	0.003148	0.000218	0.000655	0.0	0.000963	0.000522	0.000205	0.000116	0.000468
80	0.003122	0.000237	0.000642	0.0	0.000973	0.000547	0.000176	0.000095	0.000453
85	0.005134	0.000354	0.001094	0.0	0.001593	0.000837	0.000322	0.000145	0.000789
GROSS	0.758018	0.050025	0.191257	0.0	0.212726	0.144108	0.051355	0.020745	0.087802
CRUDE	0.011729	0.000796	0.002924	0.0	0.003278	0.002278	0.000810	0.000319	0.001325
M.AGE	33.6519	32.7353	34.6841	0.0	33.6755	32.5205	32.0271	34.0127	34.5904

		MIGRATION FROM CHUBU TO						
AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.012533	0.000402	0.000770	0.005572	0.0	0.003306	0.000706	0.000331	0.001445
5	0.009382	0.000221	0.000597	0.004332	0.0	0.002595	0.000532	0.000264	0.000840
10	0.005757	0.000135	0.000420	0.002719	0.0	0.001502	0.000262	0.000146	0.000574
15	0.042676	0.000736	0.001173	0.026498	0.0	0.011867	0.000779	0.000283	0.001341
20	0.047461	0.001026	0.002224	0.024917	0.0	0.013978	0.001610	0.000680	0.003025
25	0.026131	0.000583	0.001571	0.013087	0.0	0.007294	0.001160	0.000481	0.001952
30	0.015795	0.000393	0.001139	0.007486	0.0	0.004453	0.000684	0.000389	0.001251
35	0.011221	0.000274	0.001196	0.005085	0.0	0.003002	0.000555	0.000275	0.000834
40	0.007835	0.000174	0.001022	0.003461	0.0	0.002032	0.000379	0.000204	0.000562
45	0.005840	0.000112	0.000760	0.002729	0.0	0.001596	0.000192	0.000117	0.000334
50	0.004977	0.000093	0.000655	0.002299	0.0	0.001389	0.000160	0.000095	0.000287
55	0.004363	0.000103	0.000542	0.001924	0.0	0.001292	0.000151	0.000077	0.000274
60	0.004297	0.000114	0.000466	0.001911	0.0	0.001263	0.000177	0.000074	0.000292
65	0.003658	0.000120	0.000204	0.001858	0.0	0.001056	0.000137	0.000057	0.000225
70	0.003023	0.000105	0.000170	0.001513	0.0	0.000890	0.000111	0.000046	0.000189
75	0.003117	0.000105	0.000202	0.001480	0.0	0.000887	0.000145	0.000066	0.000233
80	0.002690	0.000109	0.000109	0.001428	0.0	0.000860	0.000050	0.000017	0.000117
85	0.004507	0.000184	0.000202	0.002281	0.0	0.001472	0.000110	0.000037	0.000221
GROSS	1.076315	0.024940	0.067106	0.552911	0.0	0.303689	0.059500	0.018191	0.069978
CRUDE	0.016811	0.000372	0.000989	0.008733	0.0	0.004725	0.000616	0.000282	0.001095
M.AGE	29.5274	31.8693	33.5196	28.8780	0.0	29.9529	29.0508	29.1907	28.5050

MIGRATION FROM KINKI TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.018734	0.000292	0.000415	0.005851	0.004460	0.0	0.003003	0.001474	0.003239
5	0.013456	0.000262	0.000273	0.004449	0.003281	0.0	0.002054	0.001172	0.001965
10	0.008309	0.000103	0.000182	0.002913	0.002040	0.0	0.001190	0.000611	0.001270
15	0.018541	0.000240	0.000240	0.007492	0.005234	0.0	0.002196	0.001028	0.002111
20	0.035589	0.000610	0.000697	0.012534	0.008674	0.0	0.005554	0.002961	0.004560
25	0.030759	0.000459	0.000644	0.010436	0.007777	0.0	0.004832	0.002231	0.004379
30	0.020695	0.000322	0.000521	0.007251	0.005110	0.0	0.002959	0.001556	0.002976
35	0.014282	0.000210	0.000464	0.004844	0.003702	0.0	0.002063	0.001085	0.001913
40	0.010235	0.000154	0.000419	0.003460	0.002622	0.0	0.001436	0.000787	0.001358
45	0.007460	0.000123	0.000344	0.002586	0.001847	0.0	0.000972	0.000569	0.001020
50	0.006051	0.000089	0.000282	0.001979	0.001496	0.0	0.000843	0.000498	0.000864
55	0.004892	0.000040	0.000138	0.001326	0.001245	0.0	0.000888	0.000476	0.000779
60	0.004627	0.000040	0.000113	0.001191	0.001242	0.0	0.000803	0.000468	0.000770
65	0.004559	0.000091	0.000080	0.001307	0.001290	0.0	0.000588	0.000448	0.000755
70	0.003866	0.000083	0.000064	0.001079	0.001099	0.0	0.000493	0.000400	0.000647
75	0.004188	0.000090	0.000102	0.001142	0.001187	0.0	0.000526	0.000430	0.000712
80	0.004350	0.000080	0.000023	0.001274	0.001228	0.0	0.000540	0.000482	0.000723
85	0.006848	0.000127	0.000051	0.002029	0.001953	0.0	0.000837	0.000736	0.001116
GROSS	1.087204	0.017074	0.025260	0.365712	0.277426	0.0	0.158887	0.087061	0.155785
CRUDE	0.016866	0.000263	0.000390	0.005800	0.004240	0.0	0.002513	0.001301	0.002360
M.AGE	32.0963	32.6845	32.7572	30.9520	32.8831	0.0	31.2878	34.3047	32.8002

MIGRATION FROM CHUGOKU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.017833	0.000103	0.000420	0.004848	0.001924	0.005521	0.0	0.002046	0.002971
5	0.013957	0.000087	0.000346	0.003643	0.001423	0.004777	0.0	0.001490	0.002192
10	0.008365	0.000018	0.000210	0.002039	0.000759	0.003117	0.0	0.000768	0.001454
15	0.084005	0.000438	0.000533	0.022805	0.008993	0.042518	0.0	0.002362	0.006356
20	0.079143	0.000671	0.000851	0.022302	0.007415	0.037214	0.0	0.003388	0.007300
25	0.041065	0.000335	0.000503	0.010757	0.004527	0.017352	0.0	0.002822	0.004769
30	0.022455	0.000218	0.000467	0.006075	0.002293	0.007793	0.0	0.002134	0.003474
35	0.015390	0.000151	0.000394	0.003763	0.001583	0.005701	0.0	0.001466	0.002332
40	0.010559	0.000090	0.000350	0.002444	0.001178	0.003966	0.0	0.000903	0.001629
45	0.007980	0.000025	0.000189	0.001843	0.001058	0.003397	0.0	0.000594	0.001074
50	0.007141	0.000027	0.000167	0.001564	0.000907	0.003208	0.0	0.000340	0.000929
55	0.006278	0.000041	0.000082	0.001256	0.000638	0.003020	0.0	0.000359	0.000883
60	0.006077	0.000041	0.000082	0.001285	0.000602	0.002834	0.0	0.000367	0.000867
65	0.004938	0.000041	0.000049	0.001185	0.000466	0.002244	0.0	0.000262	0.000691
70	0.003710	0.000037	0.000031	0.000907	0.000351	0.001687	0.0	0.000189	0.000508
75	0.003882	0.000043	0.000052	0.000915	0.000431	0.001682	0.0	0.000224	0.000535
80	0.003398	0.000031	0.0	0.000830	0.000235	0.001738	0.0	0.000141	0.000423
85	0.004611	0.000061	0.0	0.001107	0.000307	0.002305	0.0	0.000184	0.000645
GROSS	1.703932	0.012296	0.023625	0.447841	0.175447	0.750377	0.0	0.099188	0.195157
CRUDE	0.025545	0.000181	0.000354	0.006793	0.002639	0.011270	0.0	0.001468	0.002840
M.AGE	27.7923	30.0758	27.6222	26.8864	27.5402	28.0700	0.0	27.2377	29.1889

APPENDIX B *Continued.*

MIGRATION FROM SHIKOKU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.017272	0.000196	0.000161	0.002608	0.001804	0.007877	0.003537	0.0	0.001090
5	0.012858	0.000237	0.000237	0.001968	0.001493	0.005717	0.002494	0.0	0.000712
10	0.008171	0.000123	0.000062	0.001308	0.000893	0.003739	0.001662	0.0	0.000385
15	0.123639	0.000649	0.000324	0.027141	0.014258	0.068539	0.009855	0.0	0.002873
20	0.104028	0.000633	0.000602	0.023910	0.008804	0.057073	0.009854	0.0	0.003151
25	0.049276	0.000241	0.000407	0.009770	0.004978	0.024869	0.006754	0.0	0.002257
30	0.024472	0.000278	0.000223	0.003618	0.003043	0.011911	0.003989	0.0	0.001410
35	0.018642	0.000216	0.000177	0.003005	0.002454	0.009021	0.003031	0.0	0.000737
40	0.013725	0.000182	0.000158	0.002099	0.001934	0.006712	0.002066	0.0	0.000574
45	0.011546	0.000071	0.000111	0.001836	0.001642	0.005916	0.001487	0.0	0.000484
50	0.010754	0.000058	0.000146	0.001551	0.001536	0.005780	0.001186	0.0	0.000496
55	0.009372	0.0	0.000031	0.001228	0.001110	0.005754	0.000831	0.0	0.000418
60	0.008331	0.0	0.000023	0.001090	0.000950	0.005113	0.000694	0.0	0.000461
65	0.006402	0.000041	0.000055	0.000814	0.000655	0.003670	0.000704	0.0	0.000462
70	0.004418	0.000035	0.000035	0.000641	0.000509	0.002301	0.000545	0.0	0.000351
75	0.004470	0.000044	0.000059	0.000704	0.000586	0.002037	0.000616	0.0	0.000425
80	0.003409	0.000025	0.0	0.000534	0.000356	0.001781	0.000458	0.0	0.000254
85	0.005267	0.000051	0.0	0.000818	0.000562	0.002710	0.000716	0.0	0.000409
GROSS	2.180260	0.015413	0.014059	0.423212	0.237835	1.152606	0.252385	0.0	0.084751
CRUDE	0.032038	0.000227	0.000203	0.006381	0.003465	0.016960	0.003646	0.0	0.001157
M.AGE	27.9610	26.8197	28.7955	26.2010	28.8328	28.1055	28.1018	0.0	31.9903

MIGRATION FROM KYUSHU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.019716	0.000462	0.000308	0.005777	0.003386	0.006354	0.002905	0.000524	0.0
5	0.016416	0.000377	0.000259	0.004373	0.003232	0.005669	0.002114	0.000391	0.0
10	0.011663	0.000189	0.000129	0.003172	0.002637	0.004072	0.001250	0.000213	0.0
15	0.115459	0.000528	0.000229	0.040272	0.027242	0.040174	0.006486	0.000528	0.0
20	0.103704	0.000930	0.000789	0.039559	0.016503	0.037341	0.007474	0.001109	0.0
25	0.053646	0.000772	0.000492	0.017827	0.008685	0.018651	0.006242	0.000978	0.0
30	0.031317	0.000581	0.000373	0.009414	0.005790	0.010664	0.003931	0.000565	0.0
35	0.024104	0.000426	0.000289	0.006794	0.005016	0.008397	0.002710	0.000473	0.0
40	0.018734	0.000285	0.000237	0.005026	0.004125	0.006705	0.001998	0.000358	0.0
45	0.016132	0.000145	0.000092	0.004266	0.003528	0.006258	0.001573	0.000270	0.0
50	0.014383	0.000110	0.000090	0.003797	0.003152	0.005647	0.001536	0.000252	0.0
55	0.011726	0.000093	0.000064	0.003277	0.002504	0.004533	0.001061	0.000193	0.0
60	0.009736	0.000082	0.000072	0.002851	0.001953	0.003644	0.000941	0.000192	0.0
65	0.006839	0.000033	0.000052	0.002105	0.001166	0.002505	0.000844	0.000133	0.0
70	0.004643	0.000031	0.000037	0.001489	0.000749	0.001610	0.000622	0.000106	0.0
75	0.004364	0.000035	0.000055	0.001411	0.000721	0.001426	0.000591	0.000125	0.0
80	0.004307	0.000030	0.000010	0.001508	0.000601	0.001518	0.000562	0.000079	0.0
85	0.006767	0.000059	0.000020	0.002243	0.000885	0.002616	0.000807	0.000158	0.0
GROSS	2.368285	0.025841	0.017982	0.775799	0.459373	0.838919	0.217253	0.033138	0.0
CRUDE	0.035443	0.000382	0.000262	0.011739	0.007006	0.012495	0.003101	0.000458	0.0
M.AGE	29.0365	27.6036	28.6212	28.3251	28.5075	29.4690	30.7460	32.2007	0.0

Mortality rates: males.

DEATH RATES
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AGE	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.004367	0.004687	0.004069	0.004240	0.003739	0.004409	0.004682	0.004711
5	0.000593	0.000536	0.000536	0.000580	0.000552	0.000591	0.000633	0.000631
10	0.000433	0.000390	0.000404	0.000417	0.000427	0.000349	0.000533	0.000427
15	0.001051	0.001212	0.001034	0.001096	0.000904	0.001250	0.001436	0.001126
20	0.001529	0.001598	0.001054	0.001280	0.001145	0.001597	0.002004	0.001714
25	0.001568	0.001676	0.001234	0.001342	0.001349	0.001613	0.002008	0.001946
30	0.001916	0.001955	0.001483	0.001510	0.001561	0.001896	0.002187	0.002244
35	0.002641	0.002806	0.002175	0.002262	0.002358	0.002673	0.003193	0.002934
40	0.003793	0.003713	0.003221	0.003027	0.003277	0.003587	0.004114	0.004102
45	0.005430	0.005631	0.004495	0.004220	0.004644	0.005166	0.005548	0.005707
50	0.007990	0.008475	0.007488	0.007041	0.007443	0.007762	0.008654	0.008953
55	0.013913	0.014128	0.012491	0.011999	0.012638	0.013034	0.013482	0.014303
60	0.022102	0.024032	0.021568	0.020414	0.020385	0.020438	0.021777	0.022782
65	0.037324	0.042093	0.036615	0.035820	0.036074	0.034296	0.037262	0.038361
70	0.061096	0.067221	0.061279	0.059230	0.058813	0.056651	0.058816	0.059585
75	0.095696	0.106432	0.100534	0.098168	0.094963	0.092438	0.091937	0.094688
80	0.152676	0.163711	0.152068	0.151187	0.151151	0.141314	0.151650	0.144298
85	0.239657	0.245243	0.233003	0.251022	0.248673	0.241824	0.251605	0.243247
GROSS	3.268882	3.477688	3.223747	3.274275	3.250480	3.154441	3.307608	3.258793
CRUDE	0.007095	0.008636	0.006266	0.007722	0.006711	0.009357	0.010579	0.009094
M.AGE	78.3587	78.2205	78.5940	78.8891	78.8736	78.4928	78.3034	78.1188

APPENDIX B *Continued.*

Out-migration rates: males.

		MIGRATION FROM HOKKAIDO TO						
AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.019450	0.0	0.002320	0.010082	0.003123	0.001740	0.000491	0.000223	0.001472
5	0.020520	0.0	0.002380	0.010530	0.003682	0.001482	0.000314	0.000225	0.001908
10	0.015134	0.0	0.001985	0.007939	0.002864	0.000925	0.000271	0.000203	0.000947
15	0.078015	0.0	0.005055	0.057697	0.009709	0.004535	0.000420	0.000060	0.000539
20	0.086707	0.0	0.006472	0.060255	0.009739	0.006576	0.001278	0.000461	0.001927
25	0.043305	0.0	0.004030	0.025646	0.006399	0.003835	0.000904	0.000513	0.001978
30	0.029173	0.0	0.002927	0.016618	0.004114	0.002443	0.000508	0.000314	0.002250
35	0.025171	0.0	0.002804	0.013661	0.004409	0.001656	0.000359	0.000252	0.002030
40	0.020074	0.0	0.002251	0.011029	0.003620	0.001291	0.000304	0.000163	0.001417
45	0.016115	0.0	0.001643	0.009648	0.002659	0.001150	0.000395	0.000042	0.000578
50	0.013230	0.0	0.001332	0.007990	0.002129	0.001025	0.000342	0.000035	0.000377
55	0.009846	0.0	0.001296	0.005641	0.001603	0.000930	0.000119	0.000030	0.000228
60	0.008429	0.0	0.001070	0.004930	0.001359	0.000734	0.000096	0.000036	0.000204
65	0.006972	0.0	0.000816	0.004398	0.001071	0.000336	0.000032	0.000128	0.000192
70	0.006247	0.0	0.000738	0.003837	0.001008	0.000344	0.000025	0.000123	0.000172
75	0.006999	0.0	0.000823	0.004117	0.001144	0.000412	0.000046	0.000183	0.000274
80	0.008322	0.0	0.000925	0.005343	0.001438	0.000411	0.0	0.000103	0.000103
85	0.018668	0.0	0.001766	0.012614	0.003027	0.000757	0.0	0.000252	0.000252
GROSS	2.161885	0.0	0.203156	1.359863	0.315484	0.152902	0.029510	0.016726	0.084244
CRUDE	0.032558	0.0	0.002930	0.020678	0.004606	0.002353	0.000468	0.000219	0.001303
M.AGE	32.3397	0.0	34.0095	32.1502	33.6288	30.8560	28.4393	37.9566	29.4875

		MIGRATION FROM TOHOKU TO						
AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.014511	0.001324	0.0	0.009461	0.002143	0.000572	0.000314	0.000157	0.000539
5	0.008860	0.000613	0.0	0.005879	0.001402	0.000374	0.000208	0.000073	0.000312
10	0.005575	0.000396	0.0	0.003827	0.000810	0.000184	0.000110	0.000083	0.000166
15	0.113161	0.004698	0.0	0.096616	0.008908	0.002496	0.000212	0.000046	0.000184
20	0.103612	0.007400	0.0	0.081344	0.009290	0.004164	0.000747	0.000181	0.000487
25	0.049293	0.006370	0.0	0.033382	0.005597	0.002385	0.000573	0.000253	0.000733
30	0.031951	0.004769	0.0	0.020330	0.004204	0.001380	0.000464	0.000176	0.000627
35	0.025631	0.004315	0.0	0.016088	0.003536	0.000961	0.000224	0.000110	0.000397
40	0.020576	0.003610	0.0	0.012811	0.002874	0.000731	0.000172	0.000080	0.000299
45	0.019616	0.003211	0.0	0.012784	0.002652	0.000707	0.000090	0.000037	0.000133
50	0.018914	0.003010	0.0	0.012494	0.002516	0.000663	0.000084	0.000038	0.000107
55	0.018798	0.002932	0.0	0.012356	0.002645	0.000640	0.000083	0.000025	0.000116
60	0.014630	0.002065	0.0	0.009608	0.002137	0.000591	0.000077	0.000024	0.000130
65	0.008065	0.001103	0.0	0.005635	0.000835	0.000347	0.000049	0.000049	0.000049
70	0.004641	0.000520	0.0	0.002942	0.000752	0.000316	0.000037	0.000037	0.000037
75	0.004152	0.000382	0.0	0.002358	0.000864	0.000349	0.000066	0.000066	0.000066
80	0.004288	0.000429	0.0	0.002534	0.000935	0.000390	0.0	0.0	0.0
85	0.007987	0.000822	0.0	0.004546	0.001879	0.000940	0.0	0.0	0.0
GROSS	2.371303	0.239836	0.0	1.723978	0.269893	0.090959	0.017552	0.007175	0.021911
CRUDE	0.035198	0.003255	0.0	0.026314	0.003726	0.001223	0.000258	0.000100	0.000321
M.AGE	31.3938	36.7785	0.0	29.8815	35.1856	35.8066	28.5394	31.2752	28.7450

MIGRATION FROM KANTO TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.012410	0.000761	0.002841	0.0	0.003407	0.002434	0.000937	0.000400	0.001631
5	0.009213	0.000498	0.001921	0.0	0.002715	0.001904	0.000718	0.000287	0.001170
10	0.005202	0.000404	0.000822	0.0	0.001614	0.001132	0.000472	0.000138	0.000620
15	0.011767	0.001300	0.003223	0.0	0.003620	0.002024	0.000531	0.000201	0.000869
20	0.027593	0.002438	0.006444	0.0	0.007741	0.005586	0.001984	0.000682	0.002719
25	0.025114	0.001782	0.005936	0.0	0.007088	0.005156	0.001829	0.000633	0.002691
30	0.017629	0.001085	0.004625	0.0	0.004783	0.003428	0.001294	0.000492	0.001922
35	0.013842	0.000802	0.004579	0.0	0.003377	0.002558	0.000862	0.000359	0.001325
40	0.011165	0.000572	0.004363	0.0	0.002453	0.001879	0.000633	0.000276	0.000989
45	0.010035	0.000453	0.004569	0.0	0.001911	0.0015U6	0.000546	0.000216	0.000834
50	0.007840	0.000322	0.003626	0.0	0.001467	0.001151	0.000434	0.000181	0.000658
55	0.004719	0.000206	0.001946	0.0	0.001100	0.000768	0.000219	0.000099	0.000382
60	0.003664	0.000166	0.001277	0.0	0.001022	0.000579	0.000181	0.000092	0.000347
65	0.002625	0.000118	0.000609	0.0	0.000890	0.000365	0.000169	0.000089	0.000385
70	0.002272	0.000109	0.000547	0.0	0.000749	0.000276	0.000158	0.000079	0.000355
75	0.002653	0.000132	0.000661	0.0	0.000835	0.000289	0.000207	0.000107	0.000421
80	0.002729	0.000150	0.000729	0.0	0.000878	0.000280	0.000168	0.000093	0.000430
85	0.005796	0.000279	0.001505	0.0	0.001839	0.000557	0.000390	0.000167	0.001059
GROSS	0.881344	0.057877	0.251110	0.0	0.237453	0.159261	0.058659	0.022956	0.094028
CRUDE	0.014098	0.001005	0.003786	0.0	0.003826	0.002707	0.000963	0.000361	0.001450
M.AGE	33.5708	30.2702	36.3739	0.0	33.1700	30.6127	32.2735	33.9610	34.8528

MIGRATION FROM CHUBU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.012494	0.000362	0.000902	0.005572	0.0	0.003207	0.000731	0.000310	0.001409
5	0.009552	0.000226	0.000495	0.004379	0.0	0.002518	0.000531	0.000318	0.000884
10	0.005843	0.000159	0.000377	0.002778	0.0	0.001495	0.000272	0.000159	0.000604
15	0.055387	0.001208	0.001581	0.035133	0.0	0.014792	0.001072	0.000346	0.001255
20	0.057387	0.001525	0.002770	0.032143	0.0	0.015413	0.001996	0.000804	0.002735
25	0.026398	0.000676	0.001850	0.012963	0.0	0.007248	0.001160	0.000484	0.002016
30	0.017511	0.000463	0.001542	0.008144	0.0	0.004836	0.000782	0.000391	0.001354
35	0.013344	0.000320	0.001704	0.005801	0.0	0.003536	0.000668	0.000333	0.000982
40	0.009592	0.000212	0.001550	0.004016	0.0	0.002451	0.000460	0.000255	0.000648
45	0.007917	0.000172	0.001433	0.003434	0.0	0.002053	0.000249	0.000170	0.000405
50	0.006568	0.000146	0.001265	0.002760	0.0	0.001718	0.000198	0.000129	0.000352
55	0.004951	0.000125	0.000977	0.001889	0.0	0.001379	0.000157	0.000074	0.000350
60	0.004279	0.000117	0.000751	0.001645	0.0	0.001151	0.000182	0.000075	0.000358
65	0.002889	0.000093	0.000230	0.001459	0.0	0.000766	0.000105	0.000048	0.000210
70	0.002530	0.000089	0.000201	0.001235	0.0	0.000703	0.000089	0.000035	0.000177
75	0.002911	0.000103	0.000248	0.001532	0.0	0.000795	0.000134	0.000062	0.000237
80	0.002647	0.000110	0.000176	0.001368	0.0	0.000838	0.000044	0.0	0.000110
85	0.005530	0.000240	0.000361	0.002705	0.0	0.001863	0.000120	0.0	0.000240
GROSS	1.237653	0.031737	0.092074	0.643684	0.0	0.338805	0.044745	0.019970	0.071638
CRUDE	0.019607	0.000489	0.001314	0.010401	0.0	0.005250	0.000716	0.000319	0.001118
M.AGE	29.1575	30.8614	36.0850	27.8695	0.0	29.6552	28.5460	28.3139	29.3693

APPENDIX B *Continued.*

MIGRATION FROM KINKI TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.018691	0.000252	0.000427	0.005756	0.004501	0.0	0.003085	0.001475	0.003195
5	0.013400	0.000206	0.000321	0.004342	0.003409	0.0	0.002049	0.001147	0.001926
10	0.008431	0.000128	0.000201	0.003038	0.002044	0.0	0.001159	0.000575	0.001286
15	0.024633	0.000394	0.000343	0.010672	0.007202	0.0	0.002799	0.001166	0.002056
20	0.043014	0.000806	0.000952	0.017352	0.010821	0.0	0.005767	0.002876	0.004441
25	0.034291	0.000557	0.000738	0.011392	0.009128	0.0	0.005436	0.002433	0.004606
30	0.023730	0.000371	0.000680	0.008171	0.005938	0.0	0.003381	0.001766	0.003422
35	0.016915	0.000232	0.000637	0.005738	0.004412	0.0	0.002482	0.001251	0.002162
40	0.012410	0.000181	0.000620	0.004175	0.003219	0.0	0.001760	0.000891	0.001563
45	0.010152	0.000189	0.000652	0.003464	0.002654	0.0	0.001240	0.000616	0.001336
50	0.008216	0.000143	0.000547	0.002638	0.002138	0.0	0.001060	0.000573	0.001117
55	0.005866	0.000064	0.000241	0.001528	0.001448	0.0	0.001088	0.000645	0.000851
60	0.004773	0.000056	0.000170	0.001118	0.001266	0.0	0.000866	0.000578	0.000718
65	0.003681	0.000057	0.000076	0.000902	0.001211	0.0	0.000522	0.000328	0.000584
70	0.003154	0.000057	0.000064	0.000669	0.001068	0.0	0.000456	0.000313	0.000527
75	0.003652	0.000081	0.000109	0.000679	0.001263	0.0	0.000530	0.000367	0.000625
80	0.004049	0.000064	0.000032	0.000733	0.001498	0.0	0.000606	0.000446	0.000670
85	0.008367	0.000180	0.000090	0.001439	0.003059	0.0	0.001170	0.000990	0.001439
GROSS	1.237122	0.020094	0.034496	0.419051	0.331402	0.0	0.177276	0.092180	0.162623
CRUDE	0.019755	0.000320	0.000523	0.007081	0.005127	0.0	0.002823	0.001389	0.002491
M.AGE	31.9409	32.7329	34.6300	29.1484	33.6025	0.0	32.0541	34.8738	33.2963

MIGRATION FROM CHUGOKU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.018163	0.000091	0.000401	0.004700	0.002204	0.005811	0.0	0.001986	0.002969
5	0.014520	0.000075	0.000395	0.003686	0.001674	0.004871	0.0	0.001636	0.002182
10	0.008570	0.000036	0.000234	0.002048	0.000808	0.003054	0.0	0.000844	0.001545
15	0.101073	0.000861	0.000809	0.032549	0.011521	0.043433	0.0	0.002893	0.009007
20	0.097543	0.001098	0.001470	0.031770	0.009953	0.039527	0.0	0.004197	0.009528
25	0.041875	0.000386	0.000540	0.011115	0.004786	0.016788	0.0	0.003165	0.005094
30	0.025868	0.000306	0.000556	0.006968	0.002820	0.008868	0.0	0.002595	0.003760
35	0.018681	0.000193	0.000516	0.004716	0.001946	0.006873	0.0	0.001790	0.002647
40	0.013043	0.000109	0.000460	0.003108	0.001478	0.004890	0.0	0.001080	0.001918
45	0.010076	0.000040	0.000286	0.002423	0.001344	0.004133	0.0	0.000426	0.001424
50	0.008658	0.000043	0.000239	0.001809	0.001177	0.003789	0.0	0.000374	0.001226
55	0.006880	0.000057	0.000076	0.000994	0.000847	0.003485	0.0	0.000376	0.001045
60	0.005918	0.000044	0.000066	0.000873	0.000748	0.002933	0.0	0.000381	0.000873
65	0.003723	0.000035	0.000035	0.000769	0.000489	0.001731	0.0	0.000219	0.000446
70	0.002792	0.000034	0.000023	0.000595	0.000378	0.001259	0.0	0.000160	0.000343
75	0.003148	0.000040	0.000040	0.000677	0.000498	0.001295	0.0	0.000219	0.000379
80	0.002701	0.000040	0.0	0.000564	0.000282	0.001371	0.0	0.000121	0.000323
85	0.004303	0.000096	0.0	0.000861	0.000478	0.002104	0.0	0.000191	0.000574
GROSS	1.937671	0.017927	0.030710	0.551121	0.217158	0.781073	0.0	0.113269	0.226413
CRUDE	0.029703	0.000271	0.000472	0.008669	0.003295	0.011877	0.0	0.001714	0.003406
M.AGE	27.0112	28.8125	27.2844	25.2359	27.5837	27.7758	0.0	27.0434	27.9571

MIGRATION FROM SHIKOKU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.017522	0.000105	0.000139	0.002438	0.001846	0.008012	0.003971	0.0	0.001010
5	0.013654	0.000333	0.000233	0.002131	0.001532	0.006161	0.002464	0.0	0.000799
10	0.008321	0.000121	0.000061	0.001331	0.000847	0.003813	0.001816	0.0	0.000333
15	0.149877	0.001202	0.000475	0.036069	0.017718	0.076346	0.013225	0.0	0.004841
20	0.126236	0.001013	0.000873	0.032685	0.012571	0.062612	0.012292	0.0	0.004190
25	0.051735	0.000275	0.000431	0.010551	0.005687	0.024867	0.007570	0.0	0.002353
30	0.029580	0.000195	0.000195	0.004126	0.003931	0.014518	0.004982	0.0	0.001635
35	0.024222	0.000325	0.000250	0.003626	0.003382	0.011891	0.003822	0.0	0.000927
40	0.018702	0.000294	0.000219	0.002608	0.002814	0.009262	0.002745	0.0	0.000760
45	0.016521	0.000133	0.000168	0.002416	0.002637	0.008344	0.002301	0.0	0.000522
50	0.015120	0.000111	0.000233	0.001989	0.002500	0.007965	0.001800	0.0	0.000522
55	0.011742	0.0	0.000070	0.001218	0.001775	0.007054	0.001091	0.0	0.000534
60	0.008973	0.0	0.000050	0.000970	0.001336	0.005381	0.000731	0.0	0.000504
65	0.005675	0.000059	0.000029	0.000719	0.000777	0.003373	0.000352	0.0	0.000367
70	0.003819	0.000058	0.000019	0.000576	0.000614	0.001996	0.000288	0.0	0.000269
75	0.004107	0.000067	0.000034	0.000673	0.000741	0.001818	0.000404	0.0	0.000370
80	0.003087	0.000064	0.0	0.000579	0.000515	0.001544	0.000193	0.0	0.000193
85	0.005636	0.000157	0.0	0.000939	0.000939	0.002818	0.000470	0.0	0.000313
GROSS	2.572644	0.022550	0.017398	0.528222	0.310811	1.288877	0.302577	0.0	0.102209
CRUDE	0.057910	0.000328	0.000253	0.008003	0.004474	0.018917	0.004481	0.0	0.001454
M.AGE	27.8725	29.0802	29.0418	25.5442	30.1027	28.3100	27.0063	0.0	29.7045

MIGRATION FROM KYUSHU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.019866	0.000433	0.000282	0.005888	0.003546	0.006387	0.002916	0.000414	0.0
5	0.015988	0.000312	0.000276	0.004253	0.002951	0.005680	0.002131	0.000383	0.0
10	0.011724	0.000214	0.000127	0.003325	0.002692	0.004014	0.001148	0.000206	0.0
15	0.123789	0.000964	0.000368	0.049202	0.024005	0.040855	0.007727	0.000670	0.0
20	0.129544	0.001522	0.001303	0.052316	0.020689	0.042514	0.009667	0.001533	0.0
25	0.059703	0.000931	0.000521	0.019595	0.009953	0.020290	0.007272	0.001142	0.0
30	0.039249	0.000736	0.000444	0.011361	0.007340	0.013500	0.005201	0.000666	0.0
35	0.031367	0.000589	0.000372	0.008837	0.006620	0.010944	0.003462	0.000543	0.0
40	0.025670	0.000400	0.000295	0.006889	0.005798	0.009210	0.002656	0.000422	0.0
45	0.025044	0.000236	0.000116	0.006513	0.005683	0.009691	0.002395	0.000410	0.0
50	0.022041	0.000174	0.000106	0.005602	0.005112	0.008680	0.001995	0.000373	0.0
55	0.016049	0.000114	0.000034	0.004047	0.003887	0.006332	0.001458	0.000178	0.0
60	0.011568	0.000085	0.000034	0.002996	0.002732	0.004407	0.001164	0.000149	0.0
65	0.006797	0.000021	0.000042	0.001824	0.001439	0.002593	0.000769	0.000109	0.0
70	0.004124	0.000021	0.000028	0.001288	0.000802	0.001351	0.000549	0.000084	0.0
75	0.003886	0.000024	0.000048	0.001315	0.000748	0.001098	0.000543	0.000109	0.0
80	0.003964	0.000027	0.0	0.001570	0.000638	0.001091	0.000559	0.000080	0.0
85	0.006916	0.000065	0.0	0.002871	0.001109	0.001827	0.000913	0.000130	0.0
GROSS	2.786451	0.034336	0.021992	0.948458	0.528732	0.952309	0.262618	0.038007	0.0
CRUDE	0.041580	0.000519	0.000332	0.014469	0.007836	0.014133	0.003759	0.000532	0.0
M.AGE	29.7252	27.7739	27.1021	28.3677	30.7606	30.1490	31.1652	31.9118	0.0

APPENDIX B *Continued.*

Mortality rates: females.

AGE	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.003204	0.003660	0.003047	0.003194	0.002989	0.003179	0.003754	0.003520
5	0.000360	0.000380	0.000356	0.000354	0.000311	0.000362	0.000401	0.000380
10	0.000268	0.000251	0.000229	0.000263	0.000226	0.000249	0.000307	0.000292
15	0.000433	0.000493	0.000414	0.000431	0.000402	0.000398	0.000471	0.000508
20	0.000726	0.000709	0.000572	0.000687	0.000660	0.000673	0.000820	0.000819
25	0.000825	0.000844	0.000774	0.000804	0.000890	0.000871	0.001002	0.000989
30	0.001019	0.001014	0.000951	0.000981	0.001009	0.001008	0.001305	0.001208
35	0.001280	0.001357	0.001319	0.001333	0.001472	0.001444	0.001660	0.001629
40	0.002094	0.001929	0.002011	0.001994	0.002096	0.002049	0.002338	0.002303
45	0.003485	0.002958	0.003003	0.002970	0.003198	0.002849	0.002945	0.003463
50	0.005379	0.004547	0.004518	0.004767	0.004715	0.004674	0.004945	0.005049
55	0.008095	0.007609	0.007283	0.007234	0.007496	0.007023	0.007250	0.007808
60	0.013140	0.012789	0.011909	0.012123	0.011816	0.011464	0.012129	0.012102
65	0.021840	0.022740	0.020992	0.020782	0.020073	0.019350	0.020360	0.020471
70	0.039886	0.041025	0.037183	0.037700	0.036842	0.033968	0.035740	0.036374
75	0.069966	0.073984	0.067817	0.067287	0.065211	0.062457	0.064952	0.063554
80	0.114336	0.125854	0.116099	0.117958	0.114850	0.106733	0.112402	0.108060
85	0.205350	0.221353	0.214695	0.215839	0.214934	0.211416	0.208672	0.205272
GROSS	2.458429	2.617483	2.465869	2.483506	2.445944	2.350834	2.407157	2.369012
CRUDE	0.005232	0.006760	0.005250	0.006408	0.005646	0.007293	0.007970	0.007023
M.AGE	79.6332	79.9226	80.0851	80.0458	80.0646	80.0748	79.7192	79.6187

Fertility rates: females (female births by age of mother).

AGE	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.000005	0.000004	0.000001	0.0	0.0	0.0	0.0	0.0
15	0.003267	0.002144	0.002293	0.001703	0.002213	0.001933	0.002372	0.002339
20	0.050273	0.054287	0.038811	0.052372	0.045834	0.052121	0.054612	0.048319
25	0.092548	0.099191	0.100764	0.105195	0.100581	0.100001	0.095184	0.099623
30	0.032552	0.036784	0.049203	0.036607	0.041319	0.032823	0.031760	0.043792
35	0.006892	0.007226	0.012465	0.007471	0.010228	0.006655	0.007112	0.011455
40	0.001053	0.000991	0.001654	0.001005	0.001594	0.000976	0.001250	0.001858
45	0.000089	0.000046	0.000124	0.000058	0.000074	0.000046	0.000065	0.000116
50	0.000008	0.000013	0.000004	0.000004	0.000005	0.000005	0.0	0.000003
55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROSS	0.933434	1.003431	1.026598	1.022073	1.008248	0.972795	0.961679	1.037517
CRUDE	0.016876	0.014789	0.020125	0.017788	0.019524	0.015440	0.014433	0.015279
M.AGE	27.3143	27.3971	28.3819	27.4765	27.8972	27.3273	27.2550	27.9760

Out-migration rates: females.

		MIGRATION FROM HOKKAIDO TO						
AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.020149	0.0	0.002379	0.010961	0.003125	0.001516	0.000303	0.000235	0.001632
5	0.018740	0.0	0.002082	0.009779	0.003369	0.001591	0.000164	0.000281	0.001474
10	0.016024	0.0	0.001715	0.008787	0.003266	0.000869	0.000211	0.000141	0.001034
15	0.052179	0.0	0.002388	0.028859	0.017320	0.002830	0.000181	0.000181	0.000421
20	0.038839	0.0	0.002831	0.026443	0.005481	0.002976	0.000345	0.000181	0.000581
25	0.032744	0.0	0.003468	0.019730	0.004236	0.002590	0.000636	0.000395	0.001690
30	0.023589	0.0	0.002384	0.012709	0.004005	0.001782	0.000486	0.000255	0.001968
35	0.019572	0.0	0.002501	0.010600	0.003335	0.001362	0.000320	0.000194	0.001260
40	0.015229	0.0	0.001913	0.008349	0.002642	0.001064	0.000269	0.000143	0.000850
45	0.010524	0.0	0.001157	0.006276	0.001660	0.000769	0.000210	0.000057	0.000394
50	0.009065	0.0	0.000890	0.005536	0.001410	0.000701	0.000181	0.000047	0.000299
55	0.008397	0.0	0.000701	0.005112	0.001458	0.000691	0.000133	0.000057	0.000246
60	0.008776	0.0	0.000745	0.005410	0.001455	0.000685	0.000132	0.000060	0.000289
65	0.008733	0.0	0.001263	0.005344	0.001047	0.000570	0.000092	0.000092	0.000323
70	0.007260	0.0	0.001093	0.004373	0.000831	0.000525	0.000087	0.000087	0.000262
75	0.007338	0.0	0.001101	0.004219	0.000881	0.000587	0.000110	0.000110	0.000330
80	0.007442	0.0	0.001218	0.004533	0.000744	0.000609	0.000068	0.000068	0.000203
85	0.012326	0.0	0.001442	0.007868	0.001180	0.001311	0.000131	0.000131	0.000262
GROSS	1.584629	0.0	0.156360	0.924452	0.287215	0.115142	0.020297	0.013566	0.067596
CRUDE	0.023003	0.0	0.002085	0.013378	0.004475	0.001619	0.000283	0.000185	0.000977
M.AGE	33.4799	0.0	37.1421	34.1100	29.1722	35.2343	35.9142	34.8474	30.7010

		MIGRATION FROM TOHOKU TO						
AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.013451	0.001333	0.0	0.008908	0.001852	0.000625	0.000189	0.000094	0.000448
5	0.009363	0.000739	0.0	0.006278	0.001325	0.000467	0.000163	0.000054	0.000337
10	0.005493	0.000333	0.0	0.003916	0.000855	0.000143	0.000038	0.000067	0.000143
15	0.099047	0.002353	0.0	0.078841	0.015824	0.001770	0.000139	0.000019	0.000102
20	0.081104	0.003822	0.0	0.067432	0.006902	0.002074	0.000265	0.000142	0.000447
25	0.039090	0.002154	0.0	0.029414	0.004421	0.001868	0.000398	0.000187	0.000648
30	0.016112	0.001154	0.0	0.011390	0.002087	0.000711	0.000315	0.000058	0.000396
35	0.009977	0.000798	0.0	0.006791	0.001498	0.000404	0.000155	0.000090	0.000241
40	0.007301	0.000627	0.0	0.004871	0.001115	0.000315	0.000117	0.000070	0.000187
45	0.007337	0.000669	0.0	0.005247	0.000884	0.000376	0.000051	0.000008	0.000123
50	0.007415	0.000655	0.0	0.005328	0.000847	0.000416	0.000028	0.000006	0.000135
55	0.006797	0.000521	0.0	0.004939	0.000911	0.000298	0.000046	0.000021	0.000060
60	0.006365	0.000474	0.0	0.004612	0.000868	0.000264	0.000059	0.000025	0.000063
65	0.004712	0.000408	0.0	0.003617	0.000403	0.000202	0.000021	0.000010	0.000052
70	0.003475	0.000288	0.0	0.002648	0.000324	0.000158	0.000014	0.000007	0.000036
75	0.003150	0.000235	0.0	0.002257	0.000369	0.000201	0.000022	0.000011	0.000056
80	0.002788	0.000213	0.0	0.002277	0.000234	0.000064	0.0	0.0	0.0
85	0.004216	0.000281	0.0	0.003420	0.000375	0.000141	0.0	0.0	0.0
GROSS	1.635971	0.085283	0.0	1.260933	0.205470	0.052472	0.010097	0.004351	0.017364
CRUDE	0.024958	0.001207	0.0	0.019341	0.003202	0.000750	0.000147	0.000063	0.000248
M.AGE	27.3639	30.9578	0.0	27.1836	26.1569	30.3973	27.9280	27.5277	27.5509

APPENDIX B *Continued.*

MIGRATION FROM KANTO TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.012279	0.000718	0.002659	0.0	0.003596	0.002402	0.001064	0.000394	0.001447
5	0.009227	0.000589	0.001922	0.0	0.002658	0.001909	0.000788	0.000221	0.001138
10	0.005407	0.000396	0.000920	0.0	0.001691	0.001131	0.000478	0.000159	0.000632
15	0.006310	0.000376	0.001682	0.0	0.001767	0.000998	0.000267	0.000105	0.001116
20	0.017378	0.001085	0.004590	0.0	0.004837	0.002964	0.000903	0.000606	0.002393
25	0.018256	0.001108	0.003837	0.0	0.005392	0.003791	0.001363	0.000524	0.002242
30	0.012180	0.000717	0.002514	0.0	0.003570	0.002586	0.000935	0.000397	0.001461
35	0.007801	0.000582	0.001432	0.0	0.002285	0.001749	0.000616	0.000189	0.000949
40	0.005377	0.000382	0.000988	0.0	0.001600	0.001212	0.000405	0.000145	0.000644
45	0.003484	0.000173	0.000724	0.0	0.001095	0.000799	0.000192	0.000110	0.000390
50	0.002933	0.000134	0.000612	0.0	0.000937	0.000638	0.000162	0.000093	0.000355
55	0.002848	0.000145	0.000574	0.0	0.000909	0.000531	0.000215	0.000066	0.000408
60	0.003346	0.000194	0.000662	0.0	0.001053	0.000600	0.000254	0.000078	0.000505
65	0.004201	0.000336	0.000773	0.0	0.001287	0.000816	0.000248	0.000145	0.000597
70	0.003500	0.000279	0.000651	0.0	0.001066	0.000691	0.000200	0.000118	0.000494
75	0.003496	0.000279	0.000652	0.0	0.001053	0.000686	0.000204	0.000122	0.000500
80	0.003346	0.000286	0.000593	0.0	0.001027	0.000699	0.000180	0.000095	0.000466
85	0.004865	0.000385	0.000928	0.0	0.001493	0.000950	0.000294	0.000136	0.000679
GROSS	0.631164	0.040814	0.133556	0.0	0.186586	0.125769	0.043840	0.018519	0.082080
CRUDE	0.009317	0.000582	0.002046	0.0	0.002720	0.001841	0.000654	0.000276	0.001197
M.AGE	33.9859	35.7060	32.5332	0.0	34.5237	34.2975	32.0747	34.2872	34.7471

MIGRATION FROM CHUBU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.012574	0.000444	0.000631	0.005573	0.0	0.003410	0.000679	0.000354	0.001483
5	0.009413	0.000215	0.000704	0.004284	0.0	0.002676	0.000534	0.000208	0.000793
10	0.005668	0.000110	0.000464	0.002657	0.0	0.001509	0.000252	0.000134	0.000542
15	0.030737	0.000293	0.000790	0.018386	0.0	0.009120	0.000503	0.000223	0.001421
20	0.038167	0.000558	0.001713	0.018152	0.0	0.012635	0.001250	0.000563	0.003297
25	0.025865	0.000490	0.001292	0.013211	0.0	0.007347	0.001159	0.000477	0.001888
30	0.014061	0.000322	0.000731	0.006822	0.0	0.004066	0.000585	0.000388	0.001148
35	0.009063	0.000227	0.000680	0.004359	0.0	0.002459	0.000440	0.000216	0.000683
40	0.006050	0.000135	0.000486	0.002897	0.0	0.001607	0.000297	0.000153	0.000476
45	0.004107	0.000062	0.000198	0.002140	0.0	0.001214	0.000146	0.000073	0.000275
50	0.003693	0.000051	0.000162	0.001926	0.0	0.001123	0.000129	0.000067	0.000235
55	0.003867	0.000084	0.000175	0.001954	0.0	0.001219	0.000146	0.000079	0.000209
60	0.004313	0.000111	0.000210	0.002149	0.0	0.001364	0.000172	0.000073	0.000234
65	0.004343	0.000144	0.000180	0.002233	0.0	0.001317	0.000166	0.000065	0.000238
70	0.003438	0.000119	0.000144	0.001746	0.0	0.001047	0.000129	0.000055	0.000198
75	0.003270	0.000107	0.000168	0.001589	0.0	0.000955	0.000153	0.000069	0.000229
80	0.002715	0.000108	0.000067	0.001465	0.0	0.000874	0.000054	0.000027	0.000121
85	0.004056	0.000159	0.000133	0.002094	0.0	0.001299	0.000106	0.000053	0.000212
GROSS	0.927009	0.018691	0.044639	0.468195	0.0	0.276200	0.034495	0.016375	0.068414
CRUDE	0.014143	0.000260	0.000679	0.007140	0.0	0.004225	0.000520	0.000246	0.001073
M.AGE	30.1533	33.9181	29.6093	30.2774	0.0	30.4582	29.6765	29.8084	27.7217

MIGRATION FROM KINKI TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.018780	0.000334	0.000402	0.005951	0.004417	0.0	0.002918	0.001472	0.003286
5	0.013514	0.000319	0.000224	0.004560	0.003147	0.0	0.002061	0.001198	0.002005
10	0.008181	0.000076	0.000162	0.002781	0.002036	0.0	0.001223	0.000650	0.001252
15	0.012275	0.000082	0.000135	0.004222	0.003209	0.0	0.001575	0.000885	0.002167
20	0.027867	0.000406	0.000433	0.007522	0.006441	0.0	0.005332	0.003050	0.004683
25	0.027197	0.000360	0.000549	0.009473	0.006415	0.0	0.004224	0.002026	0.004150
30	0.017550	0.000271	0.000356	0.006296	0.004252	0.0	0.002521	0.001339	0.002514
35	0.011533	0.000187	0.000283	0.003910	0.002962	0.0	0.001626	0.000912	0.001653
40	0.007997	0.000125	0.000212	0.002723	0.002007	0.0	0.001102	0.000680	0.001148
45	0.005185	0.000068	0.000083	0.001842	0.001164	0.0	0.000745	0.000530	0.000753
50	0.004328	0.000046	0.000071	0.001455	0.000985	0.0	0.000671	0.000438	0.000663
55	0.004066	0.000019	0.000052	0.001154	0.001072	0.0	0.000719	0.000332	0.000719
60	0.004498	0.000026	0.000062	0.001256	0.001220	0.0	0.000747	0.000372	0.000815
65	0.005329	0.000121	0.000083	0.001662	0.001358	0.0	0.000646	0.000554	0.000904
70	0.004449	0.000105	0.000064	0.001415	0.001124	0.0	0.000524	0.000472	0.000745
75	0.004569	0.000097	0.000097	0.001472	0.001133	0.0	0.000523	0.000474	0.000774
80	0.004520	0.000090	0.000018	0.001578	0.001076	0.0	0.000502	0.000502	0.000753
85	0.006252	0.000106	0.000035	0.002261	0.001519	0.0	0.000706	0.000636	0.000989
GROSS	0.940452	0.014189	0.016607	0.307671	0.227682	0.0	0.141821	0.082612	0.149871
CRUDE	0.014030	0.000206	0.000259	0.004543	0.003370	0.0	0.002208	0.001214	0.002231
M.AGE	32.5791	33.1477	30.0977	32.8288	32.9331	0.0	30.8641	34.0847	32.5428

MIGRATION FROM CHUGOKU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.017486	0.000115	0.000441	0.005004	0.001630	0.005215	0.0	0.002109	0.002972
5	0.013369	0.000098	0.000295	0.003598	0.001160	0.004679	0.0	0.001337	0.002202
10	0.008153	0.0	0.000186	0.002029	0.000707	0.003183	0.0	0.000689	0.001359
15	0.067021	0.000017	0.000257	0.013109	0.006478	0.041608	0.0	0.001834	0.003719
20	0.063333	0.000304	0.000320	0.014167	0.005235	0.035227	0.0	0.002693	0.005387
25	0.040309	0.000288	0.000468	0.010424	0.004285	0.017877	0.0	0.002502	0.004465
30	0.019230	0.000135	0.000386	0.005232	0.001796	0.006777	0.0	0.001699	0.003205
35	0.012215	0.000111	0.000276	0.002844	0.001232	0.004571	0.0	0.001153	0.002027
40	0.008169	0.000071	0.000244	0.001805	0.000889	0.003077	0.0	0.000732	0.001351
45	0.006239	0.000012	0.000108	0.001362	0.000820	0.002786	0.0	0.000366	0.000783
50	0.005917	0.000015	0.000109	0.001367	0.000688	0.002738	0.0	0.000312	0.000688
55	0.005771	0.000027	0.000086	0.001478	0.000462	0.002628	0.0	0.000344	0.000747
60	0.006214	0.000038	0.000095	0.001640	0.000475	0.002749	0.0	0.000355	0.000861
65	0.006005	0.000046	0.000061	0.001551	0.000445	0.002695	0.0	0.000299	0.000906
70	0.004485	0.000039	0.000039	0.001170	0.000329	0.002049	0.0	0.000213	0.000648
75	0.004443	0.000046	0.000061	0.001095	0.000380	0.001978	0.0	0.000228	0.000654
80	0.003840	0.000026	0.0	0.000998	0.000205	0.001971	0.0	0.000154	0.000486
85	0.004757	0.000045	0.0	0.001223	0.000227	0.002401	0.0	0.000181	0.000680
GROSS	1.484772	0.007169	0.017159	0.350485	0.137213	0.721046	0.0	0.086002	0.165698
CRUDE	0.021695	0.000098	0.000244	0.005056	0.002032	0.010708	0.0	0.001240	0.002316
M.AGE	28.6827	33.8250	28.2279	29.1143	27.8543	28.2798	0.0	27.4737	30.6615

APPENDIX B *Continued.*

MIGRATION FROM SHIKOKU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.017009	0.000293	0.000183	0.002786	0.001760	0.007735	0.003079	0.0	0.001173
5	0.012032	0.000138	0.000242	0.001798	0.001452	0.005255	0.002524	0.0	0.000622
10	0.008016	0.000125	0.000063	0.001284	0.000939	0.003664	0.001503	0.0	0.000438
15	0.098609	0.000121	0.000181	0.018623	0.010957	0.061091	0.006640	0.0	0.000996
20	0.086414	0.000332	0.000388	0.016950	0.005816	0.052679	0.007921	0.0	0.002327
25	0.047081	0.000210	0.000385	0.009073	0.004344	0.024871	0.006025	0.0	0.002172
30	0.019819	0.000355	0.000248	0.003155	0.002234	0.009537	0.003085	0.0	0.001205
35	0.013398	0.000114	0.000108	0.002422	0.001583	0.006324	0.002288	0.0	0.000559
40	0.009092	0.000076	0.000102	0.001625	0.001115	0.004339	0.001434	0.0	0.000401
45	0.007507	0.000022	0.000065	0.001365	0.000833	0.003944	0.000826	0.0	0.000453
50	0.007357	0.000017	0.000078	0.001210	0.000787	0.004080	0.000709	0.0	0.000475
55	0.007473	0.0	0.0	0.001236	0.000576	0.004712	0.000623	0.0	0.000325
60	0.007779	0.0	0.0	0.001193	0.000618	0.004882	0.000662	0.0	0.000423
65	0.007047	0.000026	0.000078	0.000899	0.000547	0.003934	0.001016	0.0	0.000547
70	0.004923	0.000016	0.000049	0.000696	0.000421	0.002559	0.000761	0.0	0.000421
75	0.004751	0.000026	0.000078	0.000727	0.000467	0.002207	0.000779	0.0	0.000467
80	0.003620	0.0	0.0	0.000505	0.000253	0.001937	0.000631	0.0	0.000295
85	0.005088	0.0	0.0	0.000759	0.000380	0.002658	0.000835	0.0	0.000456
GROSS	1.835068	0.009363	0.011237	0.331535	0.175406	1.032037	0.206707	0.0	0.068783
CRUDE	0.026746	0.000136	0.000157	0.004919	0.002555	0.015196	0.002893	0.0	0.000890
M.AGE	28.1568	23.8422	28.4716	27.2271	27.3314	27.9371	29.4004	0.0	34.8381

MIGRATION FROM KYUSHU TO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	0.019560	0.000492	0.000335	0.005660	0.003219	0.006320	0.002894	0.000640	0.0
5	0.016863	0.000445	0.000241	0.004499	0.003525	0.005658	0.002096	0.000399	0.0
10	0.011599	0.000163	0.000131	0.003014	0.002581	0.004133	0.001356	0.000221	0.0
15	0.107094	0.000090	0.000090	0.031305	0.030493	0.039490	0.005241	0.000385	0.0
20	0.082520	0.000445	0.000368	0.029100	0.013071	0.033101	0.005676	0.000761	0.0
25	0.048466	0.000637	0.000467	0.016314	0.007600	0.017248	0.005360	0.000839	0.0
30	0.024309	0.000444	0.000310	0.007693	0.004420	0.008158	0.002809	0.000475	0.0
35	0.017408	0.000275	0.000211	0.004910	0.003537	0.006048	0.002017	0.000409	0.0
40	0.012358	0.000180	0.000184	0.003313	0.002587	0.004402	0.001392	0.000300	0.0
45	0.009192	0.000075	0.000073	0.002516	0.001849	0.003585	0.000934	0.000161	0.0
50	0.008482	0.000060	0.000077	0.002407	0.001641	0.003310	0.000829	0.000159	0.0
55	0.008237	0.000077	0.000089	0.002656	0.001388	0.003081	0.000741	0.000205	0.0
60	0.008200	0.000079	0.000104	0.002730	0.001301	0.003005	0.000754	0.000229	0.0
65	0.006873	0.000044	0.000061	0.002342	0.000934	0.002430	0.000908	0.000154	0.0
70	0.005054	0.000039	0.000045	0.001648	0.000707	0.001815	0.000679	0.000122	0.0
75	0.004703	0.000043	0.000060	0.001479	0.000701	0.001659	0.000624	0.000137	0.0
80	0.004509	0.000031	0.000016	0.001472	0.000579	0.001769	0.000564	0.000078	0.0
85	0.006703	0.000056	0.000028	0.001971	0.000789	0.002957	0.000760	0.000141	0.0
GROSS	2.010648	0.018374	0.014437	0.625146	0.404605	0.740844	0.178173	0.029069	0.0
CRUDE	0.029921	0.000260	0.000200	0.009283	0.006259	0.011020	0.002508	0.000391	0.0
M.AGE	28.2830	27.4130	30.3358	28.5298	26.0774	28.5956	30.3742	32.4228	0.0

Appendix C

SELECTED MULTIREGIONAL LIFE TABLE RESULTS

APPENDIX C

Expectation of life by place of birth: males.

AGE *** INITIAL REGION OF COHORT HOKKAIDO

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.49703	27.06645	3.54750	23.69565	6.95165	4.94270	1.25734	0.46589	1.56985
5	65.97362	22.83960	3.59807	24.09937	7.06719	5.03036	1.27879	0.47334	1.58689
10	61.16037	18.58433	3.52754	23.82331	6.97183	4.98499	1.26578	0.46630	1.53630
15	56.28600	14.67327	3.40893	23.34215	6.80084	4.90724	1.24396	0.45386	1.45575
20	51.57000	11.55731	3.27396	22.35151	6.55999	4.77697	1.22120	0.44332	1.38574
25	46.89374	9.50073	3.11347	20.59199	6.21471	4.53203	1.18487	0.43148	1.32446
30	42.20514	8.03284	2.90823	18.52963	5.77271	4.19306	1.12012	0.40917	1.23939
35	37.53632	6.80123	2.66522	16.46621	5.26009	3.80849	1.03202	0.37682	1.12622
40	32.95711	5.73148	2.39533	14.44938	4.71147	3.40334	0.93123	0.33837	0.99652
45	28.47877	4.78629	2.10029	12.48616	4.13946	2.98659	0.82310	0.29665	0.86022
50	24.10968	3.93640	1.78419	10.58149	3.55460	2.56341	0.71029	0.25395	0.72535
55	19.95235	3.17698	1.46302	8.77587	2.97939	2.14718	0.59752	0.21275	0.59964
60	16.11398	2.50860	1.16103	7.10482	2.43509	1.75245	0.49051	0.17455	0.48693
65	12.66446	1.93007	0.89429	5.59372	1.93573	1.38914	0.39317	0.14010	0.38823
70	9.73281	1.45233	0.67317	4.30141	1.50400	1.07550	0.30981	0.11072	0.30588
75	7.32928	1.06946	0.49672	3.23634	1.14383	0.81610	0.24110	0.08655	0.23918
80	5.49292	0.77613	0.36375	2.43225	0.86354	0.61277	0.18856	0.06740	0.18855
85	4.16436	0.55060	0.27082	1.88295	0.65186	0.45453	0.14949	0.05215	0.15195

AGE *** INITIAL REGION OF COHORT TOHOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.34449	2.22232	27.60581	27.04445	6.06367	3.80637	1.08789	0.38995	1.12403
5	65.92303	2.25931	23.37311	27.57116	6.18054	3.88853	1.10952	0.39715	1.14371
10	61.09376	2.22882	18.87772	27.35860	6.12747	3.87759	1.10152	0.39315	1.12889
15	56.20886	2.18803	14.51752	27.02386	6.04306	3.85448	1.08824	0.38675	1.10691
20	51.52051	2.12293	11.20359	25.95647	5.90366	3.80645	1.07675	0.38188	1.08877
25	46.84202	2.00535	9.29985	23.74245	5.64058	3.66655	1.05219	0.37428	1.06078
30	42.15319	1.84738	7.98649	21.25690	5.26881	3.43283	1.00028	0.35723	1.00328
35	37.48060	1.66615	6.86207	18.81647	4.81848	3.14414	0.92481	0.33077	0.91771
40	32.90072	1.47680	5.85080	16.46591	4.32774	2.82762	0.83611	0.29838	0.81737
45	28.41648	1.28488	4.91506	14.19986	3.81208	2.49336	0.73977	0.26263	0.71084
50	24.04516	1.09360	4.03207	12.01989	3.28251	2.14864	0.63895	0.22555	0.60395
55	19.88979	0.90819	3.22212	9.96408	2.75915	1.80597	0.53824	0.18938	0.50267
60	16.04551	0.73308	2.50760	8.05876	2.25975	1.47781	0.44242	0.15553	0.41056
65	12.60310	0.57359	1.90424	6.33952	1.80036	1.17532	0.35555	0.12500	0.32952
70	9.68404	0.43754	1.41708	4.87143	1.40248	0.91369	0.28126	0.09896	0.26159
75	7.29245	0.32664	1.03244	3.66232	1.07029	0.69683	0.21999	0.07756	0.20638
80	5.47993	0.24166	0.74481	2.75357	0.81309	0.52773	0.17348	0.06071	0.16488
85	4.16923	0.17617	0.53865	2.12146	0.61685	0.39516	0.13868	0.04713	0.13513

AGE *** INITIAL REGION OF COHORT KANTO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.76816	1.29739	3.71072	50.00975	6.13415	5.00988	1.50694	0.52658	1.57276
5	66.15351	1.31513	3.75372	46.13626	6.21959	5.08387	1.52659	0.53256	1.58579
10	61.32538	1.29584	3.67634	41.65172	6.12414	5.01774	1.49982	0.52088	1.53890
15	56.44454	1.26720	3.56772	37.28317	5.97666	4.91448	1.45876	0.50389	1.47266
20	51.72614	1.23067	3.46094	33.12693	5.80619	4.77852	1.41955	0.48986	1.41348
25	47.00110	1.17072	3.32413	29.20731	5.55609	4.54830	1.36919	0.47429	1.35107
30	42.29165	1.08466	3.12790	25.66170	5.19641	4.22378	1.28930	0.44845	1.25945
35	37.60360	0.98225	2.88058	22.41163	4.75045	3.84367	1.18327	0.41229	1.13946
40	33.00891	0.87344	2.59877	19.39741	4.26179	3.43766	1.06353	0.36977	1.00654
45	28.51637	0.76217	2.28539	16.57229	3.74928	3.01675	0.93651	0.32397	0.87002
50	24.12948	0.65012	1.94350	13.98800	3.22281	2.58744	0.80530	0.27703	0.73527
55	19.96604	0.54094	1.59209	11.44580	2.70468	2.16590	0.67585	0.23169	0.60910
60	16.11167	0.43747	1.25944	9.19943	2.21179	1.76536	0.55356	0.18948	0.49514
65	12.63851	0.34310	0.96725	7.19904	1.76017	1.39864	0.44324	0.15154	0.39553
70	9.72228	0.26229	0.72575	5.50279	1.36875	1.08221	0.34902	0.11922	0.31224
75	7.31814	0.19645	0.53396	4.11520	1.04234	0.82098	0.27159	0.09280	0.24482
80	5.50040	0.14614	0.39070	3.07594	0.79023	0.61793	0.21299	0.07214	0.19431
85	4.17884	0.10744	0.28903	2.34580	0.59702	0.45765	0.16878	0.05547	0.15765

AGE *** INITIAL REGION OF COHORT CHUBU

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.76033	0.88967	2.24735	16.15894	39.23804	7.61880	1.51573	0.57625	1.51554
5	66.20062	0.90434	2.28438	16.43812	35.17502	7.74384	1.53911	0.58474	1.53107
10	61.38507	0.89577	2.26263	16.30312	30.67529	7.66246	1.51900	0.57486	1.49194
15	56.50775	0.88247	2.22846	16.07587	26.30659	7.53183	1.48793	0.55883	1.43577
20	51.80030	0.86074	2.19022	15.51519	22.58633	7.26843	1.43588	0.54438	1.38113
25	47.10471	0.81830	2.12429	14.38778	19.75718	6.77391	1.40021	0.52586	1.31719
30	42.40552	0.75783	2.01663	13.01319	17.41623	6.16685	1.31528	0.49546	1.22405
35	37.71862	0.68701	1.87445	11.60141	15.25870	5.53184	1.20568	0.45448	1.10505
40	33.12877	0.61182	1.70587	10.20304	13.24966	4.89382	1.08301	0.40696	0.97459
45	28.62683	0.53467	1.51106	8.82752	11.34836	4.25625	0.95224	0.35582	0.84092
50	24.22761	0.45688	1.29352	7.48502	9.53632	3.62443	0.81777	0.30366	0.71002
55	20.03005	0.38088	1.06615	6.21011	7.84793	3.01693	0.68613	0.25357	0.58835
60	16.18391	0.30870	0.84756	5.02454	6.30707	2.44843	0.56209	0.20706	0.47845
65	12.70663	0.24245	0.65192	3.95085	4.93471	1.93120	0.44933	0.16497	0.38120
70	9.75691	0.18574	0.48918	3.03428	3.77658	1.48920	0.33303	0.12919	0.29971
75	7.32658	0.13925	0.35924	2.27655	2.82073	1.12403	0.27350	0.09985	0.23343
80	5.47517	0.10375	0.26206	1.70881	2.08595	0.84092	0.21325	0.07694	0.18349
85	4.10261	0.07688	0.19352	1.31760	1.52109	0.61990	0.16811	0.05864	0.14688

APPENDIX C *Continued.*

AGE *** INITIAL REGION OF COHORT KINKI

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.92479	0.66178	1.52501	12.54941	7.50340	40.97113	3.12568	1.26702	2.32137
5	66.20639	0.67125	1.54842	12.71929	7.59270	36.92320	3.14918	1.27394	2.32842
10	61.38345	0.66458	1.53706	12.56935	7.47008	32.60402	3.06545	1.23129	2.24162
15	56.50859	0.65381	1.51745	12.33082	7.28440	28.48019	2.94827	1.17072	2.12292
20	51.76557	0.63954	1.49789	11.93638	7.04485	24.69098	2.82853	1.11699	2.01041
25	47.05847	0.61360	1.46474	11.22549	6.69536	21.40473	2.69006	1.06365	1.90085
30	42.36509	0.57317	1.40358	10.28636	6.22446	18.62756	2.50223	0.98954	1.75818
35	37.68624	0.52286	1.31587	9.25626	5.66414	16.17805	2.27275	0.89661	1.57969
40	33.10691	0.46793	1.20676	8.19637	5.06498	13.96185	2.02673	0.79466	1.38762
45	28.61938	0.41063	1.07636	7.12881	4.44320	11.90371	1.77256	0.68966	1.19444
50	24.23897	0.35200	0.92642	6.06927	3.81013	9.97175	1.51666	0.58587	1.00686
55	20.07559	0.29394	0.76579	5.04889	3.18900	8.18805	1.26925	0.48809	0.83258
60	16.22757	0.23857	0.60984	4.09330	2.60163	6.57274	1.03783	0.39813	0.67554
65	12.74805	0.18749	0.46941	3.21961	2.06161	5.13075	0.82669	0.31616	0.53634
70	9.80175	0.14385	0.35269	2.47316	1.59787	3.91976	0.64727	0.24672	0.42043
75	7.36589	0.10790	0.25900	1.85257	1.20854	2.92356	0.49867	0.18974	0.32591
80	5.48361	0.08013	0.18812	1.38189	0.90489	2.14483	0.38483	0.14499	0.25393
85	4.09742	0.05953	0.13891	1.06315	0.67855	1.54306	0.30134	0.11052	0.20236

AGE *** INITIAL REGION OF COHORT CHUGOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.56469	0.70013	1.70920	14.83801	6.65391	13.47871	27.97269	1.47123	2.74080
5	66.05602	0.71444	1.74203	15.11128	6.77464	13.71036	23.75542	1.48084	2.76701
10	61.24327	0.71289	1.73167	15.00067	6.71971	13.56343	19.40913	1.42223	2.68354
15	56.34972	0.70878	1.71132	14.80825	6.62638	13.32044	15.27598	1.33763	2.56093
20	51.66625	0.69851	1.69065	14.52867	6.45262	12.74148	12.09029	1.25731	2.40672
25	47.00194	0.66975	1.64904	13.32119	6.12253	11.66938	10.17077	1.17915	2.22014
30	42.32349	0.62385	1.57303	12.06567	5.68069	10.45994	8.81905	1.08625	2.01500
35	37.65903	0.56785	1.46817	10.76774	5.16699	9.27502	7.64613	0.97698	1.79016
40	33.08946	0.50705	1.34061	9.47555	4.62134	8.13580	6.58938	0.85949	1.56024
45	28.61111	0.44391	1.19090	8.20162	4.05660	7.03079	5.61263	0.74024	1.33442
50	24.24269	0.37986	1.02158	6.95756	3.48191	5.95953	4.69920	0.62421	1.11885
55	20.08719	0.31689	0.84234	5.77217	2.91668	4.94251	3.85920	0.51641	0.92101
60	16.24686	0.25702	0.66970	4.67051	2.38098	4.00058	3.10521	0.41864	0.74422
65	12.77561	0.20180	0.51499	3.66786	1.88715	3.14388	2.44089	0.33080	0.58823
70	9.82448	0.15443	0.38622	2.81005	1.46046	2.41223	1.88627	0.25663	0.45819
75	7.38875	0.11549	0.28306	2.09925	1.10264	1.80712	1.43251	0.19600	0.35267
80	5.51523	0.08546	0.20518	1.56082	0.82356	1.33337	1.08610	0.14835	0.27239
85	4.12077	0.06276	0.15025	1.18746	0.61110	0.96229	0.82350	0.11045	0.21296

AGE *** INITIAL REGION OF COHORT SHIKOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.33603	0.72348	1.56709	13.89736	7.25169	17.06866	4.06191	22.81567	1.95016
5	65.91035	0.73917	1.60198	14.19594	7.39938	17.37755	4.11114	18.50386	1.98333
10	61.10886	0.73507	1.59963	14.14999	7.35723	17.18258	4.00621	14.12390	1.95424
15	56.25914	0.72566	1.59189	14.05394	7.28115	16.87920	3.85682	9.96042	1.91004
20	51.60035	0.70882	1.58400	13.65605	7.08848	16.04433	3.65328	7.02082	1.84458
25	46.93280	0.67505	1.55440	12.72271	6.70449	14.53081	3.39227	5.63006	1.74300
30	42.28259	0.62705	1.48961	11.54322	6.20925	12.92713	3.10463	4.77223	1.60948
35	37.61972	0.57013	1.39523	10.31484	5.64057	11.40267	2.79113	4.05892	1.44623
40	33.05581	0.50905	1.27828	9.09018	5.04060	9.96292	2.47089	3.43237	1.27153
45	28.58063	0.44562	1.13900	7.87826	4.42109	8.58183	2.14875	2.87045	1.09563
50	24.21058	0.38111	0.97955	6.68984	3.79149	7.25288	1.82935	2.36176	0.92460
55	20.03786	0.31772	0.80942	5.55550	3.17411	6.00104	1.52346	1.91092	0.76570
60	16.21487	0.25749	0.64439	4.49779	2.58912	4.84641	1.23972	1.51783	0.62212
65	12.74423	0.20220	0.49612	3.53499	2.05142	3.80240	0.98386	1.17857	0.49467
70	9.80223	0.15499	0.37280	2.71294	1.58885	2.91615	0.76759	0.90079	0.38812
75	7.36923	0.11611	0.27374	2.02994	1.20036	2.18265	0.58895	0.67645	0.30103
80	5.48590	0.08601	0.19869	1.51088	0.89651	1.60675	0.45175	0.50091	0.23441
85	4.10182	0.06367	0.14671	1.15883	0.66961	1.16263	0.35063	0.36318	0.18656

AGE *** INITIAL REGION OF COHORT KYUSHU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.41501	0.87968	1.89698	17.79203	8.86096	12.85845	3.25857	0.81189	23.05646
5	65.99971	0.89536	1.93795	18.14297	9.02812	13.08871	3.30162	0.82587	18.77911
10	61.19756	0.88467	1.93193	18.01141	8.93772	12.92274	3.22195	0.81307	14.47405
15	56.32219	0.86795	1.91776	17.77944	8.77726	12.66828	3.10669	0.79209	10.43273
20	51.61548	0.84532	1.90346	17.14538	8.46098	12.06855	2.96501	0.77166	7.45513
25	46.94822	0.80597	1.86467	15.85805	7.93248	11.06674	2.78395	0.74351	5.89285
30	42.27321	0.74834	1.78320	14.30232	7.29769	9.94304	2.56611	0.69745	4.93506
35	37.60895	0.67920	1.66643	12.72414	6.59872	8.83478	2.31769	0.63653	4.15147
40	33.03522	0.60490	1.52288	11.17194	5.87455	7.76109	2.05805	0.56752	3.47429
45	28.55591	0.52839	1.35392	9.65490	5.13709	6.71534	1.79469	0.49487	2.87671
50	24.18239	0.45113	1.16215	8.17966	4.39386	5.69515	1.53158	0.42182	2.34705
55	20.02799	0.37564	0.95907	6.78107	3.66995	4.72342	1.27819	0.35215	1.88851
60	16.18479	0.30413	0.76303	5.48286	2.98731	3.82105	1.04226	0.28760	1.49655
65	12.72106	0.23858	0.58754	4.30618	2.36290	3.00349	0.82928	0.22900	1.16409
70	9.78251	0.18258	0.44160	3.30238	1.82645	2.30727	0.64855	0.17917	0.89450
75	7.33746	0.13660	0.32459	2.47100	1.37754	1.73144	0.49922	0.13823	0.67884
80	5.49808	0.10121	0.23643	1.84301	1.02858	1.28157	0.38522	0.10609	0.51597
85	4.12392	0.07443	0.17444	1.40880	0.76277	0.92923	0.29968	0.08067	0.39390

APPENDIX C *Continued.*

Expectation of life by place of birth: females.

AGE *** INITIAL REGION OF COHORT HOKKAIDO

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.73938	34.29776	2.99261	22.02321	7.74349	4.47280	0.97089	0.46683	1.77179
5	70.90581	30.05071	3.01263	22.25040	7.83083	4.52630	0.98242	0.47143	1.78109
10	66.02902	25.78132	2.93880	21.93223	7.73211	4.47811	0.97299	0.46312	1.73034
15	61.11254	21.85255	2.82387	21.41814	7.55879	4.39857	0.95705	0.44966	1.65390
20	56.23914	18.53075	2.70137	20.55886	7.22281	4.27001	0.93794	0.43609	1.58132
25	51.42169	15.91494	2.57874	19.26896	6.74513	4.06249	0.91235	0.42158	1.51749
30	46.62145	13.73243	2.42583	17.73364	6.23655	3.78760	0.86982	0.40043	1.43515
35	41.84179	11.84137	2.23715	16.09403	5.69039	3.47137	0.80967	0.37171	1.32611
40	37.10476	10.15299	2.02201	14.40943	5.11333	3.13269	0.73809	0.33787	1.19835
45	32.46129	8.62913	1.79024	12.71244	4.52127	2.78382	0.66016	0.30141	1.06283
50	27.93979	7.23372	1.55295	11.02463	3.92677	2.43201	0.57962	0.26389	0.92620
55	23.56314	5.94535	1.31859	9.35977	3.33970	2.08146	0.49912	0.22655	0.79260
60	19.37332	4.76262	1.09223	7.73904	2.76822	1.73704	0.41989	0.19026	0.66401
65	15.44437	3.69775	0.87855	6.19661	2.22388	1.40596	0.34333	0.15593	0.54235
70	11.88874	2.77192	0.68139	4.78597	1.72429	1.09892	0.27206	0.12418	0.43000
75	8.85941	2.01116	0.50861	3.57539	1.29363	0.83227	0.20984	0.09618	0.33232
80	6.46696	1.43183	0.36927	2.61242	0.94862	0.61772	0.15957	0.07339	0.25414
85	4.70168	1.01775	0.26616	1.89775	0.69004	0.45604	0.12139	0.05644	0.19611

AGE *** INITIAL REGION OF COHORT TOHOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.59762	1.55269	32.38027	28.57295	6.38517	3.28878	0.83954	0.35640	1.22181
5	70.92264	1.56562	28.09154	28.99236	6.47958	3.34100	0.85236	0.36168	1.23850
10	66.05209	1.53023	23.56983	28.76815	6.42970	3.32404	0.84626	0.35897	1.22491
15	61.13147	1.48448	19.19069	28.41752	6.34884	3.29530	0.83620	0.35427	1.20418
20	56.26952	1.42460	15.74282	27.36900	6.13364	3.24086	0.82534	0.34957	1.18370
25	51.44445	1.33396	13.58174	25.34061	5.76117	3.12531	0.80764	0.34187	1.15214
30	46.64306	1.21893	11.98162	22.97440	5.33225	2.94218	0.77286	0.32652	1.09429
35	41.86081	1.09586	10.56226	20.59339	4.85980	2.71154	0.72022	0.30413	1.01360
40	37.12707	0.97173	9.22032	18.26091	4.36398	2.45683	0.65637	0.27719	0.91974
45	32.47559	0.84944	7.93905	15.98535	3.85787	2.18995	0.58631	0.24781	0.81981
50	27.93156	0.73030	6.71857	13.76535	3.35027	1.91759	0.51400	0.21726	0.71822
55	23.52414	0.61503	5.56727	11.60257	2.84864	1.64382	0.44225	0.18667	0.61790
60	19.31693	0.50541	4.49789	9.52678	2.36221	1.37470	0.37221	0.15695	0.52078
65	15.37266	0.40328	3.52058	7.57269	1.89920	1.11559	0.30453	0.12879	0.42801
70	11.82027	0.31124	2.65734	5.81374	1.47605	0.87553	0.24174	0.10281	0.34182
75	8.78234	0.23237	1.92820	4.31442	1.10975	0.66528	0.18668	0.07974	0.26592
80	6.39060	0.17133	1.35912	3.13624	0.81813	0.49668	0.14257	0.06110	0.20544
85	4.64048	0.12829	0.94676	2.27267	0.60285	0.37105	0.10973	0.04750	0.16163

AGE INITIAL REGION OF COHORT KANTO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.96841	0.95306	2.97136	56.95643	5.63330	4.65962	1.37557	0.54456	1.87453
5	71.08379	0.95924	2.98573	52.94113	5.67698	4.70254	1.38393	0.54812	1.88611
10	66.20604	0.93791	2.90768	48.42577	5.57144	4.63178	1.35190	0.53678	1.84277
15	61.28006	0.90662	2.79798	44.03085	5.41462	4.52430	1.30503	0.52061	1.78006
20	56.40288	0.87254	2.69055	39.75088	5.22681	4.38269	1.25762	0.50521	1.71658
25	51.56282	0.82990	2.57017	35.65467	4.98893	4.17982	1.20826	0.48758	1.64348
30	46.75778	0.77129	2.40498	31.85344	4.67666	3.90705	1.14122	0.46108	1.54206
35	41.97336	0.70168	2.20192	28.29138	4.29846	3.58305	1.05410	0.42639	1.41638
40	37.24025	0.62689	1.97692	24.90235	3.88291	3.23286	0.95461	0.38644	1.27726
45	32.59405	0.55027	1.74283	21.65564	3.44900	2.87049	0.84866	0.34416	1.13300
50	28.05373	0.47468	1.50702	18.53027	3.00779	2.50386	0.74087	0.30076	0.98847
55	23.64835	0.40191	1.27557	15.52485	2.56820	2.13856	0.63465	0.25747	0.84714
60	19.43874	0.33303	1.05331	12.67273	2.13925	1.78197	0.53160	0.21560	0.71125
65	15.48542	0.26875	0.84325	10.01383	1.72835	1.44043	0.43275	0.17611	0.58195
70	11.91921	0.21004	0.65066	7.64004	1.34925	1.12534	0.34166	0.13985	0.46238
75	8.85848	0.15860	0.48203	5.62467	1.01684	0.84959	0.26190	0.10768	0.35716
80	6.44200	0.11825	0.34730	4.04448	0.75023	0.62863	0.19807	0.08171	0.27334
85	4.66387	0.08966	0.24905	2.88367	0.55267	0.46354	0.15034	0.06267	0.21226

AGE INITIAL REGION OF COHORT CHUBU

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.87516	0.57529	1.48973	14.52202	46.45664	7.94238	1.37659	0.60586	1.90665
5	71.03989	0.57923	1.50579	14.68886	42.31521	8.02980	1.39024	0.61123	1.91955
10	66.16129	0.56728	1.48405	14.53331	37.79367	7.93414	1.36909	0.60092	1.87882
15	61.24412	0.55182	1.44764	14.29451	33.41311	7.79020	1.33753	0.58610	1.82322
20	56.37027	0.53452	1.40741	13.83991	29.41337	7.53842	1.30258	0.57093	1.76311
25	51.55068	0.51069	1.35545	13.05113	26.04617	7.09788	1.25535	0.55159	1.68242
30	46.75114	0.47647	1.27741	12.03848	23.15876	6.52708	1.18330	0.52190	1.56773
35	41.97040	0.43489	1.17777	10.92116	20.51942	5.91073	1.09121	0.48294	1.43228
40	37.24029	0.38954	1.06374	9.76965	18.02407	5.28199	0.98776	0.43770	1.28584
45	32.59409	0.34281	0.94093	8.61187	15.64044	4.65481	0.87803	0.38939	1.13580
50	28.05310	0.29663	0.81530	7.46168	13.35182	4.03507	0.76641	0.33980	0.98639
55	23.66132	0.25229	0.69199	6.33250	11.16733	3.42874	0.65653	0.29065	0.84129
60	19.44996	0.21002	0.57269	5.23406	9.09898	2.84008	0.54936	0.24284	0.70193
65	15.50145	0.17034	0.45948	4.19004	7.18592	2.28051	0.44681	0.19766	0.57067
70	11.92414	0.13363	0.35476	3.23388	5.47721	1.76645	0.35199	0.15612	0.45008
75	8.86713	0.10136	0.26328	2.41074	4.03379	1.32305	0.26949	0.11978	0.34564
80	6.43131	0.07572	0.18931	1.75303	2.89114	0.96701	0.20277	0.09032	0.26203
85	4.65747	0.05788	0.13584	1.27589	2.05858	0.70487	0.15342	0.06907	0.20193

APPENDIX C *Continued.*

AGE *** INITIAL REGION OF COHORT KINKI

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.99929	0.46208	0.87827	10.85523	6.62182	48.22138	3.33755	1.60046	3.02250
5	71.09510	0.46500	0.88628	10.94833	6.66957	44.13447	3.35394	1.60746	3.03005
10	66.20417	0.45412	0.87362	10.77374	6.54130	39.78914	3.26999	1.56322	2.93904
15	61.27770	0.43893	0.85460	10.51517	6.35480	35.64596	3.15193	1.49989	2.81644
20	56.39779	0.42404	0.83540	10.16597	6.12238	31.68976	3.02772	1.43798	2.69454
25	51.57597	0.40584	0.81211	9.67141	5.82232	28.05432	2.87928	1.36879	2.56189
30	46.79020	0.37975	0.77366	9.01760	5.43857	24.83490	2.68118	1.27709	2.38746
35	42.01490	0.34743	0.71921	8.24385	4.98503	21.91910	2.44983	1.17021	2.18025
40	37.29990	0.31167	0.65394	7.41605	4.49326	19.21094	2.20228	1.05402	1.95775
45	32.66375	0.27440	0.58173	6.56419	3.98085	16.65175	1.94747	0.93327	1.73008
50	28.13790	0.23733	0.50673	5.70712	3.46309	14.21617	1.69248	0.81112	1.50385
55	23.74839	0.20150	0.43207	4.85618	2.95030	11.89255	1.44209	0.69034	1.28335
60	19.55056	0.16757	0.35945	4.02676	2.45133	9.69947	1.20003	0.57413	1.07182
65	15.59646	0.13598	0.28983	3.23261	1.97325	7.65962	0.96921	0.46485	0.87111
70	12.00400	0.10684	0.22476	2.50103	1.53120	5.83170	0.75758	0.36493	0.68595
75	8.93524	0.08112	0.16747	1.86909	1.14762	4.29107	0.57524	0.27810	0.52553
80	6.47634	0.06043	0.12056	1.36039	0.83670	3.06586	0.42813	0.20779	0.39648
85	4.67403	0.04587	0.08637	0.99050	0.60866	2.16311	0.31927	0.15702	0.30324

AGE *** INITIAL REGION OF COHORT CHUGOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	75.01444	0.36551	0.93156	11.92916	5.38869	16.43711	34.95939	1.77735	3.22566
5	71.17693	0.36981	0.94087	12.06023	5.45456	16.63938	30.68820	1.78129	3.24260
10	66.30088	0.36592	0.92730	11.92113	5.40824	16.49741	26.30249	1.72167	3.15673
15	61.38055	0.36024	0.90674	11.71251	5.33410	16.26522	22.12577	1.64114	3.03483
20	56.49999	0.35457	0.88555	11.34662	5.18798	15.63483	18.62978	1.55870	2.90195
25	51.67981	0.34446	0.86006	10.73130	4.93864	14.46309	16.12032	1.47264	2.74931
30	46.89242	0.32543	0.81905	9.93067	4.61107	13.09776	14.18116	1.37017	2.55711
35	42.11766	0.29956	0.76110	9.02737	4.22501	11.72759	12.49286	1.25166	2.33251
40	37.40183	0.26996	0.69172	8.08821	3.80950	10.39707	10.93104	1.12309	2.09124
45	32.76481	0.23846	0.61528	7.13862	3.37762	9.10318	9.45687	0.98999	1.84479
50	28.22716	0.20682	0.53573	6.19136	2.93921	7.84335	8.05442	0.85628	1.59999
55	23.83796	0.17625	0.45669	5.25934	2.50422	6.62290	6.72993	0.72583	1.36279
60	19.63136	0.14709	0.37952	4.35131	2.07896	5.44918	5.48933	0.60066	1.15531
65	15.67469	0.11971	0.30554	3.48386	1.67203	4.34113	4.34896	0.48321	0.92024
70	12.07937	0.09422	0.23638	2.68581	1.29569	3.33172	3.33704	0.37635	0.72214
75	8.98924	0.07151	0.17526	1.99443	0.96741	2.46516	2.48193	0.28379	0.54976
80	6.52420	0.05328	0.12556	1.44137	0.70250	1.77363	1.80637	0.20957	0.41192
85	4.69052	0.04022	0.08889	1.03321	0.50520	1.25647	1.30106	0.15503	0.31046

AGE *** INITIAL REGION OF COHORT SHIKOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.64857	0.42475	0.84552	11.37521	6.02106	20.14050	4.12226	29.56221	2.15907
5	71.00587	0.42920	0.85888	11.55232	6.11228	20.42952	4.16350	25.27508	2.18509
10	66.14111	0.42138	0.85217	11.48246	6.06231	20.23657	4.07255	20.86102	2.15266
15	61.23563	0.41064	0.84053	11.36778	5.97982	19.96525	3.93842	16.64667	2.10651
20	56.36830	0.39897	0.82812	11.06294	5.79706	19.12060	3.76331	13.34189	2.05541
25	51.56277	0.38334	0.80831	10.46407	5.48940	17.59731	3.53545	11.30320	1.98169
30	46.78349	0.35983	0.77098	9.67775	5.11002	15.87166	3.26349	9.86562	1.86416
35	42.02260	0.32980	0.71687	8.79931	4.67479	14.17573	2.96488	8.64764	1.71358
40	37.31390	0.29583	0.65176	7.88705	4.20880	12.54217	2.65353	7.52805	1.54672
45	32.68571	0.26037	0.58008	6.96320	3.72687	10.96439	2.33748	6.47949	1.37383
50	28.15152	0.22500	0.50537	6.03872	3.23924	9.43342	2.02310	5.48702	1.19964
55	23.76683	0.19096	0.43107	5.12840	2.75762	7.95615	1.71775	4.55620	1.02867
60	19.56381	0.15865	0.35856	4.24155	2.28795	6.53803	1.42426	3.69189	0.86293
65	15.61450	0.12861	0.28929	3.39612	1.83973	5.20137	1.14776	2.90660	0.70501
70	12.02677	0.10091	0.22452	2.61961	1.42590	3.98569	0.89570	2.21650	0.55795
75	8.95074	0.07642	0.16718	1.94903	1.06607	2.96663	0.67810	1.63838	0.42893
80	6.49570	0.05683	0.12035	1.41230	0.77566	2.11808	0.50337	1.18421	0.32492
85	4.69297	0.04294	0.08602	1.01990	0.56148	1.50390	0.37326	0.85634	0.24913

AGE *** INITIAL REGION OF COHORT KYUSHU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.72233	0.59052	1.11678	16.08894	9.57522	14.83692	3.36658	0.92483	28.22254
5	70.99787	0.59512	1.13201	16.30523	9.70548	15.02556	3.39213	0.93332	23.90903
10	66.12665	0.57992	1.12143	16.15025	9.60696	14.84911	3.30906	0.91456	19.59535
15	61.21665	0.55861	1.10443	15.90596	9.43800	14.56903	3.19002	0.88797	15.56263
20	56.35567	0.53770	1.08685	15.37107	9.03317	13.94414	3.04219	0.86116	12.47939
25	51.54699	0.51355	1.05958	14.41537	8.38729	12.88105	2.86163	0.82861	10.59991
30	46.76228	0.47960	1.00870	13.23637	7.69301	11.67761	2.64900	0.78112	9.23687
35	41.99333	0.43767	0.93627	11.97122	6.96695	10.47226	2.41154	0.72114	8.07627
40	37.27872	0.39171	0.85004	10.68531	6.22493	9.29272	2.16209	0.65318	7.01874
45	32.64532	0.34419	0.75571	9.40118	5.47766	8.14016	1.90765	0.58093	6.03784
50	28.12123	0.29719	0.65818	8.13243	4.73579	7.01660	1.65426	0.50696	5.11981
55	23.73536	0.25194	0.56122	6.88799	4.00856	5.92440	1.40661	0.43342	4.26122
60	19.53883	0.20900	0.46681	5.68340	3.30681	4.87541	1.16817	0.36206	3.46717
65	15.58989	0.16879	0.37624	4.53744	2.64204	3.88468	0.94231	0.29431	2.74407
70	12.00968	0.13184	0.29171	3.49095	2.03577	2.98462	0.73628	0.23194	2.10658
75	8.94534	0.09950	0.21714	2.59134	1.51399	2.21492	0.55840	0.17730	1.57276
80	6.49861	0.07375	0.15634	1.87189	1.09485	1.59932	0.41522	0.13291	1.15434
85	4.69610	0.05547	0.11178	1.34365	0.78500	1.14155	0.30814	0.10043	0.85008

APPENDIX C *Continued.*

Expectation of life by place of residence: males.

AGE REGION OF RESIDENCE AT AGE X HOKKAIDO

***	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.49703	27.06645	3.54750	23.69565	6.95165	4.94270	1.25734	0.46589	1.56985
5	65.95844	25.05236	3.40750	23.17223	6.64823	4.61629	1.17421	0.43724	1.45038
10	61.12975	22.43987	3.23147	22.25793	6.17129	4.24415	1.09479	0.40506	1.28519
15	56.24384	18.96552	3.11073	21.65556	5.84629	4.02438	1.04210	0.38309	1.21816
20	51.42997	21.54697	2.72144	16.70172	4.81122	3.25855	0.88817	0.34132	1.16058
25	46.67564	26.82456	1.99676	10.96370	3.45945	2.05274	0.56120	0.24026	0.97697
30	41.95648	27.80961	1.47998	7.59519	2.47826	1.32840	0.34619	0.14730	0.77155
35	37.29447	26.99902	1.09880	5.59912	1.87652	0.87649	0.22858	0.09170	0.52423
40	32.72369	25.61278	0.74972	3.99988	1.26700	0.58748	0.15632	0.05145	0.29908
45	28.27865	23.52025	0.49169	2.78487	0.80719	0.39503	0.10762	0.02739	0.14460
50	23.97275	20.90043	0.32674	1.81225	0.51265	0.25734	0.05827	0.02061	0.08445
55	19.83897	17.95557	0.21845	1.10764	0.31267	0.15656	0.02173	0.01670	0.04965
60	16.08652	14.90442	0.13416	0.71209	0.19338	0.08373	0.01093	0.01494	0.03286
65	12.67735	11.95313	0.07978	0.44970	0.11670	0.03863	0.00401	0.01408	0.02132
70	9.77502	9.30700	0.05146	0.28826	0.07690	0.02591	0.00234	0.00939	0.01376
75	7.40178	7.06275	0.03634	0.21073	0.05570	0.01808	0.00160	0.00674	0.00985
80	5.48722	5.21458	0.02752	0.18002	0.04469	0.01241	0.00035	0.00346	0.00419
85	4.17469	3.87146	0.02829	0.20570	0.04755	0.01237	0.00043	0.00398	0.00490

AGE REGION OF RESIDENCE AT AGE X TOHOKU

***	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.34449	2.22232	27.60581	27.04445	6.06367	3.80637	1.08789	0.38995	1.12403
5	65.90690	2.18630	24.89413	26.87529	5.84230	3.64323	1.03517	0.36884	1.06166
10	61.06614	2.17102	20.83320	26.52971	5.65051	3.51137	0.99418	0.35597	1.02019
15	56.17323	2.16720	16.30286	26.37027	5.56193	3.44776	0.97449	0.34712	1.00161
20	51.29611	2.43846	19.86901	19.91058	4.60538	2.65141	0.75963	0.27410	0.78755
25	46.42178	2.42558	25.34667	12.78181	3.24028	1.51730	0.43646	0.17035	0.50333
30	41.63996	2.00191	26.41754	9.27414	2.35767	0.91889	0.25446	0.10017	0.31518
35	36.91697	1.60522	25.55805	7.03444	1.73394	0.59735	0.13984	0.05878	0.18936
40	32.31356	1.21236	23.91041	5.29932	1.25573	0.40405	0.08395	0.03535	0.11438
45	27.79795	0.88319	21.57788	4.01195	0.90654	0.28274	0.04870	0.02094	0.06600
50	23.44886	0.61335	19.08427	2.84044	0.63163	0.19091	0.03112	0.01414	0.04299
55	19.28812	0.38513	16.48768	1.82510	0.41102	0.12284	0.01952	0.00902	0.02801
60	15.44993	0.18928	13.97945	0.96163	0.21458	0.07178	0.01093	0.00634	0.01594
65	12.05408	0.07519	11.42907	0.41292	0.08500	0.03592	0.00524	0.00478	0.00597
70	9.27689	0.02935	8.98729	0.17510	0.05356	0.02280	0.00290	0.00268	0.00321
75	7.00368	0.01611	6.82789	0.10051	0.03740	0.01597	0.00192	0.00177	0.00211
80	5.26104	0.01210	5.13462	0.07331	0.02778	0.01258	0.00117	0.00110	0.00038
85	4.08061	0.01269	3.94955	0.07298	0.02978	0.01486	0.00020	0.00012	0.00044

AGE REGION OF RESIDENCE AT AGE X KANTO
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	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.76816	1.29739	3.71072	50.00975	6.13415	5.00988	1.50694	0.52658	1.57276
5	66.15850	1.23713	3.54173	47.91581	5.65522	4.51337	1.38513	0.48053	1.42958
10	61.35280	1.19108	3.42302	44.36892	5.22347	4.07393	1.28272	0.44520	1.32446
15	56.45318	1.15920	3.40165	40.12870	4.99670	3.83074	1.22622	0.42997	1.28000
20	51.73981	1.03773	3.24603	36.66637	4.52297	3.46558	1.16402	0.40896	1.22815
25	47.02086	0.75119	2.81299	35.40842	3.36499	2.50726	0.87476	0.31514	0.98610
30	42.31598	0.50062	2.29528	34.17410	2.22239	1.64234	0.57516	0.21698	0.68911
35	37.62694	0.33970	1.85034	31.92273	1.45731	1.07777	0.36723	0.14408	0.46778
40	33.02463	0.21951	1.39237	29.11937	0.94720	0.69124	0.23856	0.09547	0.32091
45	28.53318	0.13692	0.97064	25.94608	0.61116	0.43315	0.15412	0.06193	0.21918
50	24.13859	0.07611	0.55630	22.60434	0.38097	0.25114	0.09027	0.03880	0.14065
55	19.97421	0.03976	0.26290	19.14968	0.23424	0.13352	0.04686	0.02195	0.08530
60	16.10528	0.02254	0.13070	15.62771	0.14923	0.07126	0.02971	0.01465	0.05947
65	12.65852	0.01270	0.06151	12.38820	0.09030	0.03532	0.01925	0.00958	0.04187
70	9.70591	0.00828	0.04003	9.53701	0.05476	0.01974	0.01252	0.00612	0.02746
75	7.31320	0.00597	0.02933	7.19417	0.03770	0.01287	0.00896	0.00438	0.01981
80	5.54590	0.00455	0.02301	5.45689	0.02829	0.00912	0.00597	0.00280	0.01528
85	4.28609	0.00464	0.02497	4.18898	0.03048	0.00962	0.00677	0.00278	0.01784

AGE REGION OF RESIDENCE AT AGE X CHUBU
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	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.76033	0.88967	2.24735	16.15894	39.23804	7.61880	1.51573	0.57625	1.51554
5	66.20604	0.85010	2.16069	15.56653	37.01145	7.27239	1.41622	0.54289	1.38577
10	61.39516	0.81876	2.09789	14.94835	33.46992	6.91998	1.35291	0.50714	1.30021
15	56.52088	0.79931	2.05971	14.39966	29.27845	6.74178	1.29442	0.49233	1.25523
20	51.84413	0.62144	1.74797	10.22259	31.41963	5.21394	1.07945	0.42603	1.11307
25	47.21673	0.36295	1.27718	5.67971	34.93107	3.23513	0.66722	0.28291	0.78057
30	42.55604	0.23733	0.99055	3.68796	34.33161	2.17610	0.42287	0.19416	0.51546
35	37.88840	0.15550	0.77143	2.44245	32.31820	1.46168	0.27183	0.13000	0.33731
40	33.31541	0.10043	0.55640	1.59892	29.64039	0.96370	0.15923	0.08141	0.21493
45	28.80364	0.06678	0.38199	1.06542	26.36066	0.64942	0.09050	0.04828	0.14060
50	24.37854	0.04322	0.24021	0.66281	22.82807	0.41913	0.05761	0.02852	0.09898
55	20.17272	0.02724	0.13399	0.38912	19.24628	0.25594	0.03632	0.01559	0.06824
60	16.27220	0.01701	0.06584	0.24173	15.72195	0.15002	0.02528	0.00954	0.04283
65	12.75731	0.01012	0.02265	0.14625	12.45856	0.08184	0.01148	0.00480	0.02162
70	9.77597	0.00664	0.01401	0.08924	9.59121	0.05221	0.00696	0.00266	0.01303
75	7.30522	0.00467	0.00944	0.06014	7.18003	0.03596	0.00471	0.00171	0.00856
80	5.42986	0.00350	0.00563	0.04391	5.34436	0.02666	0.00181	0.00013	0.00387
85	3.98770	0.00372	0.00585	0.04469	3.89861	0.02844	0.00213	0.00015	0.00411

APPENDIX C *Continued.*

AGE *** REGION OF RESIDENCE AT AGE X KINKI

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.92479	0.66178	1.52501	12.54941	7.50340	40.97113	3.12568	1.26702	2.32137
5	66.21740	0.60971	1.40765	11.43161	6.97181	39.63795	2.89048	1.18326	2.08494
10	61.40166	0.56318	1.30731	10.47799	6.51981	36.72782	2.73432	1.11840	1.95284
15	56.53285	0.53511	1.24515	9.86724	6.28608	32.93520	2.67303	1.10273	1.88833
20	51.78978	0.45145	1.06745	8.05677	5.48482	31.25296	2.56054	1.09255	1.82324
25	47.09962	0.29319	0.74536	5.31373	4.07663	32.15999	2.06641	0.90259	1.54171
30	42.42745	0.18679	0.52886	3.55387	2.73572	32.26407	1.39615	0.65340	1.10858
35	37.76070	0.11899	0.36998	2.51212	1.85363	30.95048	0.95183	0.45321	0.75045
40	33.19285	0.07968	0.25306	1.49017	1.23067	28.66952	0.63064	0.31267	0.52643
45	28.71059	0.05309	0.16369	0.94327	0.81557	25.72495	0.41834	0.21869	0.37300
50	24.33566	0.02966	0.08806	0.53808	0.51358	22.46559	0.28725	0.16188	0.25155
55	20.17078	0.01473	0.03628	0.27406	0.30824	19.06954	0.19190	0.11565	0.16038
60	16.32737	0.00972	0.01803	0.15314	0.19998	15.66582	0.10889	0.06988	0.10191
65	12.81426	0.00667	0.00793	0.08626	0.12927	12.42820	0.05654	0.03659	0.06279
70	9.85992	0.00462	0.00496	0.04865	0.08275	9.61769	0.03583	0.02457	0.04086
75	7.39763	0.00346	0.00354	0.03235	0.05962	7.22632	0.02536	0.01781	0.02917
80	5.44633	0.00232	0.00134	0.02404	0.04576	5.31848	0.01884	0.01405	0.02150
85	4.02341	0.00281	0.00161	0.02456	0.04681	3.89133	0.01867	0.01501	0.02260

AGE *** REGION OF RESIDENCE AT AGE X CHUGOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.56469	0.70013	1.70920	14.83801	6.65391	13.47871	27.97269	1.47123	2.74080
5	66.05007	0.68417	1.64898	14.34658	6.40464	13.25488	25.77960	1.35104	2.58018
10	61.23302	0.66348	1.57678	13.80247	6.15382	12.89326	22.43053	1.25007	2.46260
15	56.33201	0.65391	1.54094	13.54059	6.04673	12.69600	18.23881	1.21575	2.39928
20	51.60324	0.48009	1.15214	9.51250	4.46211	9.80176	22.68764	1.27245	2.23456
25	46.96125	0.23323	0.60542	4.79515	2.56324	6.10923	29.83786	1.10551	1.71160
30	42.32334	0.14106	0.39685	2.96524	1.57622	4.02916	31.17560	0.79150	1.24971
35	37.71578	0.07891	0.25357	1.83240	1.02344	2.85891	30.31760	0.48606	0.86488
40	33.20476	0.04225	0.15060	1.11199	0.67964	1.96766	28.38997	0.27126	0.59138
45	28.77447	0.02302	0.07885	0.68125	0.45635	1.38122	25.60640	0.14686	0.40052
50	24.47452	0.01608	0.03972	0.39010	0.28779	0.94431	22.42249	0.10387	0.27015
55	20.35715	0.01110	0.01441	0.20589	0.16567	0.59977	19.11983	0.07135	0.16913
60	16.57113	0.00662	0.00769	0.12735	0.09644	0.33724	15.85692	0.04392	0.09495
65	13.09695	0.00404	0.00339	0.07547	0.04924	0.16112	12.73913	0.02108	0.04348
70	10.09077	0.00270	0.00178	0.04325	0.02813	0.08868	9.88928	0.01191	0.02504
75	7.59966	0.00191	0.00115	0.02839	0.01853	0.05698	7.46849	0.00791	0.01631
80	5.66930	0.00143	0.00013	0.01740	0.00896	0.03905	5.58842	0.00362	0.01029
85	4.13435	0.00156	0.00012	0.01515	0.00815	0.03345	4.06317	0.00317	0.00959

AGE REGION OF RESIDENCE AT AGE X SHIKOKU

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	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.33603	0.72348	1.56709	13.89736	7.25169	17.06866	4.06191	22.81567	1.95016
5	65.88827	0.72150	1.55411	13.80118	7.15593	16.87671	3.79537	20.10524	1.87822
10	61.07116	0.68051	1.50887	13.51916	6.99651	16.57289	3.65736	16.34246	1.81340
15	56.21675	0.66815	1.49482	13.40346	6.94129	16.44467	3.54039	11.92927	1.79469
20	51.35456	0.46556	1.06598	9.22121	5.14471	13.16543	3.42350	17.37805	1.49011
25	46.56955	0.22801	0.51034	4.27127	3.22522	8.84401	2.79203	25.71040	0.98829
30	41.89029	0.15447	0.28696	2.39059	2.26813	6.42872	1.98188	27.73171	0.64783
35	37.25352	0.11949	0.19480	1.64740	1.65635	4.83540	1.36659	27.01399	0.41950
40	32.76080	0.07324	0.11986	1.07584	1.18089	3.53380	0.89918	25.58380	0.29419
45	28.35653	0.03475	0.07122	0.71323	0.82629	2.56830	0.58121	23.35774	0.20378
50	24.06003	0.01822	0.04061	0.42627	0.53465	1.77204	0.33698	20.78230	0.14897
55	19.99881	0.00621	0.01374	0.22623	0.29678	1.09886	0.16838	18.08535	0.10327
60	16.21231	0.00598	0.00658	0.12973	0.15819	0.58565	0.08252	15.17914	0.06452
65	12.78896	0.00647	0.00297	0.07154	0.07630	0.27076	0.03670	12.28902	0.03520
70	9.90373	0.00433	0.00157	0.04228	0.04406	0.12669	0.02214	9.66264	0.02002
75	7.45780	0.00304	0.00102	0.02840	0.02876	0.07363	0.01507	7.29450	0.01338
80	5.41681	0.00216	0.00014	0.01742	0.01552	0.04470	0.00688	5.32421	0.00578
85	3.97679	0.00242	0.00015	0.01594	0.01493	0.04287	0.00767	3.88759	0.00521

AGE REGION OF RESIDENCE AT AGE X KYUSHU

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	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	69.41501	0.87968	1.89698	17.79203	8.86096	12.85845	3.25857	0.81189	23.05646
5	65.98350	0.84131	1.86307	17.52619	8.72777	12.61892	3.07924	0.77929	20.54772
10	61.17036	0.80639	1.81495	17.20304	8.51859	12.18585	2.93338	0.74228	16.96588
15	56.28512	0.78533	1.78846	17.00437	8.34300	11.96588	2.89550	0.72840	12.77417
20	51.42227	0.65242	1.39735	12.98500	6.79693	10.21418	2.93763	0.68909	15.74967
25	46.58194	0.42067	0.74489	7.59436	4.89501	7.59871	2.60511	0.51429	22.40889
30	41.86575	0.28858	0.46385	4.97871	3.77686	5.82244	1.89975	0.34097	24.29459
35	37.20968	0.18845	0.28991	3.56580	2.93806	4.50186	1.30695	0.23918	24.17947
40	32.64272	0.11069	0.16563	2.51277	2.18871	3.41398	0.92240	0.16598	23.16257
45	28.20425	0.06063	0.08374	1.76037	1.56934	2.53119	0.64398	0.11359	21.43941
50	23.89266	0.03397	0.04033	1.11846	1.01358	1.63908	0.41346	0.07118	19.56260
55	19.83280	0.01712	0.01569	0.63222	0.56834	0.91073	0.24310	0.03684	17.41076
60	16.09852	0.00811	0.00791	0.33908	0.27958	0.45420	0.13835	0.02020	14.85109
65	12.73409	0.00262	0.00439	0.16629	0.11496	0.19634	0.07063	0.01098	12.16788
70	9.90583	0.00175	0.00233	0.09357	0.05224	0.08370	0.03863	0.00640	9.62719
75	7.50090	0.00126	0.00152	0.06408	0.03099	0.04711	0.02457	0.00432	7.32704
80	5.60569	0.00100	0.00031	0.05017	0.01942	0.03175	0.01687	0.00242	5.48374
85	4.11190	0.00111	0.00033	0.04857	0.01803	0.02880	0.01506	0.00218	3.99782

APPENDIX C *Continued.*

Expectation of life by place of residence: female.

AGE — REGION OF RESIDENCE AT AGE X: HOKKAIDO

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.73938	34.29776	2.99261	22.02321	7.74349	4.47280	0.97089	0.46683	1.77179
5	70.89023	33.15127	2.76280	20.64771	7.41286	4.04520	0.87144	0.42302	1.57593
10	65.99764	31.15227	2.55989	19.21032	6.95845	3.56234	0.79238	0.37170	1.39029
15	61.06808	28.52725	2.41806	17.95612	6.55040	3.27262	0.72728	0.34470	1.27165
20	56.13758	31.23044	2.28504	14.17617	3.97166	2.42775	0.60146	0.28510	1.15996
25	51.28270	32.41855	1.95527	10.33775	3.05437	1.75060	0.47379	0.23180	1.06057
30	46.43966	32.82968	1.45103	7.37264	2.33601	1.18224	0.31271	0.14872	0.80663
35	41.62781	31.77370	1.10549	5.47988	1.66204	0.81298	0.20222	0.09664	0.49486
40	36.84613	29.97463	0.74159	3.93853	1.13045	0.56218	0.13798	0.06109	0.29968
45	32.17931	27.45223	0.48326	2.80679	0.74232	0.38948	0.09239	0.03758	0.17527
50	27.68159	24.25855	0.34648	2.04841	0.52968	0.28381	0.06225	0.02916	0.12324
55	23.35390	20.88557	0.25811	1.47773	0.37655	0.20327	0.03986	0.02356	0.08924
60	19.20493	17.46454	0.20364	1.04473	0.24348	0.13795	0.02607	0.01824	0.06626
65	15.33203	14.19754	0.15997	0.67854	0.13564	0.08656	0.01505	0.01396	0.04476
70	11.81064	11.13227	0.09682	0.40276	0.07821	0.05586	0.00945	0.00890	0.02637
75	8.87323	8.43836	0.06128	0.25732	0.04901	0.03853	0.00612	0.00582	0.01678
80	6.58041	6.28305	0.04090	0.18345	0.03009	0.02829	0.00332	0.00316	0.00816
85	4.85706	4.59434	0.03008	0.16573	0.02606	0.02828	0.00315	0.00302	0.00639

AGE — REGION OF RESIDENCE AT AGE X: TOHOKU

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.59762	1.55269	32.38027	28.57295	6.38517	3.28878	0.83954	0.35640	1.22181
5	70.91314	1.40597	29.87814	28.14532	6.16591	3.06106	0.78239	0.33300	1.14135
10	66.03628	1.32282	26.13735	27.60064	5.96957	2.87754	0.73481	0.31662	1.07694
15	61.11184	1.29342	21.76535	27.30271	5.86427	2.81056	0.71965	0.30549	1.05038
20	56.15584	1.26826	28.11205	19.69652	3.60709	1.94781	0.53138	0.22450	0.76823
25	51.23080	0.88575	35.33116	10.76738	2.23928	1.10710	0.31463	0.12895	0.45655
30	46.36668	0.61335	37.34241	6.08622	1.30277	0.54707	0.16554	0.06273	0.24658
35	41.55743	0.45377	35.39213	4.19720	0.88436	0.35162	0.08638	0.04267	0.14930
40	36.80236	0.34573	32.28366	3.12987	0.61441	0.25582	0.05077	0.02395	0.09815
45	32.11849	0.26629	28.67736	2.43967	0.43647	0.19492	0.02810	0.01133	0.06435
50	27.54232	0.18886	25.05047	1.77932	0.31360	0.13697	0.02087	0.00881	0.04342
55	23.09878	0.12209	21.43327	1.20098	0.21336	0.08309	0.01520	0.00703	0.02377
60	18.87879	0.07764	17.84289	0.75534	0.12383	0.05065	0.00915	0.00428	0.01500
65	14.94279	0.04475	14.38262	0.42031	0.05420	0.02771	0.00338	0.00175	0.00807
70	11.43008	0.02288	11.13199	0.22288	0.03052	0.01519	0.00168	0.00087	0.00406
75	8.46270	0.01243	8.29219	0.12707	0.01837	0.00892	0.00094	0.00048	0.00229
80	6.16233	0.00747	6.05928	0.08263	0.00928	0.00320	0.00013	0.00007	0.00029
85	4.52050	0.00586	4.43356	0.06938	0.00808	0.00320	0.00011	0.00006	0.00025

AGE *** REGION OF RESIDENCE AT AGE X KANTO

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.96841	0.95306	2.97136	56.95643	5.63330	4.65962	1.37557	0.54456	1.87453
5	71.08771	0.86043	2.71533	55.23037	4.92506	3.98847	1.18530	0.47717	1.70559
10	66.21318	0.77768	2.52978	52.07630	4.36412	3.42350	1.03898	0.43495	1.56786
15	61.28805	0.72589	2.46557	48.09642	4.03496	3.09676	0.95799	0.40948	1.50097
20	56.41303	0.67472	2.31325	44.20387	3.71195	2.82448	0.90641	0.39184	1.38653
25	51.57765	0.51393	1.71656	42.25134	2.85275	2.15245	0.73188	0.29108	1.06766
30	46.77689	0.34721	1.11715	40.69139	1.85982	1.38949	0.46902	0.18852	0.71429
35	41.99378	0.23864	0.70384	38.06791	1.20888	0.89428	0.29152	0.11259	0.47613
40	37.25839	0.15274	0.48134	34.63419	0.81816	0.58318	0.18246	0.07848	0.32786
45	32.61175	0.10010	0.34292	30.79811	0.57248	0.38886	0.11789	0.05555	0.23584
50	28.06876	0.07935	0.25423	26.70967	0.42744	0.27800	0.09156	0.04085	0.18765
55	23.65387	0.06620	0.19066	22.61560	0.32361	0.20364	0.07316	0.03031	0.15068
60	19.43900	0.05488	0.14224	18.65202	0.24259	0.15422	0.05302	0.02452	0.11550
65	15.47881	0.04287	0.09765	14.92576	0.16847	0.11095	0.03387	0.01921	0.08004
70	11.91669	0.02561	0.05776	11.59067	0.09883	0.06567	0.01964	0.01110	0.04741
75	8.84675	0.01605	0.03541	8.66647	0.06050	0.04035	0.01203	0.00664	0.02929
80	6.43785	0.01041	0.02219	6.31173	0.03846	0.02576	0.00740	0.00371	0.01818
85	4.65819	0.00811	0.01881	4.55584	0.03122	0.02012	0.00635	0.00298	0.01475

AGE *** REGION OF RESIDENCE AT AGE X CHUBU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.87516	0.57529	1.48973	14.52202	46.45664	7.94238	1.37659	0.60586	1.90665
5	71.03822	0.49965	1.39332	13.58204	44.65985	7.39128	1.23829	0.54602	1.72776
10	66.15829	0.45820	1.28483	12.73931	41.50530	6.90777	1.12924	0.50721	1.62644
15	61.24122	0.43787	1.22317	12.25222	37.53163	6.66029	1.08027	0.48656	1.56921
20	56.36258	0.37020	1.04426	9.11870	37.73712	5.34641	0.93425	0.42492	1.38674
25	51.54450	0.25624	0.71208	5.93423	39.57136	3.28810	0.61516	0.29100	0.87634
30	46.73974	0.16139	0.43960	3.52387	39.52865	2.01758	0.35041	0.18507	0.53318
35	41.95567	0.10411	0.29558	2.29074	37.30533	1.30486	0.22174	0.10731	0.32600
40	37.21833	0.06669	0.17677	1.54921	34.11391	0.89705	0.13772	0.06711	0.20986
45	32.56507	0.04648	0.10117	1.10556	30.38964	0.65583	0.08779	0.04196	0.13663
50	28.01340	0.03860	0.07402	0.82250	26.38367	0.49770	0.06632	0.03137	0.09922
55	23.62741	0.03338	0.05550	0.60928	22.40861	0.37485	0.05057	0.02334	0.07188
60	19.40414	0.02616	0.03904	0.43194	18.53965	0.26437	0.03592	0.01542	0.05164
65	15.45891	0.01849	0.02314	0.27695	14.90988	0.16530	0.02221	0.00948	0.03346
70	11.87741	0.01068	0.01286	0.15367	11.57052	0.09259	0.01220	0.00548	0.01941
75	8.82748	0.00637	0.00748	0.08921	8.64866	0.05381	0.00702	0.00329	0.01164
80	6.38520	0.00415	0.00303	0.05443	6.28148	0.03285	0.00255	0.00132	0.00539
85	4.63386	0.00342	0.00288	0.04389	4.54815	0.02703	0.00240	0.00124	0.00483

APPENDIX C *Continued.*

AGE	REGION OF RESIDENCE AT AGE X					KINKI			
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	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.99929	0.46208	0.87827	10.85523	6.62182	48.22138	3.33755	1.60046	3.02250
5	71.09854	0.39341	0.74631	9.37634	5.83527	47.49233	3.03437	1.49064	2.72988
10	66.20743	0.32912	0.65556	8.16460	5.23830	45.05863	2.81097	1.39307	2.55717
15	61.27991	0.30948	0.60127	7.45326	4.87978	41.51417	2.69854	1.35488	2.46853
20	56.39878	0.28620	0.53431	6.48253	4.35175	38.58136	2.56240	1.30446	2.29578
25	51.57629	0.20557	0.39181	4.91688	3.29010	38.21229	1.85150	0.94947	1.75869
30	46.79511	0.13269	0.23181	3.10872	2.16727	38.11071	1.20039	0.66737	1.17615
35	42.01924	0.08283	0.14070	1.94532	1.41863	36.37965	0.78966	0.46437	0.79807
40	37.31151	0.05149	0.08195	1.26706	0.92362	33.56822	0.53363	0.32994	0.55562
45	32.67876	0.03256	0.04449	0.83973	0.61883	30.13273	0.37447	0.23694	0.39901
50	28.16546	0.02356	0.03112	0.58911	0.46704	26.29392	0.28013	0.17211	0.30847
55	23.77814	0.01847	0.02182	0.42259	0.36014	22.38108	0.20735	0.12629	0.24038
60	19.59097	0.01703	0.01644	0.31779	0.26503	18.55521	0.14191	0.09886	0.17870
65	15.63177	0.01576	0.01151	0.22944	0.17863	14.91361	0.08654	0.07461	0.12167
70	12.01966	0.00925	0.00642	0.13901	0.10480	11.59238	0.05035	0.04500	0.07245
75	8.95101	0.00541	0.00391	0.08928	0.06452	8.68329	0.03087	0.02821	0.04551
80	6.46336	0.00321	0.00102	0.05909	0.03987	6.29494	0.01905	0.01811	0.02806
85	4.65418	0.00232	0.00094	0.04728	0.03169	4.52209	0.01499	0.01352	0.02136

AGE	REGION OF RESIDENCE AT AGE X						CHUGOKU		
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	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	75.01444	0.36551	0.93156	11.92916	5.38869	16.43711	34.95939	1.77735	3.22566
5	71.18822	0.32804	0.82321	10.89999	5.03988	16.27013	33.26615	1.57842	2.98240
10	66.32186	0.29809	0.74696	10.08387	4.76056	15.88885	30.29387	1.45638	2.79328
15	61.40752	0.29088	0.70641	9.66046	4.60857	15.64199	26.39514	1.40783	2.69623
20	56.57943	0.24619	0.55438	7.35852	3.53148	11.03799	30.21494	1.33057	2.50536
25	51.83623	0.15475	0.38291	4.66299	2.11198	6.38530	35.09640	1.07434	1.96756
30	47.11602	0.08134	0.23515	2.60148	1.13298	3.64837	37.30854	0.73022	1.37794
35	42.37796	0.04965	0.14608	1.59110	0.73562	2.55907	35.93897	0.46150	0.89599
40	37.69188	0.02872	0.09315	1.08054	0.49603	1.84766	33.26980	0.28117	0.59480
45	33.07191	0.01684	0.05359	0.79320	0.34680	1.41124	29.86820	0.17500	0.40704
50	28.52359	0.01449	0.03796	0.60857	0.22907	1.06091	26.13274	0.12852	0.31133
55	24.15130	0.01244	0.02469	0.45433	0.14476	0.76738	22.41264	0.09509	0.23997
60	19.93704	0.00971	0.01582	0.31720	0.09758	0.53382	18.72449	0.06386	0.17456
65	15.97849	0.00667	0.00785	0.19516	0.05907	0.33785	15.22187	0.03742	0.11259
70	12.36027	0.00392	0.00384	0.10722	0.03187	0.19016	11.94199	0.02014	0.06113
75	9.19767	0.00241	0.00217	0.06244	0.01855	0.11450	8.94965	0.01184	0.03610
80	6.68205	0.00120	0.00117	0.03687	0.00784	0.07075	6.53982	0.00582	0.01960
85	4.72917	0.00104	0.00013	0.02653	0.00536	0.05062	4.62622	0.00410	0.01517

AGE REGION OF RESIDENCE AT AGE X SHIKOKU

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.64857	0.42475	0.84552	11.37321	6.02106	20.14050	4.12226	29.56221	2.15907
5	70.99820	0.37286	0.79436	10.90798	5.76459	19.89322	3.83666	27.41578	2.01274
10	66.13016	0.34554	0.74163	10.53913	5.51190	19.56519	3.55940	23.94400	1.92337
15	61.22484	0.32445	0.72203	10.32325	5.37193	19.37810	3.42278	19.81149	1.87080
20	56.32914	0.26108	0.52355	7.30052	3.58221	14.40151	3.15177	25.52298	1.58553
25	51.51585	0.16239	0.29349	3.98822	2.27892	8.49459	2.35744	32.86541	1.07540
30	46.74354	0.10795	0.14624	2.03722	1.31759	5.02267	1.48093	35.99437	0.63657
35	42.02850	0.04498	0.07938	1.37348	0.86207	3.59283	0.98196	34.68489	0.40892
40	37.35318	0.02383	0.05124	0.92785	0.57185	2.67173	0.61871	32.17944	0.30852
45	32.76479	0.01118	0.03169	0.66483	0.39162	2.09287	0.40896	28.91646	0.24719
50	28.21619	0.00732	0.02089	0.47384	0.27376	1.62059	0.30355	25.32865	0.18758
55	23.86258	0.00456	0.01046	0.33161	0.17918	1.20211	0.22749	21.77324	0.13392
60	19.65412	0.00393	0.00948	0.21168	0.12130	0.78798	0.17325	18.24290	0.10360
65	15.73026	0.00349	0.00919	0.11851	0.07195	0.43667	0.12868	14.88940	0.07257
70	12.15257	0.00171	0.00450	0.06579	0.03946	0.21810	0.07165	11.71049	0.04088
75	9.04894	0.00098	0.00259	0.03884	0.02295	0.12174	0.04283	8.79435	0.02466
80	6.59020	0.00009	0.00010	0.02060	0.01043	0.07209	0.02392	6.45053	0.01245
85	4.78965	0.00007	0.00009	0.01705	0.00864	0.05668	0.01833	4.67836	0.01044

AGE REGION OF RESIDENCE AT AGE X KYUSHU

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	74.72233	0.59052	1.11678	16.08894	9.57522	14.83692	3.36658	0.92483	28.22254
5	70.98883	0.51470	1.03723	15.47616	9.47127	14.45244	3.07004	0.83682	26.13016
10	66.11131	0.44163	0.97197	14.88893	9.16851	13.93787	2.85360	0.77770	23.07110
15	61.19926	0.41582	0.93853	14.57583	8.98312	13.59203	2.73643	0.74754	19.20995
20	56.30112	0.37756	0.68676	10.95830	5.50880	10.36645	2.60614	0.64853	25.14858
25	51.47750	0.28974	0.41025	6.65619	3.68697	6.60523	2.11556	0.47744	31.23612
30	46.69264	0.18092	0.22496	3.89405	2.45178	4.24034	1.36708	0.30670	34.02681
35	41.94883	0.10705	0.13506	2.56844	1.71457	3.04871	0.93431	0.21523	33.22546
40	37.26604	0.06342	0.08508	1.77399	1.14862	2.17202	0.62881	0.14415	31.24995
45	32.66738	0.03710	0.05092	1.29063	0.76828	1.57473	0.43311	0.09747	28.41515
50	28.19555	0.02728	0.03837	0.97348	0.52884	1.13781	0.31793	0.07579	25.09605
55	23.85631	0.02046	0.02783	0.71594	0.34568	0.78873	0.23014	0.05804	21.66949
60	19.71294	0.01309	0.01794	0.47790	0.21682	0.51765	0.16574	0.03886	18.26495
65	15.79544	0.00675	0.00877	0.27895	0.11841	0.30222	0.11323	0.02108	14.94603
70	12.23751	0.00405	0.00460	0.14869	0.06556	0.17040	0.06226	0.01206	11.76988
75	9.19245	0.00255	0.00270	0.08796	0.03912	0.10568	0.03645	0.00732	8.91067
80	6.72808	0.00150	0.00090	0.05609	0.02262	0.07335	0.02192	0.00372	6.54796
85	4.86507	0.00135	0.00080	0.04335	0.01768	0.06360	0.01688	0.00334	4.71807

APPENDIX C *Continued.*

Expected number of survivors at exact age x in each region: total population.

AGE *** INITIAL REGION OF COHORT HOKKAIDO

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	100000.	0.	0.	0.	0.	0.	0.	0.
5	98121.	88876.	1097.	4842.	1479.	786.	205.	113.	723.
10	97887.	80390.	2044.	8960.	3005.	1496.	345.	231.	1416.
15	97718.	74264.	2746.	12046.	4216.	1902.	474.	306.	1763.
20	97354.	53405.	2752.	27410.	7964.	3842.	519.	227.	1235.
25	96872.	39421.	3386.	36307.	9129.	5850.	923.	368.	1487.
30	96336.	32797.	4218.	37955.	10374.	6958.	1404.	563.	2068.
35	95695.	28800.	4831.	38306.	11228.	7546.	1718.	712.	2553.
40	94800.	25704.	5374.	38436.	11850.	7928.	1913.	796.	2799.
45	93509.	23342.	5771.	38225.	12240.	8149.	2038.	846.	2898.
50	91693.	21497.	5967.	37783.	12376.	8269.	2098.	854.	2849.
55	88937.	19779.	5945.	36964.	12283.	8264.	2109.	844.	2749.
60	84574.	17975.	5636.	35504.	11920.	8062.	2058.	814.	2604.
65	77789.	15832.	5148.	32911.	11165.	7600.	1946.	763.	2423.
70	67403.	13189.	4438.	28655.	9836.	6702.	1736.	687.	2160.
75	52877.	9953.	3464.	22547.	7829.	5348.	1413.	565.	1759.
80	35100.	6368.	2275.	14927.	5269.	3639.	983.	400.	1238.
85	17943.	3127.	1128.	7655.	2715.	1890.	536.	214.	679.

AGE *** INITIAL REGION OF COHORT TOHOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	100000.	0.	0.	0.	0.	0.	0.
5	97938.	609.	91339.	4266.	967.	312.	132.	65.	248.
10	97713.	854.	87137.	6796.	1614.	560.	235.	102.	414.
15	97555.	956.	84668.	8328.	2006.	680.	285.	140.	493.
20	97157.	1800.	49202.	37572.	5818.	1903.	316.	109.	438.
25	96683.	2663.	31753.	49113.	7505.	3748.	709.	264.	930.
30	96150.	3110.	26509.	49338.	8983.	5048.	1188.	443.	1530.
35	95519.	3289.	24303.	48289.	9874.	5743.	1513.	584.	1924.
40	94627.	3371.	22845.	47305.	10432.	6190.	1705.	663.	2116.
45	93362.	3385.	21737.	46260.	10777.	6460.	1824.	713.	2206.
50	91583.	3362.	20586.	45274.	10934.	6627.	1872.	727.	2201.
55	88866.	3298.	19214.	44024.	10897.	6679.	1877.	725.	2154.
60	84546.	3169.	17428.	42170.	10629.	6550.	1835.	701.	2064.
65	77748.	2914.	15350.	38935.	10000.	6207.	1739.	660.	1944.
70	67277.	2511.	12835.	33696.	8826.	5504.	1556.	595.	1753.
75	52696.	1940.	9757.	26354.	7036.	4410.	1269.	489.	1441.
80	34837.	1270.	6225.	17332.	4742.	3012.	885.	347.	1023.
85	17696.	639.	2991.	8816.	2446.	1569.	484.	185.	566.

AGE *** INITIAL REGION OF COHORT KANTO

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	100000.	0.	0.	0.	0.	0.
5	98227.	343.	1274.	92438.	1647.	1139.	474.	190.	721.
10	98006.	556.	2078.	88262.	2818.	1978.	805.	309.	1200.
15	97849.	689.	2408.	85990.	3505.	2451.	1003.	374.	1429.
20	97487.	864.	2261.	84027.	4335.	3655.	885.	274.	1185.
25	97067.	1375.	3325.	77152.	6169.	5585.	1298.	459.	1705.
30	96559.	1736.	4383.	70596.	8035.	6964.	1847.	658.	2340.
35	95948.	1902.	5119.	66334.	9145.	7686.	2205.	822.	2737.
40	95076.	1988.	5689.	63236.	9802.	8141.	2412.	905.	2905.
45	93817.	2012.	6133.	60632.	10196.	8394.	2532.	955.	2963.
50	92064.	1997.	6415.	58290.	10378.	8522.	2572.	967.	2922.
55	89363.	1951.	6436.	55766.	10353.	8509.	2558.	957.	2832.
60	85072.	1867.	6094.	52648.	10088.	8280.	2482.	920.	2694.
65	78320.	1721.	5550.	48050.	9495.	7791.	2335.	861.	2517.
70	67923.	1501.	4752.	41268.	8421.	6876.	2079.	771.	2255.
75	53369.	1175.	3687.	32120.	6739.	5487.	1688.	630.	1844.
80	35431.	781.	2408.	21036.	4558.	3732.	1172.	443.	1301.
85	18125.	400.	1184.	10652.	2361.	1937.	639.	236.	717.

AGE *** INITIAL REGION OF COHORT CHUBU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	100000.	0.	0.	0.	0.
5	98153.	190.	375.	2625.	92236.	1540.	345.	162.	681.
10	97923.	282.	661.	4507.	87908.	2642.	599.	288.	1036.
15	97757.	330.	850.	5640.	85365.	3236.	723.	355.	1258.
20	97392.	547.	972.	16418.	69193.	7915.	835.	308.	1205.
25	96931.	900.	1671.	23547.	55431.	11580.	1393.	536.	1873.
30	96409.	1117.	2306.	25558.	49740.	12586.	1932.	744.	2426.
35	95796.	1234.	2785.	26214.	46676.	12942.	2256.	919.	2769.
40	94917.	1294.	3222.	26422.	44488.	13104.	2467.	1014.	2907.
45	93681.	1312.	3569.	26289.	42808.	13104.	2588.	1069.	2941.
50	91959.	1305.	3779.	26002.	41269.	13030.	2618.	1077.	2879.
55	89281.	1278.	3836.	25461.	39453.	12817.	2597.	1062.	2777.
60	85052.	1229.	3679.	24488.	37108.	12360.	2524.	1023.	2640.
65	78396.	1141.	3390.	22742.	33772.	11549.	2381.	959.	2464.
70	68089.	1002.	2910.	19853.	29044.	10118.	2118.	853.	2192.
75	53594.	789.	2264.	15654.	22665.	8028.	1719.	693.	1782.
80	35691.	528.	1484.	10386.	14934.	5428.	1193.	486.	1252.
85	18248.	272.	729.	5332.	7526.	2798.	649.	257.	685.

APPENDIX C *Continued.*

AGE	INITIAL REGION OF COHORT KINKI								
***	**********								
	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	0.	100000.	0.	0.	0.
5	98318.	140.	214.	2744.	2078.	89611.	1377.	676.	1478.
10	98102.	253.	371.	4655.	3468.	83784.	2191.	1148.	2251.
15	97940.	291.	471.	5847.	4284.	80410.	2619.	1364.	2654.
20	97607.	355.	462.	10256.	5904.	74791.	2551.	1059.	2228.
25	97157.	613.	868.	15321.	8064.	64305.	3568.	1537.	2880.
30	96615.	806.	1330.	18008.	10024.	56294.	4522.	1917.	3713.
35	95984.	920.	1708.	19391.	11133.	51427.	5014.	2194.	4197.
40	95071.	979.	2040.	20078.	11807.	48217.	5280.	2320.	4350.
45	93795.	1005.	2319.	20336.	12189.	45799.	5407.	2373.	4367.
50	92015.	1009.	2507.	20351.	12332.	43784.	5405.	2356.	4271.
55	89307.	993.	2581.	20080.	12247.	41681.	5314.	2295.	4114.
60	85018.	950.	2481.	19379.	11875.	39089.	5137.	2200.	3907.
65	78412.	878.	2289.	18040.	11120.	35599.	4804.	2048.	3633.
70	68178.	775.	1975.	15799.	9823.	30531.	4241.	1809.	3225.
75	53792.	613.	1542.	12491.	7836.	23810.	3419.	1466.	2617.
80	36054.	413.	1018.	8317.	5287.	15820.	2353.	1016.	1832.
85	18567.	214.	502.	4290.	2731.	8009.	1276.	539.	1005.

AGE	INITIAL REGION OF COHORT CHUGOKU								
***	**********								
	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	0.	0.	100000.	0.	0.
5	98115.	55.	212.	2291.	940.	2541.	89777.	935.	1364.
10	97882.	105.	390.	3892.	1635.	4501.	83605.	1528.	2225.
15	97732.	120.	494.	4767.	2021.	5678.	80131.	1794.	2727.
20	97345.	289.	553.	13935.	5253.	20016.	52385.	1605.	3309.
25	96856.	601.	1031.	20354.	7331.	26021.	35746.	1874.	3899.
30	96300.	803.	1525.	22332.	8933.	26154.	29863.	2214.	4476.
35	95652.	919.	1926.	23102.	9812.	25390.	27142.	2495.	4866.
40	94729.	984.	2267.	23369.	10358.	24841.	25337.	2614.	4960.
45	93445.	1010.	2550.	23306.	10685.	24296.	24025.	2646.	4928.
50	91666.	1009.	2730.	23077.	10837.	23791.	22861.	2587.	4775.
55	88954.	991.	2793.	22605.	10790.	23134.	21583.	2490.	4567.
60	84684.	952.	2674.	21723.	10476.	22101.	20079.	2364.	4315.
65	78107.	881.	2461.	20156.	9818.	20464.	18151.	2183.	3992.
70	67971.	776.	2120.	17582.	8667.	17779.	15617.	1910.	3520.
75	53727.	613.	1653.	13854.	6908.	14000.	12331.	1530.	2837.
80	36067.	412.	1088.	9192.	4658.	9393.	8299.	1053.	1972.
85	18709.	213.	536.	4720.	2401.	4807.	4406.	552.	1073.

AGE *** INITIAL REGION OF COHORT SHIKOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	0.	0.	0.	100000.	0.
5	97920.	95.	89.	1283.	885.	3586.	1626.	89821.	535.
10	97670.	198.	218.	2251.	1604.	5849.	2623.	84055.	872.
15	97471.	243.	263.	2896.	2032.	7200.	3234.	80554.	1049.
20	97054.	422.	360.	12999.	6462.	28020.	4824.	42411.	1557.
25	96536.	680.	862.	19308.	8412.	34212.	5532.	25230.	2301.
30	95961.	853.	1371.	21276.	9969.	33224.	6178.	20041.	3049.
35	95299.	963.	1761.	21971.	10864.	31781.	6506.	17954.	3499.
40	94360.	1023.	2095.	22283.	11429.	30779.	6680.	16421.	3651.
45	93061.	1048.	2373.	22278.	11760.	29908.	6733.	15273.	3688.
50	91282.	1046.	2560.	22110.	11894.	29132.	6670.	14245.	3624.
55	88561.	1026.	2634.	21692.	11821.	28208.	6504.	13166.	3510.
60	84302.	979.	2530.	20861.	11460.	26867.	6220.	12038.	3348.
65	77716.	903.	2332.	19361.	10724.	24797.	5761.	10708.	3128.
70	67545.	794.	2012.	16893.	9456.	21475.	5057.	9067.	2790.
75	53306.	626.	1572.	13316.	7530.	16857.	4058.	7075.	2271.
80	35739.	421.	1036.	8840.	5073.	11269.	2779.	4725.	1596.
85	18409.	217.	511.	4542.	2614.	5741.	1499.	2409.	876.

AGE *** INITIAL REGION OF COHORT KYUSHU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	0.	0.	0.	0.	100000.
5	97969.	215.	165.	2711.	1599.	2893.	1333.	255.	88797.
10	97723.	366.	318.	4595.	3000.	5149.	2174.	443.	81677.
15	97550.	427.	401.	5890.	4061.	6616.	2622.	541.	76992.
20	97170.	539.	472.	19509.	11279.	18799.	3487.	498.	42586.
25	96674.	857.	1131.	27292.	13050.	23601.	4133.	834.	25777.
30	96112.	1094.	1765.	28903.	14190.	23664.	4825.	1141.	20530.
35	95458.	1224.	2244.	29266.	14851.	23175.	5197.	1363.	18139.
40	94540.	1290.	2648.	29272.	15261.	22811.	5383.	1482.	16394.
45	93252.	1311.	2977.	28998.	15477.	22431.	5465.	1544.	15048.
50	91465.	1302.	3194.	28584.	15504.	22062.	5443.	1549.	13826.
55	88740.	1273.	3269.	27903.	15288.	21506.	5332.	1523.	12646.
60	84452.	1216.	3136.	26753.	14734.	20548.	5119.	1467.	11479.
65	77818.	1122.	2890.	24755.	13702.	19006.	4761.	1372.	10210.
70	67590.	981.	2490.	21524.	12001.	16492.	4191.	1218.	8692.
75	53277.	771.	1943.	16914.	9501.	12973.	3370.	988.	6817.
80	35633.	515.	1279.	11188.	6358.	8692.	2312.	689.	4601.
85	18374.	265.	631.	5728.	3255.	4442.	1249.	366.	2438.

APPENDIX C *Continued.*

Expected number of survivors at exact age x in each region: females.

AGE *** INITIAL REGION OF COHORT HOKKAIDO

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	100000.	0.	0.	0.	0.	0.	0.	0.
5	98411.	88983.	1114.	5055.	1484.	737.	163.	116.	760.
10	98234.	80904.	2001.	9022.	2949.	1477.	277.	244.	1360.
15	98105.	74599.	2661.	12283.	4251.	1876.	398.	308.	1729.
20	97894.	57322.	2375.	23176.	9544.	3530.	431.	262.	1253.
25	97562.	47216.	2769.	29888.	10055.	5134.	692.	362.	1447.
30	97165.	40136.	3584.	32843.	10782.	6195.	1106.	527.	1994.
35	96683.	35650.	4182.	33991.	11544.	6766.	1389.	661.	2501.
40	96041.	32252.	4657.	34858.	12086.	7136.	1569.	734.	2748.
45	95061.	29669.	4948.	35315.	12430.	7357.	1684.	784.	2874.
50	93567.	27714.	5003.	35453.	12522.	7474.	1725.	800.	2875.
55	91329.	25827.	4948.	35236.	12439.	7509.	1735.	800.	2835.
60	87946.	23825.	4799.	34444.	12183.	7423.	1728.	784.	2761.
65	82697.	21400.	4563.	32827.	11635.	7176.	1686.	752.	2658.
70	74396.	18430.	4221.	29727.	10616.	6629.	1575.	711.	2487.
75	61489.	14591.	3546.	24756.	8878.	5603.	1360.	619.	2136.
80	43609.	9899.	2522.	17614.	6393.	4093.	1018.	466.	1604.
85	24021.	5298.	1362.	9721.	3524.	2301.	600.	271.	944.

AGE *** INITIAL REGION OF COHORT TOHOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	100000.	0.	0.	0.	0.	0.	0.
5	98195.	613.	91828.	4152.	901.	323.	103.	50.	226.
10	98010.	891.	87525.	6788.	1535.	590.	200.	83.	398.
15	97888.	975.	85094.	8348.	1945.	698.	236.	119.	473.
20	97658.	1501.	51356.	35225.	7045.	1731.	265.	98.	437.
25	97341.	2209.	34783.	47220.	8234.	3178.	528.	247.	941.
30	96948.	2462.	29406.	48527.	9305.	4415.	947.	402.	1483.
35	96472.	2519.	27646.	47727.	9941.	5045.	1231.	524.	1839.
40	95824.	2523.	26528.	47016.	10324.	5421.	1403.	588.	2021.
45	94869.	2490.	25615.	46310.	10548.	5644.	1506.	633.	2122.
50	93447.	2447.	24520.	45760.	10619.	5782.	1530.	650.	2141.
55	91319.	2386.	23253.	44958.	10556.	5851.	1529.	653.	2135.
60	88001.	2289.	21779.	43512.	10348.	5804.	1524.	641.	2104.
65	82803.	2144.	19943.	41018.	9899.	5636.	1492.	618.	2052.
70	74432.	1946.	17546.	36705.	9058.	5246.	1397.	587.	1947.
75	61488.	1605.	14147.	30273.	7594.	4458.	1209.	513.	1690.
80	43449.	1132.	9657.	21334.	5482.	3273.	905.	387.	1280.
85	23674.	631.	4999.	11651.	3029.	1846.	534.	225.	760.

AGE *** INITIAL REGION OF COHORT KANTO

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	100000.	0.	0.	0.	0.	0.
5	98484.	334.	1235.	92711.	1695.	1134.	505.	190.	680.
10	98309.	572.	2043.	88561.	2853.	1978.	858.	294.	1156.
15	98195.	700.	2398.	86273.	3561.	2455.	1051.	366.	1391.
20	97990.	710.	2042.	85091.	4244.	3466.	914.	280.	1243.
25	97700.	1058.	2975.	79599.	5658.	4971.	1161.	467.	1813.
30	97314.	1352.	3853.	73881.	7269.	6294.	1636.	640.	2390.
35	96842.	1489.	4467.	70112.	8264.	6994.	1954.	791.	2770.
40	96191.	1571.	4763.	67646.	8843.	7412.	2148.	857.	2951.
45	95222.	1591.	4920.	65677.	9190.	7644.	2258.	903.	3039.
50	93789.	1560.	4925.	63983.	9338.	7756.	2273.	922.	3032.
55	91656.	1513.	4846.	62012.	9344.	7773.	2254.	921.	2993.
60	88354.	1453.	4694.	59292.	9207.	7654.	2226.	899.	2929.
65	83212.	1372.	4465.	55274.	8869.	7380.	2157.	859.	2837.
70	74938.	1277.	4099.	49024.	8215.	6832.	2006.	811.	2673.
75	62144.	1076.	3423.	40173.	6953.	5781.	1725.	704.	2308.
80	44189.	776.	2421.	28154.	5062.	4226.	1284.	528.	1738.
85	24316.	442.	1295.	15288.	2823.	2377.	755.	307.	1029.

AGE *** INITIAL REGION OF COHORT CHUBU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	100000.	0.	0.	0.	0.
5	98416.	209.	312.	2632.	92465.	1590.	335.	173.	700.
10	98242.	300.	648.	4503.	88163.	2728.	593.	275.	1034.
15	98115.	336.	857.	5611.	85686.	3327.	716.	338.	1244.
20	97904.	388.	840.	13393.	73761.	7189.	765.	305.	1263.
25	97578.	612.	1373.	19203.	61509.	10992.	1248.	524.	2117.
30	97180.	800.	1876.	22235.	54869.	12324.	1752.	718.	2608.
35	96701.	900.	2223.	23291.	51661.	12767.	2037.	890.	2932.
40	96044.	956.	2467.	23816.	49595.	12940.	2224.	975.	3070.
45	95076.	972.	2616.	23998.	48036.	12958.	2332.	1031.	3134.
50	93648.	954.	2628.	24007.	46630.	12917.	2351.	1049.	3112.
55	91471.	927.	2594.	23806.	44924.	12782.	2337.	1045.	3056.
60	88184.	896.	2524.	23265.	42714.	12490.	2307.	1023.	2966.
65	83033.	854.	2416.	22195.	39572.	11947.	2231.	978.	2840.
70	74843.	803.	2225.	20156.	35123.	10913.	2071.	913.	2639.
75	62050.	682.	1862.	16823.	28731.	9131.	1778.	788.	2256.
80	44236.	494.	1323.	11994.	20232.	6597.	1323.	587.	1686.
85	24297.	283.	706.	6625.	10918.	3663.	774.	339.	988.

APPENDIX C *Continued.*

AGE *** INITIAL REGION OF COHORT KINKI

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	0.	100000.	0.	0.	0.
5	98511.	160.	208.	2797.	2062.	89762.	1342.	678.	1503.
10	98355.	298.	346.	4757.	3401.	83952.	2170.	1164.	2267.
15	98241.	320.	441.	5893.	4224.	80666.	2618.	1396.	2684.
20	98041.	299.	380.	8643.	5400.	77338.	2506.	1152.	2322.
25	97718.	468.	638.	12001.	7119.	68856.	3687.	1738.	3211.
30	97293.	617.	996.	15086.	8804.	61201.	4512.	2063.	4013.
35	96802.	710.	1264.	16645.	9825.	56580.	4973.	2327.	4479.
40	96109.	761.	1444.	17464.	10462.	53609.	5223.	2465.	4679.
45	95114.	780.	1563.	17895.	10820.	51399.	5347.	2549.	4762.
50	93642.	770.	1589.	18073.	10918.	49635.	5351.	2576.	4731.
55	91464.	748.	1584.	18031.	10860.	47761.	5284.	2549.	4647.
60	88137.	716.	1551.	17673.	10658.	45385.	5170.	2466.	4519.
65	83043.	675.	1494.	16911.	10218.	42137.	4943.	2334.	4332.
70	74984.	638.	1392.	15452.	9402.	37380.	4530.	2161.	4029.
75	62321.	545.	1175.	12970.	7916.	30566.	3853.	1851.	3444.
80	44678.	397.	845.	9311.	5739.	21612.	2835.	1368.	2570.
85	24764.	228.	454.	5189.	3185.	11752.	1653.	790.	1512.

AGE *** INITIAL REGION OF COHORT CHUGOKU

	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	0.	0.	100000.	0.	0.
5	98422.	61.	222.	2369.	808.	2411.	90216.	967.	1369.
10	98245.	118.	378.	3953.	1399.	4349.	84310.	1502.	2236.
15	98122.	123.	474.	4819.	1775.	5573.	80911.	1743.	2704.
20	97924.	128.	428.	10443.	4372.	20411.	57783.	1617.	2742.
25	97599.	313.	682.	15054.	6036.	27365.	42607.	1946.	3594.
30	97179.	484.	1056.	17871.	7527.	28138.	35479.	2285.	4339.
35	96688.	580.	1346.	19013.	8309.	27425.	32599.	2567.	4850.
40	95999.	639.	1528.	19537.	8811.	26897.	30815.	2714.	5058.
45	95011.	664.	1651.	19749.	9108.	26386.	29531.	2788.	5135.
50	93582.	657.	1679.	19792.	9234.	25979.	28375.	2783.	5084.
55	91411.	640.	1676.	19662.	9222.	25455.	27047.	2730.	4978.
60	88134.	619.	1643.	19243.	9052.	24604.	25511.	2634.	4828.
65	83075.	589.	1584.	18388.	8677.	23244.	23493.	2484.	4616.
70	75071.	560.	1471.	16730.	7977.	20966.	20817.	2272.	4279.
75	62592.	480.	1239.	13986.	6710.	17361.	17250.	1924.	3642.
80	45009.	351.	888.	9997.	4863.	12427.	12368.	1408.	2706.
85	25190.	203.	476.	5542.	2694.	6845.	7044.	803.	1582.

AGE INITIAL REGION OF COHORT SHIKOKU

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	0.	0.	0.	100000.	0.
5	98153.	139.	100.	1368.	866.	3529.	1425.	90154.	573.
10	97960.	200.	230.	2263.	1565.	5612.	2461.	84762.	867.
15	97815.	244.	275.	2891.	2015.	6962.	3024.	81340.	1064.
20	97594.	248.	284.	10011.	5647.	26989.	4160.	49139.	1117.
25	97245.	417.	603.	14837.	7134.	34948.	5232.	32034.	2039.
30	96808.	561.	983.	17435.	8513.	34941.	5915.	25603.	2858.
35	96288.	671.	1261.	18410.	9313.	33679.	6265.	23360.	3330.
40	95583.	721.	1431.	18948.	9821.	32772.	6474.	21883.	3533.
45	94573.	740.	1544.	19187.	10110.	31982.	6553.	20825.	3632.
50	93136.	728.	1572.	19257.	10199.	31356.	6503.	19874.	3647.
55	90954.	707.	1572.	19132.	10150.	30622.	6372.	18779.	3620.
60	87669.	677.	1538.	18707.	9944.	29564.	6177.	17518.	3544.
65	82584.	638.	1480.	17848.	9516.	27889.	5854.	15932.	3428.
70	74555.	601.	1381.	16216.	8734.	25069.	5349.	13983.	3222.
75	62028.	512.	1167.	13548.	7339.	20683.	4538.	11468.	2775.
80	44480.	373.	840.	9683.	5311.	14742.	3331.	8113.	2087.
85	24709.	214.	451.	5365.	2940.	8079.	1936.	4492.	1232.

AGE INITIAL REGION OF COHORT KYUSHU

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	100000.	0.	0.	0.	0.	0.	0.	0.	100000.
5	98265.	229.	177.	2667.	1527.	2885.	1333.	308.	89138.
10	98080.	411.	322.	4615.	3054.	5146.	2176.	497.	81860.
15	97942.	456.	406.	5850.	4098.	6649.	2671.	596.	77214.
20	97710.	413.	383.	16527.	12597.	19122.	3402.	534.	44732.
25	97364.	602.	830.	22820.	13807.	24210.	4051.	852.	30193.
30	96939.	802.	1324.	25350.	14542.	24666.	4681.	1130.	24464.
35	96435.	912.	1673.	26117.	15014.	24200.	5013.	1341.	22165.
40	95744.	970.	1888.	26443.	15331.	23871.	5208.	1461.	20570.
45	94745.	987.	2026.	26491.	15475.	23521.	5299.	1538.	19408.
50	93272.	969.	2058.	26382.	15429.	23192.	5278.	1564.	18400.
55	91089.	939.	2050.	26062.	15204.	22731.	5190.	1558.	17355.
60	87768.	903.	2010.	25378.	14758.	21966.	5049.	1523.	16182.
65	82669.	853.	1938.	24109.	13970.	20739.	4802.	1456.	14802.
70	74579.	795.	1801.	21792.	12665.	18681.	4393.	1357.	13095.
75	61966.	672.	1519.	18119.	10539.	15456.	3730.	1168.	10765.
80	44384.	485.	1088.	12879.	7550.	11051.	2739.	867.	7725.
85	24663.	277.	585.	7099.	4143.	6082.	1593.	502.	4383.

APPENDIX C *Continued.*

Multiregional net reproduction rate by region of birth: total population.

NET REPRODUCTION RATE

	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
HOKKAIDO	0.386001	0.027866	0.015015	0.009715	0.006853	0.006686	0.007424	0.009453
TOHOKU	0.040884	0.343174	0.040876	0.020994	0.011725	0.013568	0.011756	0.015203
KANTO	0.371609	0.487778	0.749812	0.245817	0.169631	0.214026	0.203202	0.280357
CHUBU	0.103022	0.086149	0.074126	0.578212	0.094276	0.084352	0.095802	0.142888
KINKI	0.064838	0.044557	0.063927	0.120838	0.627516	0.259959	0.336863	0.236739
CHUGOKU	0.011855	0.009625	0.016189	0.016860	0.041285	0.371384	0.060634	0.046324
SHIKOKU	0.004822	0.003598	0.005747	0.006548	0.017725	0.021454	0.271227	0.010066
KYUSHU	0.021301	0.014392	0.023510	0.024615	0.038224	0.048299	0.030775	0.288573
TOTAL	1.004332	1.017140	0.989202	1.023600	1.007236	1.019727	1.017682	1.029604

NET REPRODUCTION ALLOCATIONS

	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
HOKKAIDO	0.384336	0.027397	0.015179	0.009491	0.006803	0.006556	0.007295	0.009181
TOHOKU	0.040708	0.337391	0.041323	0.020510	0.011641	0.013306	0.011552	0.014766
KANTO	0.370006	0.479559	0.757997	0.240149	0.168412	0.209885	0.199671	0.272296
CHUBU	0.102578	0.084697	0.074935	0.564881	0.093599	0.082720	0.094137	0.138779
KINKI	0.064558	0.043806	0.064624	0.118052	0.623008	0.254930	0.331010	0.229932
CHUGOKU	0.011803	0.009463	0.016366	0.016471	0.040989	0.364200	0.059581	0.044992
SHIKOKU	0.004801	0.003538	0.005810	0.006397	0.017597	0.021039	0.266514	0.009777
KYUSHU	0.021209	0.014149	0.023767	0.024048	0.037950	0.047364	0.030240	0.280276
TOTAL	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Expectation of life at birth and migration levels: females.

EXPECTATIONS OF LIFE

	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
HOKKAIDO	34.2978	1.5527	0.9531	0.5753	0.4621	0.3655	0.4247	0.5905
TOHOKU	2.9926	32.3803	2.9714	1.4897	0.8783	0.9316	0.8455	1.1168
KANTO	22.0232	28.5730	56.9564	14.5220	10.8552	11.9292	11.3732	16.0889
CHUBU	7.7435	6.3852	5.6353	46.4566	6.6218	5.3887	6.0211	9.5752
KINKI	4.4728	3.2888	4.6596	7.9424	48.2214	16.4371	20.1405	14.8369
CHUGOKU	0.9709	0.8395	1.3756	1.3766	3.3376	34.9594	4.1223	3.3666
SHIKOKU	0.4668	0.3564	0.5446	0.6059	1.6005	1.7774	29.5622	0.9248
KYUSHU	1.7718	1.2218	1.8745	1.9066	3.0225	3.2257	2.1591	28.2225
TOTAL	74.7394	74.5976	74.9684	74.8752	74.9993	75.0144	74.6486	74.7223

MIGRATION LEVELS

	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
HOKKAIDO	0.458898	0.020814	0.012713	0.007683	0.006161	0.004872	0.005690	0.007903
TOHOKU	0.040041	0.434066	0.039635	0.019896	0.011710	0.012418	0.011327	0.014946
KANTO	0.294667	0.383028	0.759739	0.193950	0.144738	0.159025	0.152357	0.215316
CHUBU	0.103607	0.085595	0.075142	0.620455	0.088292	0.071835	0.080659	0.128144
KINKI	0.059845	0.044087	0.062154	0.106075	0.642958	0.219119	0.269804	0.198561
CHUGOKU	0.012990	0.011254	0.018349	0.018385	0.044501	0.466036	0.055222	0.045055
SHIKOKU	0.006246	0.004778	0.007264	0.008092	0.021340	0.023693	0.396018	0.012377
KYUSHU	0.023706	0.016379	0.025004	0.025464	0.040300	0.043000	0.028923	0.377699
TOTAL	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

APPENDIX C *Continued.*

Multiregional net migraproduction rate by region of birth: females.

NET MIGRAPRODUCTION RATE

	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
HOKKAIDO	0.756271	0.026818	0.015616	0.009179	0.007365	0.005330	0.006622	0.009575
TOHOKU	0.047480	0.794812	0.046384	0.021166	0.011224	0.012043	0.010089	0.013599
KANTO	0.149646	0.204517	0.452395	0.097478	0.070187	0.079206	0.075453	0.110118
CHUBU	0.078717	0.062741	0.050972	0.586911	0.061543	0.049116	0.056693	0.100791
KINKI	0.042188	0.029184	0.043663	0.079541	0.598832	0.175668	0.219204	0.158705
CHUGOKU	0.011552	0.009321	0.018787	0.018069	0.049454	0.759658	0.065814	0.053439
SHIKOKU	0.007340	0.004785	0.008674	0.009473	0.029110	0.034392	0.821719	0.015161
KYUSHU	0.033944	0.019420	0.035553	0.036868	0.061317	0.066650	0.038066	0.859555
TOTAL	1.127136	1.151597	0.672044	0.858684	0.889032	1.182064	1.293660	1.320943

NET MIGRAPRODUCTION ALLOCATIONS

	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
HOKKAIDO	0.670967	0.023288	0.023237	0.010689	0.008284	0.004509	0.005119	0.007249
TOHOKU	0.042124	0.690183	0.069019	0.024649	0.012625	0.010188	0.007799	0.010295
KANTO	0.132766	0.177594	0.673163	0.113520	0.078948	0.067006	0.058325	0.083363
CHUBU	0.069838	0.054482	0.075846	0.683501	0.069225	0.041551	0.043824	0.076302
KINKI	0.037429	0.025342	0.064971	0.092631	0.673578	0.148611	0.169445	0.120145
CHUGOKU	0.010249	0.008094	0.027954	0.021042	0.055627	0.642654	0.050874	0.040455
SHIKOKU	0.006512	0.004155	0.012907	0.011032	0.032743	0.029095	0.635189	0.011477
KYUSHU	0.030115	0.016863	0.052903	0.042935	0.068970	0.056385	0.029425	0.650714
TOTAL	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000

Appendix D

MULTIREGIONAL POPULATION PROJECTIONS FOR THE TOTAL AND FEMALE POPULATIONS: 1980–2030

LEGEND

M.AG: mean age of population
SHA: percentage of population in each region
LAM: intrinsic growth ratio (λ)
R: intrinsic growth rate ($r = 1/5 \ln\lambda$)

APPENDIX D

Multiregional population projections: total population.

YEAR 1980

POPULATION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	9830648.	394428.	748044.	3606581.	1675523.	1816864.	526835.	234933.	827440.
5	9846821.	412658.	849701.	3332111.	1701359.	1725310.	583814.	286572.	955296.
10	8796657.	389170.	854565.	2769183.	1513235.	1480867.	545372.	280928.	963316.
15	8228417.	357716.	754065.	2742638.	1404943.	1451597.	460317.	230406.	826736.
20	7921989.	314444.	577320.	3035980.	1312567.	1519235.	389043.	164422.	608977.
25	9080331.	369632.	607144.	3595993.	1515240.	1766564.	444947.	178816.	601996.
30	10606520.	434428.	749280.	4026546.	1787736.	2016475.	579870.	257709.	754473.
35	9018447.	383636.	726569.	3162340.	1567932.	1644832.	543186.	254105.	736047.
40	8275858.	376422.	786051.	2723385.	1415715.	1430760.	507232.	255025.	781267.
45	8042360.	376283.	848618.	2445947.	1373469.	1331799.	537931.	281544.	846768.
50	7092744.	334979.	796139.	2030542.	1231659.	1127215.	501208.	273274.	797727.
55	5546968.	265610.	627177.	1554422.	951782.	860092.	409143.	221876.	656866.
60	4354725.	206806.	481295.	1207951.	753614.	673722.	326368.	175152.	529816.
65	3733320.	165541.	404736.	1006915.	657339.	594683.	287395.	155603.	461111.
70	2786415.	117832.	308882.	715096.	490414.	442957.	221175.	124073.	365985.
75	1830790.	73705.	203118.	456169.	322566.	282318.	152845.	87808.	252262.
80	957362.	36355.	100726.	228081.	165211.	142946.	88384.	50911.	144749.
85	474587.	17030.	48670.	112172.	82578.	67111.	45312.	25040.	76674.
TOTAL	116424957.	5026674.	10471899.	38752053.	19922883.	20375369.	7150379.	3538196.	11187505.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	8.4438	7.8467	7.1433	9.3068	8.4100	8.9170	7.3679	6.6399	7.3961
5	8.4577	8.2094	8.1141	8.5985	8.5397	8.4676	8.1648	8.0994	8.5390
10	7.5556	7.7421	8.1606	7.1459	7.5955	7.2680	7.6272	7.9399	8.6106
15	7.0676	7.1163	7.2008	7.0774	7.0519	7.1243	6.4377	6.5120	7.3898
20	6.8044	6.2555	5.5130	7.8344	6.5882	7.4562	5.4409	4.6471	5.4434
25	7.7993	7.3534	5.7978	9.2795	7.6055	8.6701	6.2227	5.0539	5.3810
30	9.1102	8.6425	7.1552	10.3905	8.9733	9.8966	8.1096	7.2836	6.7439
35	7.7461	7.6320	6.9364	8.1604	7.8700	8.0727	7.5966	7.1818	6.5792
40	7.1083	7.4885	7.5063	7.0277	7.1060	7.0220	7.0938	7.2078	6.9834
45	6.9078	7.4857	8.1038	6.3118	6.8939	6.5363	7.5231	7.9573	7.5689
50	6.0921	6.6640	7.6026	5.2398	6.1821	5.5322	7.0095	7.7235	7.1305
55	4.7644	5.2840	5.9891	4.0112	4.7773	4.2212	5.7220	6.2709	5.8714
60	3.7404	4.1142	4.5961	3.1171	3.7827	3.3066	4.5644	4.9503	4.7358
65	3.2066	3.2932	3.8650	2.5984	3.2994	2.9186	4.0193	4.3978	4.1217
70	2.3933	2.3441	2.9496	1.8453	2.4616	2.1740	3.0932	3.5067	3.2714
75	1.5725	1.4665	1.9396	1.1771	1.6191	1.3856	2.1376	2.4817	2.2549
80	0.8223	0.7232	0.9619	0.5886	0.8293	0.7016	1.2361	1.4389	1.2938
85	0.4076	0.3388	0.4648	0.2895	0.4145	0.3294	0.6337	0.7077	0.6854
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
MAG	33.2994	33.9240	35.6267	31.4943	33.4404	32.2932	35.8940	37.2393	35.7694
SHA	100.0000	4.3175	8.9945	33.2850	17.1122	17.5009	6.1416	3.0390	9.6092
LAM	1.049933	0.983240	0.961344	1.116104	1.063454	1.095717	1.008902	0.954266	0.929417
R	0.009745	-0.003380	-0.007885	0.021969	0.012304	0.018282	0.001772	-0.009363	-0.014640

YEAR 2000

POPULATION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	9359045.	279314.	524190.	3890922.	1631800.	1906793.	432225.	164243.	529558.
5	8724050.	271957.	545696.	3487957.	1545143.	1713516.	432520.	173986.	553277.
10	8496623.	271331.	581991.	3307531.	1512892.	1612687.	439986.	183828.	586378.
15	8909377.	271243.	542374.	3673281.	1544044.	1753217.	420190.	165146.	539882.
20	9642945.	275755.	464100.	4290754.	1600686.	2031058.	395293.	140076.	445223.
25	9710274.	285386.	476631.	4272728.	1614873.	2046329.	416453.	151479.	446396.
30	8639385.	267984.	471833.	3659720.	1478686.	1773406.	401912.	150854.	434990.
35	8038379.	261474.	491887.	3289637.	1411019.	1601063.	394612.	153999.	434688.
40	7683014.	257151.	523183.	3056462.	1364277.	1481701.	399653.	157379.	443208.
45	8708631.	306581.	630333.	3384721.	1573627.	1650869.	468397.	185660.	508441.
50	9985181.	357873.	754946.	3757358.	1798764.	1888217.	571599.	241271.	615154.
55	8224733.	309488.	662454.	2927520.	1507433.	1531764.	502747.	218707.	564620.
60	7148852.	291416.	631472.	2437698.	1287202.	1290437.	441812.	203925.	564892.
65	6320287.	267949.	592800.	2024072.	1130857.	1109719.	423528.	203611.	567950.
70	4740517.	203596.	463867.	1433780.	855530.	802014.	338520.	170632.	472778.
75	2831075.	122548.	278361.	827087.	501380.	465976.	214740.	109177.	311806.
80	1437612.	61329.	137193.	408339.	253592.	234000.	114104.	57494.	171565.
85	841456.	33064.	75749.	234018.	147061.	137770.	70654.	35267.	107872.
TOTAL	129441437.	4395438.	8849059.	50363586.	22758866.	25030536.	6878544.	2866731.	8298676.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	7.2303	6.3546	5.9237	7.7257	7.1700	7.6179	6.2837	5.7293	6.3812
5	6.7398	6.1872	6.1667	6.9256	6.7892	6.8457	6.2880	6.0691	6.6671
10	6.5641	6.1730	6.5769	6.5673	6.6475	6.4429	6.3965	6.4124	7.0659
15	6.8829	6.1710	6.1292	7.2935	6.7844	7.0043	6.1087	5.7608	6.5056
20	7.4497	6.2737	5.2446	8.5196	7.0332	8.1143	5.7468	4.8862	5.3650
25	7.5017	6.4928	5.3862	8.4838	7.0956	8.1753	6.0544	5.2840	5.3791
30	6.6744	6.0969	5.3320	7.2666	6.4972	7.0850	5.8430	5.2622	5.2417
35	6.2101	5.9488	5.5586	6.5318	6.1999	6.3964	5.7369	5.3719	5.2380
40	5.9355	5.8504	5.9123	6.0688	5.9945	5.9196	5.8101	5.4898	5.3407
45	6.7279	6.9750	7.1232	6.7206	6.9143	6.5954	6.8095	6.4764	6.1268
50	7.7141	8.1419	8.5314	7.4605	7.9036	7.5437	8.3099	8.4162	7.4127
55	6.3540	7.0411	7.4862	5.8128	6.6235	6.1196	7.3089	7.6291	6.8057
60	5.5228	6.6300	7.1360	4.8402	5.6558	5.1555	6.4230	7.1134	6.8070
65	4.8827	6.0961	6.6990	4.0189	4.9689	4.4335	6.1543	7.1026	6.8459
70	3.6623	4.6320	5.2420	2.8469	3.7591	3.2041	4.9185	5.9521	5.6970
75	2.1871	2.7881	3.1457	1.6422	2.2030	1.8616	3.1219	3.8084	3.7573
80	1.1106	1.3953	1.5504	0.8108	1.1143	0.9349	1.6588	2.0055	2.0673
85	0.6501	0.7522	0.8560	0.4647	0.6462	0.5504	1.0272	1.2302	1.2999
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
MEAG	36.9530	39.5935	40.9119	35.0515	37.2730	35.8714	40.1959	42.1380	40.7785
SHA	100.0000	3.3957	6.8363	38.9084	17.5824	19.3373	5.3140	2.2147	6.4111
LAM	1.021777	0.964277	0.961276	1.053274	1.026096	1.040421	0.987968	0.953103	0.933028
R	0.004309	-0.007275	-0.007899	0.010381	0.005152	0.007925	-0.002421	-0.009606	-0.013864

APPENDIX D *Continued.*

YEAR 2030

POPULATION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	9416691.	218206.	435848.	4261457.	1623898.	1952636.	380519.	134929.	409199.
5	9040063.	215944.	459809.	3968694.	1594449.	1825103.	394814.	147541.	433708.
10	8802768.	211509.	475469.	3800175.	1570343.	1743941.	401019.	154335.	445975.
15	8898316.	201566.	418401.	4036894.	1536465.	1823818.	364131.	130457.	386583.
20	9252581.	201747.	356512.	4447295.	1512116.	1985422.	326996.	106769.	315723.
25	9430232.	218853.	387992.	4464887.	1545259.	2005224.	352621.	120106.	335290.
30	9081720.	222799.	422906.	4140032.	1543799.	1881718.	375554.	133906.	361005.
35	8485879.	214922.	438483.	3761831.	1477172.	1721734.	373504.	137800.	360433.
40	8187213.	211407.	462374.	3559166.	1447029.	1633818.	374859.	139910.	358651.
45	8469577.	221955.	512049.	3624197.	1515149.	1672163.	399081.	149319.	375663.
50	8983200.	239003.	566052.	3779596.	1626174.	1773398.	435237.	162824.	400915.
55	8740147.	236779.	560089.	3610113.	1600723.	1733288.	437318.	164131.	397707.
60	7329124.	204449.	471467.	2984683.	1351097.	1458510.	375000.	140531.	343386.
65	6155741.	178446.	401124.	2466917.	1146008.	1218142.	321765.	121603.	301735.
70	4939992.	147608.	328709.	1946931.	922375.	962405.	269714.	102144.	260106.
75	4175219.	130460.	277967.	1612862.	785701.	807741.	237419.	90890.	232180.
80	2968289.	94225.	195494.	1108223.	552776.	576123.	183727.	73921.	183801.
85	1551312.	50986.	103043.	553897.	287022.	292293.	106009.	43286.	114776.
TOTAL	133908064.	3420865.	7273790.	58127851.	23637555.	27067476.	6109289.	2254402.	6016836.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	7.0322	6.3787	5.9920	7.3312	6.8700	7.2140	6.2285	5.9851	6.8009
5	6.7509	6.3125	6.3215	6.8275	6.7454	6.7428	6.4625	6.5446	7.2082
10	6.5737	6.1829	6.5367	6.5376	6.6434	6.4429	6.5641	6.8460	7.4121
15	6.6451	5.8923	5.7522	6.9449	6.5001	6.7380	5.9603	5.7868	6.4250
20	6.9097	5.8975	4.9013	7.6509	6.3971	7.3351	5.3524	4.7360	5.2473
25	7.0423	6.3976	5.3341	7.6811	6.5373	7.4082	5.7719	5.3276	5.5725
30	6.7821	6.5129	5.8141	7.1223	6.5311	6.9520	6.1473	5.9398	5.9999
35	6.3371	6.2827	6.0283	6.4716	6.2493	6.3609	6.1137	6.1125	5.9904
40	6.1141	6.1799	6.3567	6.1230	6.1217	6.0361	6.1359	6.2061	5.9608
45	6.3249	6.4883	7.0396	6.2349	6.4099	6.1778	6.5324	6.6234	6.2435
50	6.7085	6.9866	7.7821	6.5022	6.8796	6.5518	7.1242	7.2225	6.6632
55	6.5270	6.9216	7.7001	6.2106	6.7719	6.4036	7.1582	7.2805	6.6099
60	5.4733	5.9765	6.4817	5.1347	5.7159	5.3884	6.1382	6.2336	5.7071
65	4.5970	5.2166	5.5147	4.2439	4.8483	4.5004	5.2668	5.3940	5.0148
70	3.6891	4.3149	4.5191	3.3494	3.9022	3.5556	4.4148	4.5309	4.3230
75	3.1180	3.8137	3.8215	2.7747	3.3240	2.9842	3.8862	4.0316	3.8588
80	2.2167	2.7544	2.6876	1.9065	2.3385	2.1285	3.0073	3.2789	3.0548
85	1.1585	1.4904	1.4166	0.9529	1.2143	1.0799	1.7352	1.9201	1.9076
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
MEAG	38.0736	40.2691	41.1944	36.9111	38.7428	37.6214	40.7562	41.3556	39.7349
SHA	100.0000	2.5546	5.4319	43.4088	17.6521	20.2135	4.5623	1.6835	4.4933
LAM	1.001243	0.965058	0.978206	1.012886	1.000074	1.003982	0.982215	0.972709	0.964317
R	0.000248	-0.007113	-0.004407	0.002561	0.000015	0.000795	-0.003589	-0.005534	-0.007267

STABLE EQUIVALENT TO ORIGINAL POPULATION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	9193176.	184636.	408041.	4408573.	1538448.	1833036.	338109.	120437.	361897.
5	9094667.	186292.	441348.	4256770.	1555692.	1766342.	360622.	135050.	392551.
10	9072151.	184380.	462210.	4186332.	1575961.	1736737.	374918.	144083.	407532.
15	9043313.	172167.	396793.	4356972.	1524351.	1795154.	334871.	119476.	343529.
20	9001436.	168221.	327400.	4553999.	1432670.	1864100.	288531.	94316.	272198.
25	8952046.	182149.	354900.	4458753.	1426289.	1829877.	305978.	104823.	289278.
30	8894509.	192190.	402155.	4281229.	1469299.	1768145.	337075.	120791.	323626.
35	8820229.	195495.	441985.	4138945.	1493924.	1720117.	356138.	131949.	341676.
40	8716377.	194830.	474717.	4014170.	1502771.	1681524.	365948.	137129.	345289.
45	8572408.	191521.	497507.	3894127.	1498176.	1644418.	368271.	138313.	340075.
50	8362132.	186165.	504826.	3765417.	1476020.	1601555.	363743.	136063.	328344.
55	8035715.	178181.	489719.	3602203.	1429626.	1539377.	352893.	131252.	312464.
60	7525524.	165985.	453923.	3363446.	1348219.	1444013.	333943.	123620.	292374.
65	6736998.	147935.	400785.	2997628.	1215546.	1294669.	303039.	112138.	265259.
70	5590551.	122084.	327642.	2473020.	1015631.	1074935.	256351.	95191.	225697.
75	4098943.	88764.	236231.	1797476.	748486.	791041.	193031.	72179.	171734.
80	2476951.	53311.	138948.	1075424.	453373.	480031.	121244.	45271.	109349.
85	1508980.	32632.	81897.	653307.	273491.	287239.	77903.	28994.	73517.
TOTAL	133696107.	2826936.	6841026.	62277790.	22977971.	26152312.	5432608.	1991074.	5196389.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	6.8762	6.5313	5.9646	7.0789	6.6953	7.0091	6.2237	6.0488	6.9644
5	6.8025	6.5899	6.4515	6.8351	6.7704	6.7541	6.6381	6.7828	7.5543
10	6.7857	6.5222	6.7564	6.7220	6.8586	6.6409	6.9012	7.2364	7.8426
15	6.7641	6.0902	5.8002	6.9960	6.6340	6.8642	6.1641	6.0006	6.6109
20	6.7328	5.9506	4.7858	7.3124	6.2350	7.1279	5.3111	4.7369	5.2382
25	6.6958	6.4433	5.1878	7.1595	6.2072	6.9970	5.6323	5.2646	5.5669
30	6.6528	6.7985	5.8786	6.8744	6.3944	6.7610	6.2047	6.0666	6.2279
35	6.5972	6.9154	6.4608	6.6459	6.5015	6.5773	6.5556	6.6270	6.5753
40	6.5195	6.8919	6.9393	6.4456	6.5400	6.4297	6.7361	6.8872	6.6448
45	6.4119	6.7749	7.2724	6.2528	6.5201	6.2879	6.7789	6.9467	6.5444
50	6.2546	6.5854	7.3794	6.0462	6.4236	6.1240	6.6956	6.8336	6.3187
55	6.0104	6.3030	7.1586	5.7841	6.2217	5.8862	6.4958	6.5920	6.0131
60	5.6288	5.8716	6.6353	5.4007	5.8674	5.5216	6.1470	6.2087	5.6265
65	5.0390	5.2331	5.8586	4.8133	5.2900	4.9505	5.5781	5.6320	5.1047
70	4.1815	4.3186	4.7894	3.9710	4.4200	4.1103	4.7187	4.7809	4.3433
75	3.0659	3.1399	3.4532	2.8862	3.2574	3.0247	3.5532	3.6251	3.3049
80	1.8527	1.8858	2.0311	1.7268	1.9731	1.8355	2.2318	2.2737	2.1043
85	1.1287	1.1543	1.1971	1.0490	1.1902	1.0983	1.4340	1.4562	1.4148
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
MEAG	38.1055	39.0132	40.6965	37.3870	38.7822	37.8159	40.0245	40.2974	38.4311
SHA	100.0000	2.1144	5.1168	46.5816	17.1867	19.5610	4.0634	1.4893	3.8867
LAM	1.000520	1.000520	1.000521	1.000520	1.000520	1.000520	1.000520	1.000520	1.000520
R	0.000104	0.000104	0.000104	0.000104	0.000104	0.000104	0.000104	0.000104	0.000104

APPENDIX D *Continued.*

Multiregional population projections: females.

YEAR 1980

POPULATION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	4752724.	191459.	356330.	1705771.	823128.	886464.	255920.	119360.	414291.
5	4773452.	201894.	409671.	1600500.	828598.	836488.	284376.	142321.	469604.
10	4297428.	191770.	417077.	1352836.	738172.	722319.	267342.	137543.	470369.
15	4028401.	176354.	370627.	1301331.	706221.	714173.	230737.	118302.	410656.
20	3893898.	159016.	289274.	1393359.	679866.	753705.	202844.	92495.	323338.
25	4514781.	193205.	305642.	1672145.	784917.	890101.	231316.	101246.	336210.
30	5337795.	232072.	389040.	1918231.	895591.	1017963.	304312.	144251.	436335.
35	4553626.	197292.	376103.	1561918.	770941.	826892.	276049.	134668.	409763.
40	4163897.	189335.	411496.	1332597.	696825.	703025.	259313.	136365.	434942.
45	4030397.	182924.	441500.	1192453.	674573.	648839.	273840.	150057.	466211.
50	3584759.	163023.	413101.	1004263.	606076.	552597.	255834.	147001.	442864.
55	3066218.	139713.	354777.	842052.	517195.	465531.	225468.	127418.	394063.
60	2466663.	109996.	279643.	670015.	421119.	380093.	184539.	102656.	318602.
65	2107622.	87293.	236667.	554431.	368246.	334720.	162217.	90988.	273060.
70	1587025.	62833.	182364.	399704.	274671.	252662.	126625.	71898.	216268.
75	1075905.	41234.	123560.	266092.	186862.	166003.	89443.	51324.	151385.
80	594259.	21685.	64593.	142195.	100932.	88686.	53941.	31103.	91122.
85	321811.	11377.	33848.	75416.	55343.	45991.	29959.	17011.	52865.
TOTAL	59150661.	2552475.	5455314.	18985310.	10129276.	10286252.	3714078.	1916007.	6111948.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	8.0349	7.5009	6.5318	8.9847	8.1262	8.6180	6.8905	6.2296	6.7784
5	8.0700	7.9097	7.5096	8.4302	8.1802	8.1321	7.6567	7.4280	7.6834
10	7.2652	7.5131	7.6453	7.1257	7.2875	7.0222	7.1981	7.1786	7.6959
15	6.8104	6.9091	6.7939	6.8544	6.9721	6.9430	6.2125	6.1744	6.7189
20	6.5830	6.2299	5.3026	7.3391	6.7119	7.3273	5.4615	4.8275	5.2903
25	7.6327	7.5693	5.6027	8.8076	7.7490	8.6533	6.2281	5.2842	5.5009
30	9.0241	9.0920	7.1314	10.1038	8.8416	9.8963	8.1935	7.5287	7.1391
35	7.6984	7.7294	6.8943	8.2270	7.6110	8.0388	7.4325	7.0286	6.7043
40	7.0395	7.4177	7.5430	7.0191	6.8793	6.8346	6.9819	7.1171	7.1163
45	6.8138	7.1665	8.0930	6.2809	6.6596	6.3078	7.3730	7.8318	7.6279
50	6.0604	6.3869	7.5724	5.2897	5.9834	5.3722	6.8882	7.6723	7.2459
55	5.1837	5.4736	6.5033	4.4353	5.1059	4.5258	6.0706	6.6502	6.4474
60	4.1701	4.3094	5.1261	3.5291	4.1574	3.6952	4.9686	5.3578	5.2128
65	3.5631	3.4200	4.3383	2.9203	3.6355	3.2540	4.3676	4.7488	4.4676
70	2.6830	2.4617	3.3429	2.1053	2.7117	2.4563	3.4093	3.7525	3.5384
75	1.8189	1.6155	2.2650	1.4016	1.8448	1.6138	2.4082	2.6787	2.4769
80	1.0047	0.8496	1.1840	0.7490	0.9964	0.8622	1.4523	1.6233	1.4909
85	0.5441	0.4457	0.6205	0.3972	0.5464	0.4471	0.8066	0.8878	0.8650
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
MEAG	34.3678	34.4522	37.1037	32.4383	34.2289	33.1410	36.9972	38.3760	37.3252
SHA	100.0000	4.3152	9.2227	32.0965	17.1245	17.3899	6.2790	3.2392	10.3328
LAM	1.048747	0.982546	0.962443	1.111390	1.060484	1.096665	1.008800	0.967112	0.946297
R	0.009519	-0.003522	-0.007656	0.021122	0.011745	0.018455	0.001752	-0.006688	-0.011040

YEAR 2000

POPULATION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	4455428.	127555.	232450.	1829148.	788978.	932341.	205132.	82387.	257435.
5	4170337.	126923.	247158.	1645189.	749033.	838215.	207036.	87124.	269658.
10	4074260.	128564.	268123.	1558887.	736662.	789839.	212265.	92375.	287544.
15	4296989.	129843.	254024.	1708629.	773706.	864655.	208546.	86834.	270752.
20	4683270.	134965.	219850.	1974434.	820454.	1012851.	204528.	79301.	236886.
25	4728004.	140246.	224395.	1986849.	810758.	1025806.	213141.	84002.	242807.
30	4243368.	131267.	222652.	1739043.	733046.	898233.	202219.	81154.	235754.
35	3960648.	127798.	232082.	1568468.	698236.	814364.	197734.	82913.	239053.
40	3805828.	125701.	247567.	1465018.	676134.	753623.	201414.	85773.	250599.
45	4372800.	153369.	298139.	1649489.	790889.	844751.	237335.	103137.	295690.
50	5093783.	185297.	369409.	1862886.	893444.	966185.	297846.	138850.	379867.
55	4241614.	157135.	336134.	1497032.	743115.	781757.	258111.	122650.	345680.
60	3726925.	147272.	342598.	1244888.	641703.	652300.	230908.	116414.	350843.
65	3368006.	134766.	338987.	1049614.	576485.	570603.	226160.	117919.	353472.
70	2647814.	106925.	279908.	780912.	455006.	432384.	188568.	102610.	301501.
75	1812655.	73266.	191225.	518743.	309477.	291038.	135630.	72737.	220536.
80	989467.	39311.	100119.	275955.	169593.	159961.	77601.	40864.	126063.
85	612303.	23133.	57715.	164137.	105367.	100539.	51093.	27278.	83043.
TOTAL	65283499.	2193336.	4462536.	24519321.	11472088.	12729446.	3555269.	1604321.	4747185.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	6.8247	5.8156	5.2089	7.4600	6.8774	7.3243	5.7698	5.1353	5.4229
5	6.3880	5.7868	5.5385	6.7098	6.5292	6.5848	5.8234	5.4306	5.6804
10	6.2409	5.8616	6.0083	6.3578	6.4213	6.2048	5.9704	5.7579	6.0572
15	6.5820	5.9199	5.6924	6.9685	6.7443	6.7926	5.8658	5.4125	5.7034
20	7.1737	6.1534	4.9266	8.0526	7.1517	7.9568	5.7528	4.9430	4.9900
25	7.2423	6.3942	5.0284	8.1032	7.0672	8.0585	5.9951	5.2360	5.1148
30	6.4999	5.9848	4.9894	7.0925	6.3898	7.0563	5.6879	5.0585	4.9662
35	6.0668	5.8267	5.2007	6.3969	6.0864	6.3975	5.5617	5.1681	5.0357
40	5.8297	5.7310	5.5477	5.9750	5.8937	5.9203	5.6652	5.3464	5.2789
45	6.6982	6.9925	6.6809	6.7273	6.8940	6.6362	6.6756	6.4287	6.2287
50	7.8026	8.4482	8.2780	7.5976	7.7880	7.5902	8.3776	8.6548	8.0020
55	6.4972	7.1642	7.5324	6.1055	6.4776	6.1413	7.2600	7.6450	7.2818
60	5.7088	6.7145	7.6772	5.0772	5.5936	5.1243	6.4948	7.2563	7.3905
65	5.1590	6.1443	7.5963	4.2808	5.0251	4.4825	6.3613	7.3501	7.4459
70	4.0559	4.8750	6.2724	3.1849	3.9662	3.3967	5.3039	6.3958	6.3512
75	2.7766	3.3404	4.2851	2.1157	2.6977	2.2863	3.8149	4.5338	4.6456
80	1.5156	1.7923	2.2435	1.1255	1.4783	1.2566	2.1827	2.5471	2.6555
85	0.9379	1.0547	1.2933	0.6694	0.9185	0.7898	1.4371	1.7003	1.7493
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
MEAN	38.2803	40.8016	43.3409	36.2080	38.0264	36.7152	41.5956	43.8384	43.5103
SHA	100.0000	3.3597	6.8356	37.5582	17.5727	19.4987	5.4459	2.4575	7.2716
LAM	1.019308	0.957956	0.947905	1.052822	1.023603	1.042663	0.985275	0.956175	0.938556
R	0.003825	-0.008591	-0.010700	0.010295	0.004666	0.008356	-0.002967	-0.008963	-0.012685

APPENDIX D *Continued.*

YEAR 2030

POPULATION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	4404810.	90005.	176786.	1981289.	769530.	953260.	175568.	65832.	192539.
5	4245149.	92177.	191615.	1851255.	757986.	890765.	184363.	72077.	204911.
10	4146672.	92463.	202123.	1776601.	749162.	852112.	188950.	75577.	211683.
15	4210031.	88368.	179970.	1863372.	750895.	896901.	176235.	66751.	187538.
20	4400311.	88569.	153927.	2030488.	755242.	987011.	164000.	58511.	162564.
25	4503935.	96287.	166797.	2057468.	761488.	1005753.	175043.	64579.	176521.
30	4355127.	97641.	181063.	1937705.	749584.	948938.	182863.	69770.	187563.
35	4087967.	94548.	185917.	1779071.	715667.	871968.	181284.	71246.	188267.
40	3965575.	93674.	192152.	1700692.	702596.	830909.	182358.	72668.	190526.
45	4136215.	99391.	208841.	1755114.	739340.	855129.	195128.	78780.	204491.
50	4433632.	108639.	229534.	1858442.	797420.	912553.	214629.	87785.	224629.
55	4359530.	108988.	232628.	1799019.	787319.	895230.	217740.	89879.	228727.
60	3745560.	97000.	207196.	1522651.	676456.	767620.	191015.	78487.	205135.
65	3242744.	88199.	189484.	1286781.	590444.	659488.	168864.	70608.	188875.
70	2725427.	77102.	170225.	1055198.	496194.	542285.	148670.	62777.	172977.
75	2463098.	74193.	157415.	932655.	453061.	482491.	139294.	59533.	164455.
80	1889727.	59407.	124282.	689785.	336525.	366070.	117830.	52722.	143106.
85	1078697.	35617.	73092.	376693.	189564.	202199.	72875.	33433.	95224.
TOTAL	66394207.	1582269.	3223046.	28252280.	11778473.	13920683.	3076710.	1231015.	3329730.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	6.6343	5.6884	5.4851	7.0128	6.5334	6.8478	5.7064	5.3478	5.7824
5	6.3939	5.8256	5.9452	6.5526	6.4354	6.3989	5.9922	5.8551	6.1540
10	6.2455	5.8437	6.2712	6.2813	6.3604	6.1212	6.1413	6.1394	6.3574
15	6.3410	5.5849	5.5839	6.5955	6.3752	6.4429	5.7280	5.4224	5.6322
20	6.6276	5.5976	4.7758	7.1870	6.4121	7.0902	5.3304	4.7530	4.8822
25	6.7836	6.0854	5.1751	7.2825	6.4651	7.2249	5.6893	5.2460	5.3013
30	6.5595	6.1710	5.6178	6.8586	6.3640	6.8167	5.9435	5.6677	5.6330
35	6.1571	5.9754	5.7684	6.2971	6.0761	6.2638	5.8921	5.7876	5.6541
40	5.9728	5.9202	5.9618	6.0197	5.9651	5.9689	5.9270	5.9031	5.7220
45	6.2298	6.2816	6.4796	6.2123	6.2770	6.1429	6.3421	6.3996	6.1414
50	6.6777	6.8661	7.1216	6.5780	6.7702	6.5554	6.9759	7.1311	6.7462
55	6.5661	6.8881	7.2176	6.3677	6.6844	6.4309	7.0770	7.3012	6.8692
60	5.6414	6.1304	6.4286	5.3895	5.7432	5.5142	6.2084	6.3758	6.1607
65	4.8841	5.5742	5.8790	4.5546	5.0129	4.7375	5.4885	5.7358	5.6724
70	4.1049	4.8729	5.2815	3.7349	4.2127	3.8955	4.8321	5.0996	5.1949
75	3.7098	4.6890	4.8840	3.3012	3.8465	3.4660	4.5274	4.8361	4.9390
80	2.8462	3.7546	3.8560	2.4415	2.8571	2.6297	3.8298	4.2828	4.2978
85	1.6247	2.2510	2.2678	1.3333	1.6094	1.4525	2.3686	2.7159	2.8598
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M/AG	39.5556	42.3595	43.0973	38.3303	39.8126	38.8793	42.3594	43.5157	43.0557
SHA	100.0000	2.3831	4.8544	42.5523	17.7402	20.9667	4.6340	1.8541	5.0151
LAM	0.997284	0.947662	0.955931	1.011558	0.996782	1.003881	0.976101	0.964636	0.953339
R	-0.000544	-0.010752	-0.009014	0.002298	-0.000645	0.000775	-0.004838	-0.007201	-0.009557

STABLE EQUIVALENT TO ORIGINAL POPULATION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	4424938.	69120.	163753.	2149959.	734033.	920332.	156710.	59067.	171903.
5	4395540.	72826.	182269.	2082907.	745885.	887913.	169804.	66431.	187505.
10	4397979.	73945.	194332.	2052214.	758274.	874555.	178356.	71024.	195278.
15	4399633.	68514.	167852.	2112598.	749427.	908652.	163284.	61385.	167920.
20	4396999.	66367.	139083.	2182936.	718403.	951817.	145123.	51815.	141455.
25	4389982.	72284.	151047.	2154719.	706978.	942605.	152106.	56580.	153662.
30	4379052.	76310.	170394.	2099346.	719107.	916577.	164602.	63238.	169478.
35	4362094.	77847.	184292.	2053443.	729762.	895734.	173374.	68450.	179193.
40	4333791.	77835.	191893.	2017125.	734905.	879491.	178306.	71187.	183048.
45	4287676.	76316.	194232.	1983313.	734002.	864657.	179513.	72514.	183128.
50	4214547.	73810.	192014.	1944657.	725711.	848147.	177554.	72342.	180311.
55	4098600.	70726.	186934.	1887680.	708751.	824030.	173880.	70778.	175821.
60	3914147.	66821.	178989.	1797304.	679300.	786534.	167866.	67808.	169523.
65	3616897.	61969.	166861.	1650071.	630486.	726635.	157202.	63588.	160086.
70	3143592.	54436.	146153.	1422490.	550456.	630798.	139247.	56851.	143162.
75	2446834.	42465.	113352.	1097473.	430065.	491212.	111251.	45697.	115319.
80	1583144.	27691.	71974.	702742.	278639.	318398.	74743.	30663.	78294.
85	1052560.	19510.	46600.	459342.	185051.	209702.	52688.	22060.	57606.
TOTAL	67838003.	1148792.	2842024.	31850319.	11519234.	13877790.	2715611.	1071480.	2812753.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	HOKKAIDO	TOHOKU	KANTO	CHUBU	KINKI	CHUGOKU	SHIKOKU	KYUSHU
0	6.5228	6.0168	5.7618	6.7502	6.3722	6.6317	5.7707	5.5127	6.1137
5	6.4795	6.3394	6.4133	6.5397	6.4751	6.3981	6.2529	6.1999	6.6663
10	6.4831	6.4368	6.8378	6.4433	6.5827	6.3018	6.5678	6.6286	6.9426
15	6.4855	5.9640	5.9061	6.6329	6.5059	6.5475	6.0128	5.7290	5.9699
20	6.4816	5.7771	4.8938	6.8537	6.2365	6.8586	5.3440	4.8359	5.0291
25	6.4713	6.2922	5.3148	6.7651	6.1374	6.7922	5.6012	5.2806	5.4631
30	6.4552	6.6426	5.9955	6.5913	6.2427	6.6046	6.0613	5.9019	6.0254
35	6.4302	6.7764	6.4845	6.4472	6.3352	6.4544	6.3843	6.3883	6.3707
40	6.3884	6.7754	6.7520	6.3331	6.3798	6.3374	6.5660	6.6438	6.5078
45	6.3205	6.6432	6.8343	6.2270	6.3720	6.2305	6.6104	6.7676	6.5106
50	6.2127	6.4250	6.7563	6.1056	6.3000	6.1115	6.5383	6.7516	6.4105
55	6.0417	6.1566	6.5775	5.9267	6.1528	5.9378	6.4030	6.6057	6.2508
60	5.7698	5.8166	6.2980	5.6430	5.8971	5.6676	6.1815	6.3285	6.0270
65	5.3317	5.3942	5.8712	5.1807	5.4733	5.2360	5.7888	5.9346	5.6914
70	4.6340	4.7385	5.1426	4.4662	4.7786	4.5454	5.1277	5.3059	5.0897
75	3.6069	3.6965	3.9884	3.4457	3.7334	3.5396	4.0967	4.2648	4.0999
80	2.3337	2.4105	2.5325	2.2064	2.4189	2.2943	2.7524	2.8617	2.7835
85	1.5516	1.6983	1.6397	1.4422	1.6065	1.5111	1.9402	2.0588	2.0480
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
MEAG	39.6375	40.2039	41.1439	38.8649	39.8246	39.1628	41.2698	41.9446	40.9291
SHA	100.0000	1.6934	4.1894	46.9506	16.9805	20.4572	4.0031	1.5795	4.1463
LAM	0.997971	0.997971	0.997971	0.997971	0.997971	0.997971	0.997971	0.997971	0.997971
R	-0.000406	-0.000406	-0.000406	-0.000406	-0.000406	-0.000406	-0.000406	-0.000406	-0.000406

Appendix E

MIGRATION STATISTICS IN JAPAN

Migration data in Japan are derived from two major sources: the population census and the registration system. This appendix describes the main features of the population census and the population register and performs a comparative analysis of migration data derived from both sources.

E1 SOURCES OF MIGRATION DATA

E1.1 Population Censuses

The first population census in Japan was carried out in 1920. Since then, there have been large scale censuses taken every October at 10 year intervals with simplified counts made during the intervening years, the 13th being the 1980 census. (The 1945 census was postponed until 1947 because of war.)

Since 1950, censuses in Japan have been based on *de jure* population, whereas before that date they were based on *de facto* population. In these censuses populations by place of birth, place of work, and place of schooling have often been surveyed in addition to *de jure* and *de facto* populations. Before the 1960 census, the place-of-birth question was the only source for migration data. In 1960 the usual place of residence at exactly 1 year prior to the census was recorded for the population of 1 year of age and over. Its results were tabulated by sex and age, and further by labor force status, occupation, and industry. From these results a sex- and age-specific origin–destination (O–D) matrix of the number of interprefectural migrants between October 1, 1959 and October 1, 1960 can be obtained. These figures are from a 10 percent sample tabulation, which presents data for the 1–14, 15–19, . . . , 25–29, 30–39, . . . , 70–79, and 80+ age groups.

In 1970 the usual place of previous residence taken up exactly 1 year prior to the census was no longer recorded. Instead it was ascertained whether the last migration took place during the last year or during the last 5 years. The migration recorded was then the last migration (i.e., migration from previous place of residence to current place of residence). The results were classified by sex and age group, and for each classification they were tabulated by level of education, labor force status, occupation, industry, and so forth. From this, one can obtain the O–D migration matrix showing the number of last migrations by prefecture of previous residence and prefecture of present residence, during the period October

1969 to September 1970 and the period October 1965 to September 1970. The age groups in this analysis are 0–4, 5–9, . . . , 30–34, 35–44, . . . , 55–64, and 65+; the figures are derived from a 20 percent sample tabulation.

In the census of October 1, 1980 the period in which the last move occurred and the prefectures of previous and current residence were surveyed. The following periods were considered: October 1979 to September 1980 and October 1975 to September 1980. The age groups in it are 0, 1–4, 5–9, . . . , 80–84, and 85+. The figures for the 5-year period are from a 20 percent sample tabulation, and the ones for the 1-year period are from the complete enumeration.

E1.2 Population Register

While the population registration systems in some European countries are well known, the system in Japan seems not as familiar to the world in spite of its long history. Since 1872, annual statistics of in- and out-migration were obtained by a registration system on the basis of the Family Registration Law, but they were imperfect. In 1914, the Temporary Domicile Law was enacted, requiring people who had a temporary address or residence other than their permanent domicile for more than 90 days to make their in- and out-migration notification as a temporary resident. Thus began the registration of in- and out-migration. Because of under- and misreporting, however, it was difficult to maintain a high level of accuracy in the migration statistics.

In the postwar years, population mobility surveys were made in accordance with the Staple Food Control Law. Their results were totalized and tabulated monthly since August 1948, and their annual results (from November to October) were published as the Annual Investigative Report of Population Migration by the Food Agency, Ministry of Agriculture and Forestry. These reports were used for the estimation of population by prefecture carried out every year by the Prime Minister's Office as an extrapolation for census populations. But their use was discontinued with the 1955 report and replaced by migration statistics based on the Resident Registration Law and subsequently on the Basic Resident Register Law.

The Basic Resident Register Report contains data on population migration derived from the Basic Resident Registers kept by the heads of municipalities (*Shi* or city, *Machi* or town, *Mura* or village and *Tokupetso Ku* or special wards) in accordance with a provision of the Basic Resident Register Law (1967).

Before the Basic Resident Register Law there was the Resident Registration Law (1951), in accordance to which information on migration was collected and published from January 1, 1954 to November 9, 1967.

According to a provision of the more recent Basic Resident Register Law, residence cards were introduced and municipal heads reported (through prefectural governors to the Prime Minister) the number of in-migrants by sex and by locality of previous residence (prefectures, the Tokyo special-ward area, Kobe, Kita-Kyushu, Sapporo, Kawasaki, Fukuoka, and foreign countries). The migration data, however, excluded persons without Japanese nationality, those not under the application of the Family Registration Law, and those who changed their residence within the same municipalities.

The registration information is collected monthly according to a fixed form and is published quarterly and annually through the following process:

(1) The heads of municipalities, excluding the nine largest cities, produce a table of registration statistics and remit it to their prefectural governors.

(2) The heads of the nine largest cities produce the same table by ward and remit it to their prefectural governors.
(3) The prefectural governors remit the tables sent by municipal heads (including those of the nine largest cities) to the Director of the Statistics Bureau in the Prime Minister's Office.
(4) The Statistics Bureau collects and publishes them under the titles *The Quarterly Report on the Internal Migration in Japan Derived from the Basic Resident Registers*, in which the monthly number of migrants is recorded, and *The Annual Report on the Internal Migration in Japan Derived from the Basic Resident Registers*, in which the annual number of migrants is reported.

Though registration statistics in Japan have some defects and cannot be expected to be completely accurate, they have few precedents as a nationwide and annually obtainable source of migration statistics.

The chief tables in the annual report of the basic residence register are:

1. Number of intra- and inter-prefectural migrants by sex and month, for Japan, each year
2. Number of migrants by sex and month, for prefectures, each year
3. Number of in- and out-migrants by sex and origin or destination, for prefectures and for ten major cities (nine of the largest cities and the Tokyo special-ward area), each year.

The quarterly and annual reports on internal migration use several terms, which are worth describing here.

Migrants refer to those persons who changed their addresses and crossed municipality boundaries, those who immigrated from or emigrated to foreign countries, those who were exempt from the application of the Basic Resident Register Law, that is, those who were not of Japanese nationality and those whose previous addresses were unknown. As a result there may be some undercounting of migrations. Migrants during a particular month or year refer to those who reported their move to the local offices or those who were registered *ex officio* in the Basic Resident Registers during the period. These migrants, therefore, do not necessarily refer to the actual moves in the period but rather to the move registrations, which may be delayed.

Intra-prefectural migrants refer to those persons who moved across a municipal boundary within the same prefecture.

Inter-prefectural migrants refer to those persons who moved across a prefectural boundary.

In-migrants refer to those persons who moved into a municipality (prefecture) from another municipality (prefecture).

Out-migrants refer to those persons who moved out of a municipality (prefecture) into another municipality (prefecture). The number of out-migrants in this report was computed by the Statistics Bureau using the returns on the previous addresses of in-migrants, and therefore they are not necessarily equal to the number of persons who received the out-migration certificates. Some people may leave municipalities without registering during the same period in the municipality of in-migration. The total number of out-migrants, however, is equal to that of in-migrants because the number of out-migrants in this report is totalized by locality of previous residence recorded in in-migrant notifications.

Net migration was computed as the difference between in-migrants and out-migrants for each prefecture and each of the ten major cities (nine of the largest cities and the Tokyo special-ward area).

Rates of migration refer to the ratio of the number of migrants to the Japanese population estimated for each prefecture as of October 1 of the year.

E2 COMPARATIVE ANALYSIS OF MIGRATION DATA

Table E.1 shows from census data the number of *people* who made their last migration between October 1, 1969 and September 30, 1970 by region of origin and region of destination. (Migrant figures for Okinawa are excluded since the 1970 registration data do not include them.)

An analogous table may be assembled from registration data. For reasons of comparability, the registration data shown here are adjusted to the period covered by census data (October 1969 to September 1970). Table E.2 contains the number of *migrations* between October 1, 1969 and September 30, 1970. Since some people have moved more than once during the year, the figures generally exceed those of last migrations (census data).

Table E.3 is the matrix showing the ratio of each element of Table E.2, i.e., the 1970 migration flow matrix by sex using registration data, to the corresponding element of Table E.1, i.e., the 1970 migration flow matrix by sex using census data.

TABLE E.1 The sex-specific 1970 migration flow matrix for the eight regions of Japan.[a]

Region of origin	Region of destination							
	Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu
a. Males								
Hokkaido	–	7480	52788	11759	6007	1194	560	3317
Tohoku	17868	–	144467	20458	6715	1419	551	1728
Kanto	15351	57811	–	58412	41331	14697	5509	21261
Chubu	4157	11166	88395	–	44617	6084	2712	9344
Kinki	2620	4274	57917	41940	–	23094	11363	19883
Chugoku	911	1587	29162	11084	39953	–	5766	11376
Shikoku	607	468	14810	8279	35006	8292	–	2650
Kyushu	3191	1983	80930	46416	82664	22955	3223	–
b. Females								
Hokkaido	–	5487	35204	11775	4261	746	487	2567
Tohoku	7126	–	114155	18897	4424	865	374	1400
Kanto	8723	30675	–	40769	27603	9806	4133	17259
Chubu	2311	6044	63562	–	37611	4633	2193	9393
Kinki	1720	2158	37852	28076	–	18395	10112	18192
Chugoku	357	887	18368	7383	38904	–	4504	8380
Shikoku	279	323	10101	5247	31205	5941	–	1822
Kyushu	1773	1353	56193	40801	72046	17050	2676	–

[a]Number of people who made their last migrations in the period October 1, 1969–September 30, 1970 derived from 1970 census data.

TABLE E.2 The sex-specific 1970 migration flow matrix for the eight regions of Japan.[a]

Region of origin	Region of destination							
	Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu
a. Males								
Hokkaido	–	9425	50662	11844	6223	1465	631	3494
Tohoku	7793	–	128749	17089	6743	1627	665	2011
Kanto	23559	78084	–	79367	49521	20920	9960	40061
Chubu	6067	12245	90493	–	49765	9428	5281	20881
Kinki	3444	4986	60140	51408	–	36207	23958	40736
Chugoku	1021	1503	27949	11643	42089	–	8240	15666
Shikoku	636	586	14163	7164	33441	9300	–	3355
Kyushu	2984	2033	73514	40402	76172	24316	3685	–
b. Females								
Hokkaido	–	6635	33549	11736	4197	859	394	2443
Tohoku	5320	–	113912	18843	4536	1075	470	1473
Kanto	13019	59501	–	51421	30558	13201	6670	27331
Chubu	5037	12959	67998	–	38833	6688	4195	22972
Kinki	2249	3094	39502	35211	–	27748	19056	33834
Chugoku	507	913	19256	7729	37669	–	5786	11502
Shikoku	330	390	10291	5557	30091	6168	–	2413
Kyushu	1828	1349	55688	40449	67941	18047	2768	–

[a]Total number of migrations in the period October 1, 1969–September 30, 1970 derived from registration data for that period.

A comparison between census and registration data is rather difficult to make, because the data sets are quite different in character. Therefore there have been few attempts at such a comparative analysis in the past. To begin our comparison, let us first look at the 1960 census and registration data and later come back to the 1970 data. As mentioned earlier, the 1960 census recorded the usual place of residence exactly 1 year prior to the census. Based on that survey, it can be known whether a person migrated during the year before the census, but it cannot be known how many times a migration occurred during the year.

There exists, however, a report showing that the 1960 national census migration data agree very well with the registration data for the same year (Kono 1969). Tables E.4 and E.5, taken from this report, illustrate the comparison of the two kinds of migration data. Table E.4 gives the in-migrants by prefecture of destination, and Table E.5 gives the out-migrants by prefecture of origin in 1960.

Column (3) of Table E.4, i.e., the value of the registration data divided by the census data times 100 equals A, say, is 101.33 for Japan as a whole. There is variation of this value among prefectures, however, especially when prefectures with a large city are compared with those not having a large city. The accuracy of the two kinds of data is impaired by students who move to a city to continue their education and seasonal laborers who move from agricultural districts to the city.

Note that most of the column (3) values in Table E.4 are larger than those in Table E.5. The mean absolute percentage deviation from 100 in column (3), i.e., the summation

TABLE E.3 The matrix showing the ratio (in hundreds) of each element in Table E.2 to the corresponding element in Table E.1.

Region of origin	Region of destination							
	Hokkaido	Tohoku	Kanto	Chubu	Kinki	Chugoku	Shikoku	Kyushu
a. Males								
Hokkaido	–	126.00	95.97	100.72	103.60	122.68	112.63	105.34
Tohoku	43.61	–	89.12	83.53	100.41	114.66	120.69	116.35
Kanto	153.47	135.07	–	135.87	119.82	142.34	180.80	188.42
Chubu	145.95							
109.66	102.37	–	111.54	154.96	194.73	223.47		
Kinki	131.44	114.79	103.84	122.58	–	156.78	210.84	204.88
Chugoku	112.10	94.68	95.84	105.04	105.35	–	142.91	139.71
Shikoku	104.70	125.11	95.63	86.53	95.53	112.15	–	126.58
Kyushu	93.50	102.53	90.84	87.04	92.15	105.93	114.33	–
b. Females								
Hokkaido	–	120.91	95.30	99.67	98.50	115.18	80.95	95.15
Tohoku	74.66	–	99.79	99.71	102.52	124.28	125.67	105.23
Kanto	149.25	193.97	–	126.13	110.71	134.62	161.38	158.36
Chubu	217.97	214.41	106.98	–	103.25	144.36	191.30	244.57
Kinki	130.73	143.36	104.36	125.41	–	150.85	188.45	185.98
Chugoku	141.88	102.93	104.84	104.69	96.82	–	128.47	137.25
Shikoku	118.10	120.82	101.88	105.91	96.43	103.83	–	132.45
Kyushu	103.10	99.70	99.10	99.14	94.30	105.85	103.43	–

of column (3) minus 100 divided by the number of prefectures equals B, say, was obtained for general comparison, and it was found to be 14.26 for Table E.4 and 8.16 for Table E.5.

The 1970 census recorded the last move and the prefectures of previous residence within a year before October 1, 1970, whereas the registration data are the sum of monthly move-in notifications by persons who have migrated from one prefecture to another. Tables E.6 and E.7 are equivalent to Tables E.4 and E.5 but are for 1970. According to these tables, the value of A for each prefecture is more than 100 and larger than the corresponding value of A in 1960. In 1970 also, the value of A in Table E.7 is, in general, smaller than in Table E.6.

In Table E.6 the value of B is 33.93, and in Table E.7 it is 11.54. Both values are larger than the corresponding ones for 1960. This is partly because of the difference in character between the migration data of the two censuses of 1970 and 1960. Recall that the 1960 data refer to the place of residence exactly 1 year prior to the census, whereas the 1970 data refer to the last place of residence. Part of the difference may also be attributed to the differences in the number of multiple moves in 1960 and 1970.*

*We are grateful to Dr. Yoichi Okazaki and Professor Atsushi Otomo for their instructive suggestions for this appendix.

TABLE E.4 Comparison of in-migrants by prefecture of destination based on the two kinds of migration data, both sexes (October 1, 1959– October 1, 1960).[a]

Prefecture of destination	Registration data (1)	Census data (2)	Ratio A: (1/2)100 (3)	Prefecture of destination	Registration data (1)	Census data (2)	Ratio A: (1/2)100 (3)
All Japan	2 625 135	2 590 751	101.33	24. Mie	28 640	31 232	91.70
1. Hokkaido	54 741	80 033	68.40	25. Shiga	21 688	18 100	119.82
2. Aomori	18 673	17 340	107.60	26. Kyoto	51 268	57 094	89.80
3. Iwate	17 796	16 650	108.88	27. Osaka	291 276	298 730	97.51
4. Miyagi	29 778	29 769	100.03	28. Hyogo	137 770	136 279	101.09
5. Akita	15 142	13 763	110.02	29. Nara	18 124	26 851	67.50
6. Yamagata	19 119	12 885	148.38	30. Wakayama	18 623	17 324	107.50
7. Fukushima	28 535	23 283	122.56	31. Tottori	10 809	9 017	119.87
8. Ibaraki	36 388	30 671	118.64	32. Shimane	14 228	14 021	101.48
9. Tochigi	23 395	20 462	114.33	33. Okayama	29 243	26 158	111.79
10. Gunma	23 835	19 676	121.14	34. Hiroshima	46 349	46 349	100.00
11. Saitama	98 259	89 062	110.33	35. Yamaguchi	34 277	29 925	114.54
12. Chiba	79 665	74 183	107.39	36. Tokushima	11 944	10 043	118.93
13. Tokyo	591 711	578 526	102.28	37. Kagawa	16 830	14 361	117.19
14. Kanagawa	192 148	199 217	96.45	38. Ehime	24 130	19 628	122.94
15. Nigata	30 635	25 655	119.41	39. Kochi	12 355	10 167	121.52
16. Toyama	12 705	15 107	64.10	40. Fukuoka	98 867	91 036	108.60
17. Ishikawa	14 384	16 067	89.53	41. Saga	21 644	17 359	124.69
18. Fukui	10 612	10 593	100.18	42. Nagasaki	34 583	31 891	108.44
19. Yamanashi	12 528	16 340	76.67	43. Kumamoto	31 541	24 285	129.88
20. Nagano	27 775	26 827	103.53	44. Oita	23 181	20 166	114.95
21. Gifu	39 950	42 008	95.10	45. Miyazaki	24 474	21 900	111.75
22. Shizuoka	56 999	67 192	84.63	46. Kagoshima	36 955	26 354	140.23
23. Aichi	151 563	167 168	90.67				

[a]For general comparison $B = 1/46\ \Sigma[\text{Col. (3)} - 100] = 14.26$.
SOURCE: Kono (1969).

TABLE E.5 Comparison of out-migrants by prefecture of origin based on the two kinds of migration data, both sexes (October 1, 1959–October 1, 1960).[a]

Prefecture of origin	Registration data (1)	Census data (2)	Ratio *A*: (1/2)100 (3)	Prefecture of origin	Registration data (1)	Census data (2)	Ratio *A*: (1/2)100 (3)
All Japan	2 625 135	2 590 751	101.33	24. Mie	37 627	37 711	99.78
1. Hokkaido	65 222	67 294	96.92	25. Shiga	23 699	21 974	107.85
2. Aomori	30 386	47 312	64.23	26. Kyoto	56 550	52 777	107.15
3. Iwate	32 156	42 488	75.68	27. Osaka	146 833	129 083	113.75
4. Miyagi	48 725	56 113	86.83	28. Hyogo	103 844	93 573	110.98
5. Akita	34 410	45 181	76.16	29. Nara	24 265	23 722	102.29
6. Yamagata	36 711	40 036	91.70	30. Wakayama	24 262	25 798	94.05
7. Fukushima	63 662	70 256	90.61	31. Tottori	18 526	18 470	100.30
8. Ibaraki	53 718	53 589	99.50	32. Shimane	27 846	28 801	96.68
9. Tochigi	40 911	42 089	97.20	33. Okayama	41 446	41 282	100.40
10. Gunma	40 748	41 105	99.13	34. Hiroshima	52 883	52 852	100.06
11. Saitama	65 307	56 444	115.70	35. Yamaguchi	49 848	52 443	95.05
12. Chiba	68 354	63 554	107.55	36. Tokushima	24 960	28 194	88.53
13. Tokyo	377 019	319 420	118.03	37. Kagawa	28 710	28 932	99.23
14. Kanagawa	102 963	88 183	116.76	38. Ehime	46 063	48 760	94.47
15. Nigata	63 619	60 696	104.82	39. Kochi	24 779	28 158	88.00
16. Toyama	20 479	24 019	85.26	40. Fukuoka	126 188	127 430	99.03
17. Ishikawa	19 259	20 449	94.18	41. Saga	41 992	40 605	103.42
18. Fukui	16 455	17 016	96.70	42. Nagasaki	62 435	67 900	91.95
19. Yamanashi	24 209	25 163	96.21	43. Kumamoto	60 466	67 637	89.40
20. Nagano	50 213	50 140	100.15	44. Oita	40 531	45 668	88.75
21. Gifu	40 723	38 874	104.76	45. Miyazaki	40 127	43 427	92.40
22. Shizuoka	61 214	62 254	98.33	46. Kagoshima	77 462	81 874	94.61
23. Aichi	87 330	73 605	121.96				

[a]For general comparison $B = 1/46\ \Sigma[\text{Col. (3)} - 100] = 8.16$.
SOURCE: Kono (1969).

TABLE E.6 Comparison of in-migrants by prefecture of destination based on the two kinds of migration data, both sexes (October 1, 1969–October 1, 1970).[a]

Prefecture of destination	Registration data (1)	Census data (2)	Ratio *A*: (1/2)100 (3)	Prefecture of destination	Registration data (1)	Census data (2)	Ratio *A*: (1/2)100 (3)
All Japan	4 203 871	3 731 555	112.66	24. Mie	46 630	35 410	131.69
1. Hokkaido	73 897	67 070	110.18	25. Shiga	36 738	31 655	116.06
2. Aomori	36 360	22 610	160.81	26. Kyoto	86 103	85 000	101.30
3. Iwate	30 152	18 010	167.42	27. Osaka	383 133	374 470	102.05
4. Miyagi	58 923	47 985	122.79	28. Hyogo	204 164	185 940	109.80
5. Akita	26 590	20 475	129.87	29. Nara	53 604	48 850	109.73
6. Yamagata	23 422	24 850	94.25	30. Wakayama	29 136	20 870	139.61
7. Fukushima	49 861	31 025	160.71	31. Tottori	17 999	12 775	140.89
8. Ibaraki	74 233	55 850	132.91	32. Shimane	22 640	13 050	173.49
9. Tochigi	50 634	40 810	124.07	33. Okayama	62 802	51 360	122.28
10. Gunma	40 963	30 600	133.87	34. Hiroshima	91 140	80 885	112.68
11. Saitama	295 145	287 650	102.61	35. Yamaguchi	51 030	34 820	146.55
12. Chiba	252 432	247 060	102.17	36. Tokushima	20 799	12 245	169.86
13. Tokyo	691 808	632 710	106.18	37. Kagawa	32 608	22 855	142.67
14. Kamagawa	390 258	387 945	100.60	38. Ehime	39 751	26 100	152.30
15. Nigata	42 425	32 800	129.34	39. Kochi	21 667	13 005	166.81
16. Toyama	22 361	16 005	139.71	40. Fukuoka	138 210	112 495	122.86
17. Ishikawa	26 209	22 930	114.30	41. Saga	26 994	15 930	169.45
18. Fukui	16 164	11 410	141.67	42. Nagasaki	47 073	28 890	162.94
19. Yamanashi	19 770	14 885	134.63	43. Kumamoto	49 550	31 290	158.36
20. Nagano	39 121	28 525	137.15	44. Oita	42 564	28 900	147.28
21. Gifu	53 579	43 030	124.52	45. Miyazaki	37 809	22 310	169.47
22. Shizuoka	99 535	87 735	113.45	46. Kagoshima	56 831	28 725	197.85
23. Aichi	212 059	212 880	99.61				

[a] For general comparison $B = 1/46\ \Sigma[\text{Col. (3)} - 100] = 33.93$.

TABLE E.7 Comparison of out-migrants by prefecture of origin based on the two kinds of migration data, both sexes (October 1, 1969–October 1, 1970).[a]

Prefecture of origin	Registration data (1)	Census data (2)	Ratio *A*: (1/2)100 (3)	Prefecture of origin	Registration data (1)	Census data (2)	Ratio *A*: (1/2)100 (3)
All Japan	4 203 871	3 731 555	112.66	24. Mie	49 985	45 260	110.44
1. Hokkaido	145 808	143 700	101.47	25. Shiga	30 251	25 270	119.71
2. Aomori	53 309	71 015	75.07	26. Kyoto	80 547	64 805	124.29
3. Iwate	51 142	58 490	87.44	27. Osaka	318 139	243 370	130.72
4. Miyagi	61 955	57 345	108.04	28. Hyogo	182 422	151 430	120.47
5. Akita	44 398	49 700	89.33	29. Nara	36 987	27 605	133.99
6. Yamagata	38 356	38 195	100.42	30. Wakayama	35 182	33 135	106.18
7. Fukushima	68 325	65 715	103.97	31. Tottori	21 694	20 615	105.23
8. Ibaraki	61 953	55 995	110.64	32. Shimane	34 615	33 355	103.78
9. Tochigi	45 386	40 825	111.17	33. Okayama	57 498	48 250	119.17
10. Gunma	41 297	37 215	110.97	34. Hiroshima	82 335	72 825	113.06
11. Saitama	165 801	125 240	132.39	35. Yamaguchi	63 703	61 420	103.72
12. Chiba	139 544	112 760	123.75	36. Tokushima	28 658	30 185	94.94
13. Tokyo	766 622	645 290	118.80	37. Kagawa	34 367	32 070	107.16
14. Kamagawa	266 606	206 275	129.25	38. Ehime	53 700	53 810	99.80
15. Nigata	67 473	66 185	101.95	39. Kochi	29 750	29 070	102.34
16. Toyama	26 657	26 305	101.34	40. Fukuoka	171 179	157 750	108.51
17. Ishikawa	28 605	26 275	108.87	41. Saga	39 667	38 375	103.37
18. Fukui	20 594	21 120	97.51	42. Nagasaki	87 431	86 875	100.64
19. Yamanashi	25 000	23 035	108.53	43. Kumamoto	83 681	83 685	100.00
20. Nagano	49 060	44 655	109.86	44. Oita	52 412	52 575	99.69
21. Gifu	52 588	44 300	118.71	45. Miyazaki	55 726	54 245	102.73
22. Shizuoka	90 542	79 635	113.70	46. Kagoshima	96 271	99 785	96.48
23. Aichi	166 652	117 710	141.58				

[a]For general comparison $B = 1/46\ \Sigma[\text{Col. (3)} - 100] = 11.54$.

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(continued overleaf)

NATIONAL CASE STUDIES *(continued)*

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