MIGRATION AND SETTLEMENT
IN BULGARIA

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Preface

     To promote international scientific cooperation and to dis-
seminate research results, the Migration and Settlements Task of
the Human Settlements and Services Area at IIASA initiated a com-
parative analysis of patterns of interregional migration and
spatial population growth in National Member Organization Coun-
tries. To carry out the study, a network of national scholars
was established, an integrated methodology for multiregional
demographic analysis was developed, and a package of computer
programs to implement this methodology was written. The con-
tributors were invited to prepare reports on migration and
settlement in their respective countries. An outline was pro-
vided and computer analysis was carried out by IIASA. The re-
sults of the various case studies will be discussed at a Confe-
rence to be held at IIASA in September, 1978.

     This is the report on migration and settlement in Bulgaria.
In it Dimiter Philipov analyzes recent changes in Bulgaria's
patterns of population redistribution and studies in detail the
population dynamics of the system of seven economic planning
regions.

                                        Frans Willekens
                                        Leader
                                        Migration and
                                        Settlement Task

                                        July 1978

Abstract

This paper examines the recent evolution of Bulgaria's population. It is part of IIASA's comparative study of migration and settlement patterns in its member nations. The paper presents a multiregional demographic analysis of fertility, mortality, and internal migration for a seven-region disaggregation of the Bulgarian state. The results give a detailed snapshot of current spatial population dynamics in the country and offer valuable insights useful for improving the national population policy.

Acknowledgements

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Migration and Settlement in Bulgaria

INTRODUCTION

Demographers throughout the world have for a long time fixed their attention mainly on fertility and mortality patterns, neglecting to some extent migration within a given population. The reasons for this may have been a lack of efficient mathematical models and poor statistical data on migration. During the last decade these difficulties have been eased: new models have been created both for the study of migration and for the improvement of incomplete data. For the study of the spatial dynamics of a given population, the most useful models are those which analyze the joint evolution of fertility, mortality, and migration patterns.

In this spatial analysis of the population of Bulgaria, models and computer programs were used that have been elaborated at IIASA and presented in a series of IIASA papers. The models were fitted to 1975 data.

Section 1 of this paper describes demographic changes of the Bulgarian population until 1975. Section 2 deals with the preparation of the data to fit the needs of the analysis. The following sections present the results of the models used: the multiregional life table; the population projection; the stable equivalent population; and their use in the study of spatial fertility, mortality, and migration patterns as indicated by such variables as the spatial reproduction and migraproduction rates, and spatial migration levels. These are examined together with other observed demographic characteristics to give a full view of the demographic structure of the Bulgarian population in 1975.

1. OVERVIEW OF THE DEMOGRAPHIC HISTORY OF BULGARIA

In order to understand the models' results, one needs some background information about the current demographic patterns of the population of Bulgaria.

In its demographic development, each nation passes through several stages closely connected with the social and economic history of the nation. Demographic studies in Bulgaria (Stefanov et al., 1974, Naoumov et al., 1974) identify three stages that have affected the present demographic structure of the Bulgarian population:

- the period until 1920-1925

- the period between 1920-1925 and 1945 (the end of World War 2)

- the period after 1945

We begin our paper with a brief description of the changes in fertility, mortality, and migration patterns in Bulgaria.

1.1 Fertility

Except for the years of the Balkan War and the First World War, during the first stage, crude birth rates (CBR) were in the range of 39-42 per thousand. These high numbers are typical of a population that has not yet started its demographic transition. During 1925, the last year of this period, the CBR was 36.9 per thousand (Figure 1.1). This marked the beginning of the demographic transition, which took place during the second stage. In 1939-1945, the CBRs were around 22 per thousand. The second stage was characterized by the beginning, though a very slow one, of industrialization and urbanization in the country.

The last stage, the period after the Second World War, was remarkably new in the formation of the demographic structure of the Bulgarian population. This was due to the social and economic changes in the country after 1944, namely, land reforms,
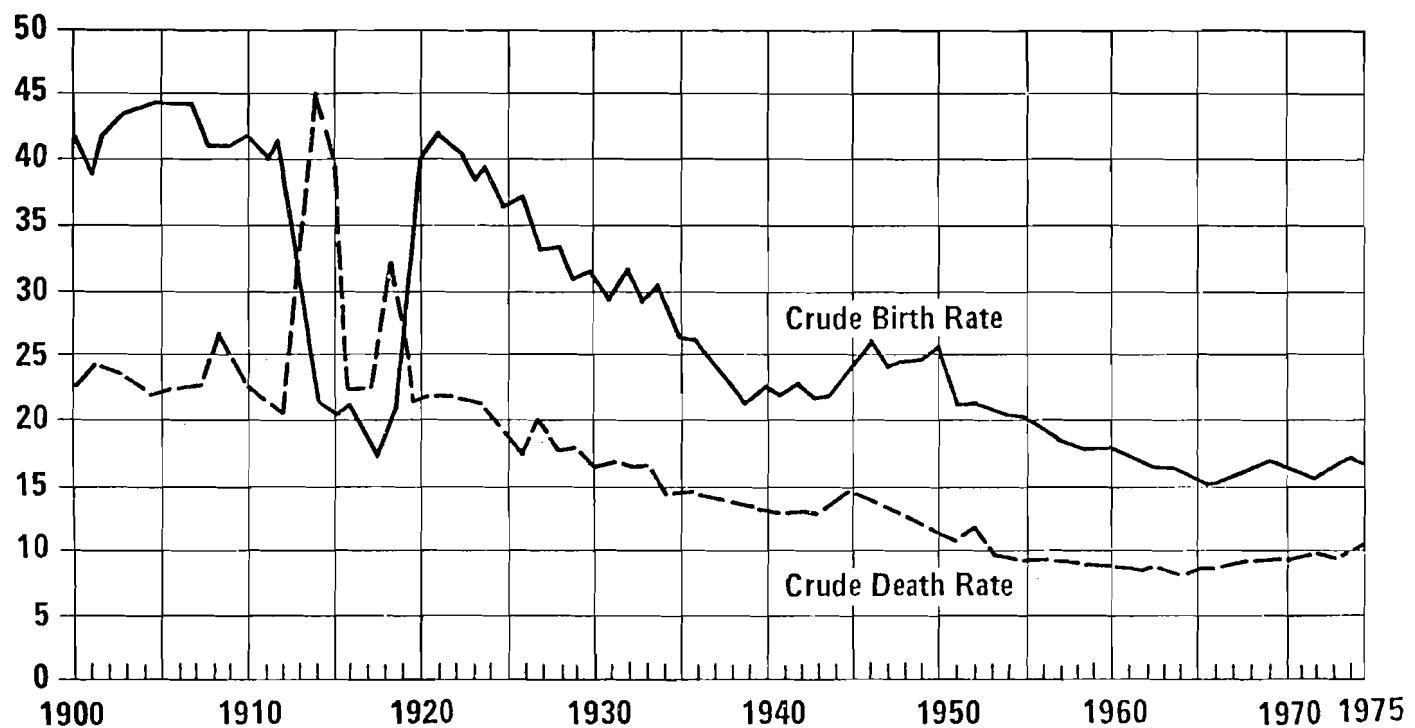
Figure 1.1   Crude birth and death rates for Bulgaria, 1900-1975.

Source: Demographic Yearbook for Bulgaria, 1974 - readjusted
          for 1975.

socialistic industrialization, collectivization and mechanization
of agriculture, emancipation of women, improved health care, and
urbanization.   Some of the basic characteristics of economic
development in the state are shown in Table 1.1:

Table 1.1   Some economic indices for Bulgaria, 1950-1975

Indices	1950	1960	1965	1970	1975
National income	100,0	239,2	353,6	561,0	761,4
National income per capita	100,0*	220,4	312,3	478,8	632,4
Real working salary	100,0*	195,0	215,0	278,0	321,0

*in 1952

The fast economic growth brought changes in the structure of
the economy (Table 1.2) which caused the movement of a large pro-
portion of the labor force from agriculture to other branches of
the economy, mainly to industry and non-material spheres.

Table 1.2   Structure of the labor force in economic branches
            in Bulgaria, 1948-1975 (in percents)

Branches	1948	1960	1965	1975
Industry	7,9	21,9	26,3	34,6
Agriculture	81,8	54,7	44,9	22,5
Total in material production	95,6	90,8	89,2	80,6
Total in non-material production	4,4	9,2	10,8	19,4
Total	100,0	100,0	100,0	100,0

The redistribution of the labor force according to the struc-
tural changes of the economic branches led to enormous changes in
the spatial distribution of the population.

These structural changes called for an increase in the quality
of the labor force, which led directly to a widening of education
in the country. According to the 1975 census, there were no illit-
erate people aged 7+, 4.1 percent of the total population (above 7
years of age) had a higher education, and 20,2 percent had a sec-
ondary education.

After the fertility compensation period following the war,
there appeared a decrease in natality (Figure 1.1). The lowest
CBR observed was during 1966: 14.9, and the netreproduction
rates (NRR) in 1965-1967 were less than 1.00 (Table 1.3). This
trend was caused by the socio-economic changes in Bulgaria. For
example a clearly identifiable movement of laborers freed from
agricultural pursuits migrated to urban areas, where industrial-
ization was growing rapidly. A much improved standard of living

Table 1.3   Net reproduction rates for the female population of
            Bulgaria, 1965-1974

Year	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
NRR	0,969	0,943	0,946	1,064	1,078	1,030	0,967	0,963	1,017	1,084	1,055

and quality of life plus the emancipation of women, with their larger social and economic occupation, were factors that led to the diminishing number of children born in a given family. It must also be mentioned that, according to Bulgarian tradition, children were added working hands in an agricultural household, but not so important in an urban household.

The fall of natality and the increase in the average life expectancy led to an ageing of the population. To counteract this, in the fall of 1967 the government adopted laws for the encouragement of childbearing. As a result, natality has increased since 1968. The fall of the CDR and NRR in 1971-1972 is due mainly to the effect of the Second World War on the age group 20-27.

Since 1956, Bulgaria has been divided into 28 administrative districts. The statistical data for this regional delineation, however, are compatible with data going back to 1947. This allows for the regional comparison of the levels of fertility during the third demographic stage.

At the beginning of the third stage, and after the post-war compensation period (around 1950) natality differed greatly among the districts, its rate ranging between 14-36 per thousand (Figure 1.2). After 1951, natality decreased in all the districts, and the decrease was highest for districts with a previously high level of fertility. For instance, the district of Kurdjali exhibited the highest levels of natality in 1951 and 1975, but the decrease has been significant: from 35 down to 22.3. The other extreme is the district of Vidim, which exhibited the lowest level of natality in 1951 (14-16) and in 1975 (12.6). The same is true for each other district: a high level of natality in the beginning of the stage leads to a high level at its end, and a low level remains a low level. It could be observed that the higher the level of natality in 1951, the stronger its decrease in 1975. So greater uniformity among the districts was achieved - in 1975 their CBRs were in the range of 12-24.
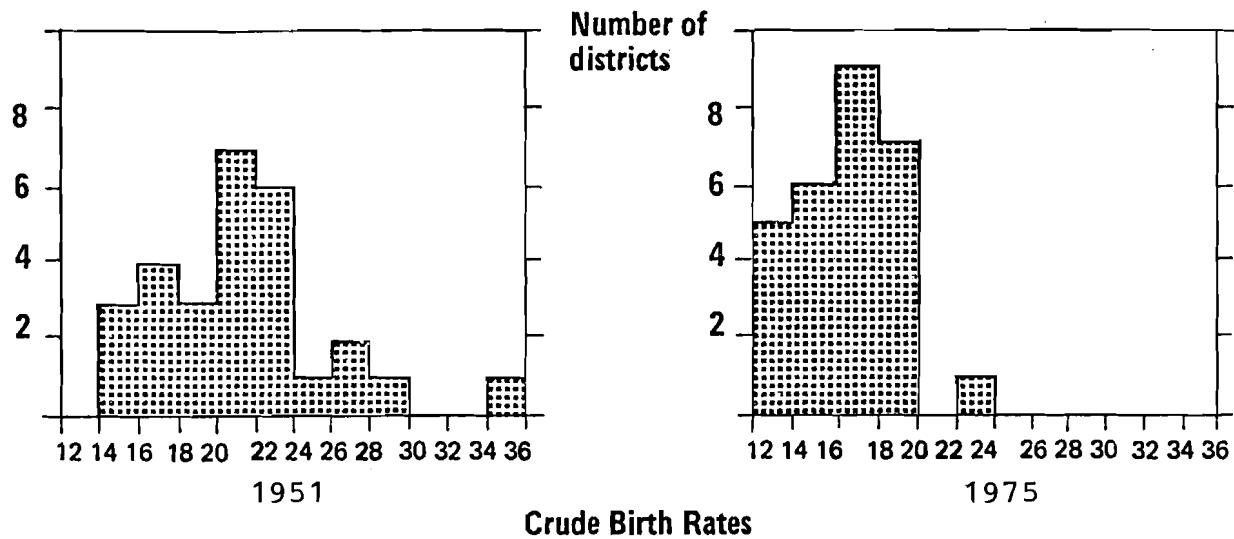
Figure 1.2 Distribution of the 28 administrative districts
of Bulgaria according to the level of natality.

Source: Demographic Yearbook for Bulgaria, 1974 - readjusted
for 1975.

The pronatalist policy adopted in 1967 has brought a uni-
form increase of the fertility levels in all the districts, with
the exception of Kurdjali, which was not influenced at all.

It is clear from the above that the traditions in the fer-
tility patterns that have been historically established in the
separate districts, are taking place in 1975 in Bulgaria as a
whole. It might be expected that during the next 5-6 years the
difference between the high and low levels of regional fertility
will continue to diminish.

The socialistic development and the planned territorial
distribution of the productive forces bring further equaliza-
tion of the economic and cultural quality of life among the dis-
tricts of the country. Together with the overcoming of religious
and other influences, comes the elimination of differences in
fertility levels among the regions of the state.

1.2 Mortality

Until the end of the first stage of demographic development
(1920-1925), mortality in Bulgaria was high, with a crude death
rate (CDR) of approximately 23 per thousand (Figure 1.1). By the

end of this stage and during the second stage, mortality fell
together with fertility, the CDR in 1941-1945 having dropped to
13.4 per thousand. An unusual feature of the Bulgarian demogra-
phic transition was the lack of any lag between the fall of fer-
tility and the fall of mortality, i.e., the transitional popula-
tion growth usually occurring in countries in which the decline
in mortality appears before the decline in fertility did not
occur in Bulgaria.

After the Second World War, as a result of the new condi-
tions of living, the fall of mortality continued. Until 1965
the fall of mortality, together with the fall of fertility led to
the ageing of the population structure, causing the slight in-
crease of the CDR after 1965.

The <u>expectation of life</u> gives a better picture of the mor-
tality level than the CDR because it is not influenced by the age
composition of the real population. It is common also to say
that the life expectancy is an indicator of economic development
and the standard of living. Table 1.4 shows that this has been
the case for the Bulgarian population. The life expectancy at
birth is much higher during the third stage than before. This is
a result of the improvement of the health care system, as well as
of the already mentioned socio-economic changes that have taken

Table 1.4   Life expectancy for the population of Bulgaria
            during the period 1900-1970.

Source: Demographic Yearbook for Bulgaria, 1975.

Sex \ Year	1900 1905	1921 1925	1927 1934	1935 1939	1946 1947	1956 1957	1960 1962	1965 1967	1969 1971	1973 1974
Males	42.1	44.4	47.8	51.0	53.3	64.2	67.8	68.8	68.6	68.9
Females	42.2	45.0	49.1	52.6	56.4	67.7	71.4	72.7	73.9	73.6
Totals	–	44.6	48.4	51.8	54.9	65.9	69.6	70.7	71.1	–

place after the Second World War. The life expectancy in 1969-1971 is equal to 71.1 years, and it is approximately the same in 1975.

Life expectancies at the level of Bulgaria's 28 districts are unavailable, thus Table 1.5 presents the distribution of the districts during the third demographic stage, arrayed according to the magnitude of CDRs. At the beginning of the period mortality was higher, and the CDRs varied more. In the middle of the period (1960-1965) the range of the CDRs was very narrow, and their magnitude was lower. During the last decade of the period (1965-1975) a rise of the CDR appears in several districts. This rise is a result of the ageing of the population structure in some districts in Northern and especially in Northwestern Bulgaria, caused by outmigration movements during the first two decades of the third stage. Therefore, it can be stated that during the whole third stage, mortality fell as depicted by the life expectancy for the total population, and it has been the age structure of the population that has caused the rise of some CDRs during the last ten years. It is expected that with the rapid, but uniform, social and economic development of the country, the level of mortality (if measured with age-specific rates) will continue to fall in the long run in all the 28 districts, while the CDR, which depends on the peculiarities of the population age-structure, may continue to increase.

Table 1.5   Distribution of the 28 districts of Bulgaria, according to the level of mortality.
Source: Stefanov et al., (1974) adjusted for 1975.

CDR \ Year	1950	1955	1960	1965	1970	1975
5.0 - 6.9	-	1	2	4	2	2
7.0 - 8.9	1	13	20	16	10	2
9.0 - 10.9	20	10	6	8	11	13
11.0 - 12.9	6	3	-	-	5	6
13.0 - 14.9	-	1	-	-	-	4
15.0 - 16.9	1	-	-	-	-	1

Accordingly it cannot be stated that a high or low CDR in 1950 would lead to a high or low CDR in 1975, as was the case for the CBR. On the contrary, the district of Kurdjali had the highest CDR in 1947 (26.9) and the lowest one in 1975 (6.3)! There is no other measure available for the level of regional mortality than the CDR, but it is clear that this measure is not representative, because of the effect of the age structure.

The demographic development of the populations of the districts, as depicted by fertility, suggests that where mortality is concerned there should exist greater uniformity among the districts in 1975 than in 1950, i.e., the mortality levels equalize.

1.3 Migrations and Territorial Structure

Internal migrations in any country are caused mainly by social and economic factors, but geographical, personal, and ethnical factors must not be neglected. In Bulgaria, migration rates before 1944, were very low, because the industrial development of the country was very slow, and agriculture was more developed than industry. Some urbanization trends were observed, but they were still not well depicted. For instance, the urban population of the country in 1900 was 19.9 percent of the total, and in 1934 it was 21.4 percent.

Table 1.6 gives the total number of migrations and their intensity per thousand of the population in the period 1947-1975. As a result of the social, economic, and cultural changes after 1944, the intensity of migration movements began to rise. The economic factors, being the most important reasons for migration, caused the younger part of the active population, together with pupils and students, to migrate. Because of the collectivization and the mechanization of agriculture, a large mass of the labor force moved to the urban areas, where there was a need for workers in the newly developed heavy industry. Therefore the change in the territorial structures can be best observed in the rural-urban structure, resulting from the territorial changes of the structure of the social and labor product.

Table 1.6   Total numbers and intensity of migrations
in Bulgaria, 1947-1975.

Source: Demography of Bulgaria (Stefanov et
al., 1974),
Demographic Yearbook of Bulgaria
(1972-1975)

year	migrants (thous.)	intensity (per thous.)
1947-1950	117.8	16.4
1951-1955	138.9	18.9
1956-1960	158.1	20.5
1961-1965	160.4	19.9
1966-1968	156.8	18.9
1969	152.3	18.1
1970	155.7	18.4
1971	155.6	18.3
1972	151.1	17.7
1973	170.0	19.8
1974	142.1	16.4
1975	124.1	14.2

The urban population was 24.7 percent of the total in 1946,
46.5 percent in 1965, and 58.7 percent in 1975. This intensive
growth appears for the first time in the demographic history of
Bulgaria. The urbanization arises as a result of three main fac-
tors: migration to the urban areas, higher fertility in the urban
population (insofar as its age structure is younger than that of
the rural population), and the administrative reclassification of
villages into towns or parts of towns. (Such reclassification
involved 283 villages, during the period 1945-1971, and transferred
764 thousand people from rural to urban status.)

The migration flow from rural to urban areas was most inten-
sive after World War II, and lasted until the early sixties.
Later this flow decreased because the urban population had in-
creased and the rural one had diminished. In fact, the absolute
number of migrants also diminished in the period between 1960 and
1975. This was due mainly to the direct and indirect policy of
the Bulgarian government. Because of the uniform economic devel-
opment of all the districts in Bulgaria, and because of the equal-
ization of the conditions of living in the towns and villages, it
is expected that in the next five or ten years the migration move-
ments will drop to a low and constant level.

When only interdistrict migrations are considered, net mi-
gration flows are positive only for five districts: Sofia-city,
Varna, Gabrovo, Ruse, and Stara Zagora; negative flows appear for
16 districts; and a mixture of positive and negative net migra-
tions appear for the remaining 7 districts. Most of the last 7
districts exhibit a positive flow until 1960-1965, and a negative
one afterwards. The intensity of the flows has been decreasing
for most of the districts since 1965, or has remained constant.
Interregional migrations are studied in greater detail in the
following sections.

1.4 Age-structure of the Population

The age structures of the rural, urban, and total populations
at the end of 1975 are presented in Figure 1.3. They are a result
of the changes in the fertility, mortality, and migration patterns
that have been briefly explained above. The inferences that might
be made are listed below.

- The gap in the age group 55-60, of the total population,
  is caused by World War I, (stage 1); the gap in the age
  group 30-40 is caused by World War II (stage 2). The
  gap in the age group 5-15 is due to both the low fertil-
  ity level in this period, and to the low numbers of the
  population in the fertile ages (stages 1 and 2).
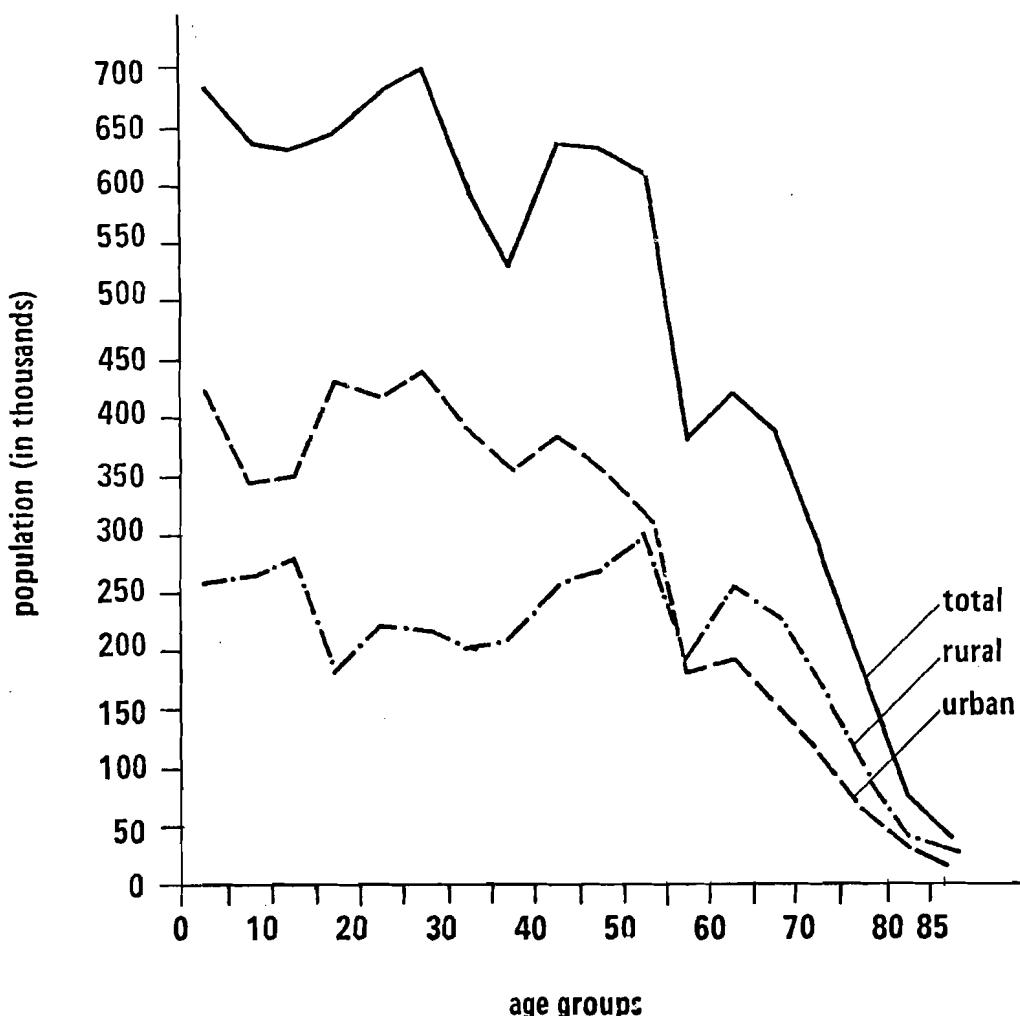
Figure 1.3   Age-structures of the rural, urban, and total
             populations of Bulgaria at the end of 1975.

-   The size of the urban population at ages up to age 55 is
    higher than that of the rural population (due to the
    strong migration flows from the rural to urban areas in
    stage 3).   At the older ages, the size of the rural pop-
    ulation is larger.   The urban population has a young age
    structure and the rural population has an old age struc-
    ture.

-   Fertility is low in the rural areas because of the small
    number of people in the fertile ages (15-45), and is
    especially low for the most fertile age group, 15-30.

2. PREPARATION OF THE DATA

As mentioned before, Bulgaria is divided (since 1956) into
28 administrative districts. They are the regional basis for the
future planning of the development of the economy, and they are
the smallest regional unit for which published demographic data
are available.

In order to simplify our multiregional analysis, it was
found desirable to aggregate the 28 districts into a more manage-
able number of regions. The 28 districts were consolidated into
7 regions (Figure 2.1).

- Region 1: Northwestern Bulgaria (referred to as region
  N.West) is made up of 4 districts: Vidin, Vratza,
  Michailovgrad, and Sofia-district. However, the latter
  is to be distinguished from the district Sofia-city,
  which is an entirely different administrative district:
  Sofia district surrounds the district Sofia-city. Sofia-
  district is included in this region because it has much
  the same demographic characteristics as the other three
  districts.

- Region 2: Northern Bulgaria (region North) includes 5
  administrative districts: Gabrovo, Great Turnovo,
  Lovetch, Pleven, and Russe.

- Region 3: Northeastern Bulgaria (region N.East) consists
  of Varna, Razgrad, Silistra, Tolbukchin, Targovishte, and
  Schumen.

- Region 4: Southwestern Bulgaria (region S.West) includes
  the Blagoevgrad, Kiustendil, and Pernik districts.

- Region 5: Southern Bulgaria (region South) is made up of
  the Plovdiv, Kurdjali, Pazardjik, Smolian, Stara Zagora,
  and Haskovo districts.

- Region 6: Southeastern Bulgaria (region S.East) consists
  of Burgas, Sliven, and Jambol.
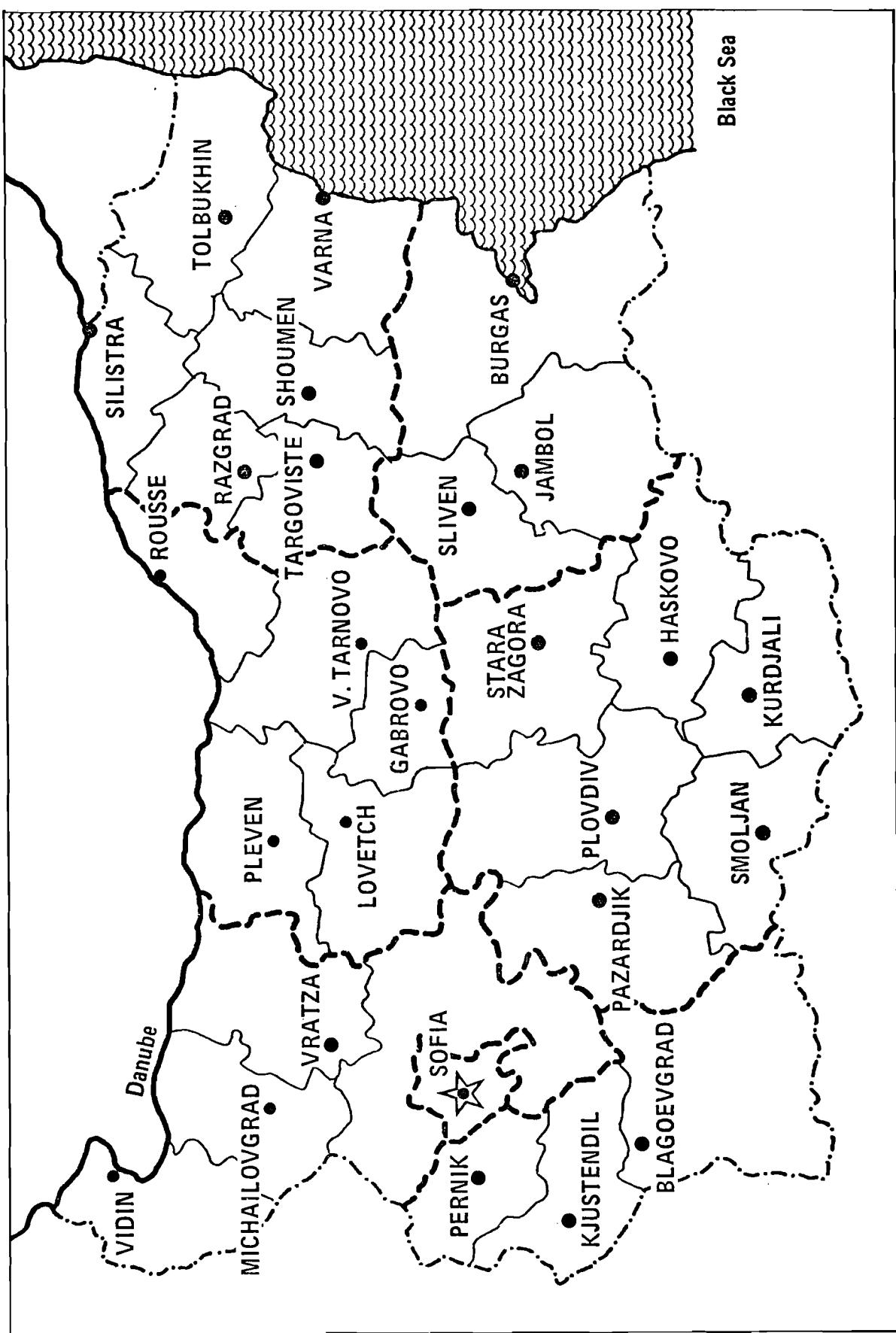
Figure 2.1 Map of Bulgaria showing the 28 districts and the 7 regions of the study.

Source: Demographic Yearbook of Bulgaria, 1975.

- <u>Region 7</u>: Sofia-city (region Sofia) forms a separate
  region, because of its specific demographic significance.
  Sofia-city has a population of about one million, and the
  total population of Bulgaria is about 8.5 million. It is
  obvious that the migration flow towards that district is
  very strong.

The data for the population by age groups (total and for the
28 districts) in the end of 1975, and the data for the departures
and arrivals by age groups (total and for each district separately)
during 1975, were received by the Central Statistical Office in
Sofia. The data for the population at the end of 1974 were taken
from the Demographic Yearbook for Bulgaria 1975. The data for
births, deaths, and the 28 by 28 migration flow matrix were taken
from the Demographic Yearbook for Bulgaria 1976.

Data on population were available for each of the 28 dis-
tricts by 5-year age groups (the last one being 60+) for the end
of the years 1974 and 1975 which yield the necessary mid-year
1975 population. For the analysis, the population age structure
was extrapolated up to 85+. This was done by following the age
structure of the national population until 100+. (Polynomial
extrapolations were experimented with for different polynomial
degrees but none of them were appropriate because of the gap in
the age structure for the age group 55-59, due to the First World
War and the preceding Balkan War.) It is supposed that the use
of the national percentage distribution will not cause a large
bias because the wars had affected uniformly the population
throughout the country.

Regional data for births by age of mother are available by
5-year age groups. The original data were not changed at all
since they fit exactly the needs of our analysis.

At the district level, data on deaths were available by
5-year age groups, until 20 years of age, and by 10-year age
groups until 70 years and over. It was necessary to disaggregate
each 10 year age group to two 5-year groups. This was done again
by following the percentage distribution of the total deaths in
the country. (Interpolation programs were also tried, but the

results received were poor for the age groups 50-59, because the
total number of deaths in the age group 50-54 exceeded the number
of deaths in the age group 55-59.)

Adjustment of the data on migration was most important to
our analysis, because the original data differed significantly
from the input data used in the analysis.

The vital statistics in Bulgaria record annually permanent
moves only. A permanent move is defined as a permanent change of
residence from one dwelling to another. Moves are registered,
but migrants are not, because data are gathered through statisti-
cal lists which are to be completed on each change of permanent
residence.

Available data for internal migration in Bulgaria (and in a
number of European countries) are the departures and the arrivals
for each district (given by 5-year age groups), and the flow mat-
rix (given only in total numbers) between districts. What is in
fact necessary for the analysis is the flow matrix among the 7
regions for each 5-year age group. In the original data the
total number of departures for each age group was usually less
than the total number of arrivals for the same age group. This
is due to the fact that migrants usually register upon arrival,
but do not always register when leaving. Because of this, prior-
ity was given to the arrival data, which are assumed to be true,
and departure data were adjusted to them (following percentage
distribution). Table 2.1 presents the departures and the arriv-
als after this adjustment was carried out, and after the 28 dis-
tricts were aggregated into 7 regions. Table 2.2 gives the flow
matrix among the 7 regions.

It can be seen in Tables 2.1 and 2.2 that the total number of
moves among the districts, 60782, is considerably less than the
total number of arrivals, 124105. This is because the flow matrix
excludes the intradistrict migrations, which is not the case with
the departures and the arrivals. It is evident that the two num-
bers have to be equal, and to do this the total number of the ar-
rivals and the departures was diminished to 60782, taking into ac-
count the percentage distribution for the age groups (Table 2.3).

Table 2.1 Departures and arrivals by age groups for 7 regions of Bulgaria. Departures equalized to arrivals.

arrivals to:

age	N.W.	N.	N.E.	S.W.	S.	S.E.	Sofia	total.
0	1331	1704	1672	376	2231	962	795	9071
5	925	1729	1553	314	1745	804	494	7564
10	2453	4250	3792	2368	5547	2070	711	21191
15	4159	6786	7032	2724	11622	3281	3901	39505
20	1880	3100	3590	689	5021	1491	3274	19045
25	1499	2014	1928	479	2925	926	1209	10980
30	705	886	973	215	1317	486	568	5150
35	494	502	655	136	889	334	427	3437
40	379	394	416	117	710	250	296	2562
45	268	217	278	72	501	192	214	1742
50	201	163	171	31	330	120	131	1147
55	88	91	122	16	185	45	100	647
60	67	96	127	16	167	34	148	655
65	44	93	87	15	159	34	141	573
70+	56	154	79	9	211	30	297	836
total	14549	22179	22475	7577	33560	11059	12706	124105

departures from:

age	N.W.	N.	N.E.	S.W.	S.	S.E.	Sof.	total.
0	1265	1478	1731	555	2264	1069	709	9071
5	857	1573	1589	490	1758	904	393	7564
10	2373	3974	4208	2578	5451	2230	377	21191
15	5344	5957	8204	3746	10993	4669	592	39505
20	2478	3162	3616	1323	5382	2184	900	19045
25	1513	1918	1836	678	2857	1129	1049	10980
30	654	842	969	312	1369	635	369	5150
35	365	496	603	269	923	366	415	3437
40	294	392	427	200	684	264	301	2562
45	210	266	273	125	457	189	222	1742
50	147	185	197	78	289	110	141	1147
55	83	106	115	46	162	56	79	647
60	82	109	132	47	159	56	70	655
65	78	87	93	46	150	51	68	573
70+	114	207	135	68	195	88	29	836
total	15857	20752	24128	10561	33093	14000	5714	124105

Table 2.2 Flow matrix of the migrations among the 7 regions of Bulgaria, total numbers.

Source: Aggregated from 28 x 28 migration flow matrix from Demographic Yearbook of Bulgaria, 1976.

from \ to	N.West	North	N.East	S.West	South	S.East	Sofia	totals
N.West	1896	1042	411	539	1261	271	1673	7093
North	1175	4152	2764	292	1427	559	747	11116
N.East	471	1524	4642	220	983	994	492	9326
S.West	268	146	122	823	298	67	310	2034
South	854	1107	759	813	9766	2500	1039	16838
S.East	110	249	502	103	919	1685	259	3827
Sofia	3154	1446	833	1987	2264	864	0	10548
totals	7928	9666	10033	4777	16918	6940	4520	60782

Table 2.3   Departures and arrivals for 7 regions of Bulgaria, diminished by percentage distribution.*

departures from:

age	N.W.	N.	N.E.	S.W.	S.	S.E.	Sof.	total
0	633	688	720	251	1157	530	561	4540
5	429	733	661	222	899	448	311	3703
10	1187	1851	1748	1166	2787	1105	298	10142
15	2668	2775	3411	1694	5620	2314	468	18950
20	1239	1473	1504	598	2750	1082	712	9368
25	757	893	763	307	1460	560	830	5570
30	327	392	403	141	700	315	292	2570
35	183	231	251	122	472	181	328	1768
40	147	183	178	90	350	131	238	1317
45	105	124	114	57	234	94	176	904
50	74	86	82	35	148	55	112	592
55	42	49	48	21	83	28	62	333
60	41	51	55	21	81	28	55	332
65	39	41	39	21	77	25	54	296
70+	57	96	56	31	100	44	23	407
total	7928	9666	10033	4777	16918	6940	4520	60782

arrivals to:

age	N.W.	N.	N.E.	S.W.	S.	S.E.	Sofia	total
0	649	854	694	101	1119	333	660	4410
5	451	867	644	84	875	278	410	3609
10	1196	2130	1573	637	2783	716	590	9625
15	2026	3400	2918	731	5830	1135	3237	19279
20	917	1554	1489	185	2519	516	2718	9898
25	731	1009	800	129	1467	320	1004	5460
30	344	444	404	58	661	168	472	2551
35	241	252	272	37	446	116	354	1718
40	185	197	173	31	356	87	246	1275
45	131	109	115	19	251	66	178	869
50	98	82	71	8	166	42	109	576
55	43	46	51	4	93	16	83	336
60	33	48	53	4	84	12	123	357
65	21	47	36	4	80	12	117	317
70+	27	77	33	2	106	10	247	502
total	7095	11117	9326	2033	16837	3828	10550	60782

*rounding errors not removed.

Table 2.4 Departures and arrivals for the 7 regions of Bulgaria, intradistrict moves removed.

age	departures from:								arrivals to:							
	N.W.	N.	N.E.	S.W.	S.	S.E.	Sof.	total	N.W.	N.	N.E.	S.W.	S.	S.E.	Sofia	total
0	614	669	699	244	1122	514	548	4410	649	854	694	101	1119	333	660	4410
5	417	715	644	217	875	436	305	3609	451	867	644	84	875	278	410	3609
10	1125	1758	1660	1110	2640	1048	284	9625	1196	2130	1573	637	2783	716	590	9625
15	2712	2827	3468	1729	5712	2352	479	19279	2026	3400	2918	731	5832	1135	3237	19279
20	1306	1560	1591	634	2906	1144	757	9898	917	1554	1489	185	2519	516	2718	9898
25	740	876	748	302	1429	548	817	5460	731	1009	800	129	1467	320	1004	5460
30	324	389	400	141	694	312	291	2551	344	444	404	58	661	168	472	2551
35	177	225	244	119	457	176	320	1718	241	252	272	37	446	116	354	1718
40	142	177	172	87	338	128	231	1275	185	197	173	31	356	87	246	1275
45	101	119	109	55	225	90	170	869	131	109	115	19	251	66	178	869
50	72	84	80	34	144	53	109	576	98	82	71	8	166	42	109	576
55	42	49	48	21	84	28	64	336	43	46	51	4	93	16	83	336
60	44	55	59	23	87	30	59	357	33	48	53	4	84	12	123	357
65	42	44	42	23	82	27	57	317	21	47	36	4	80	12	117	317
70+	70	119	69	38	123	54	29	502	27	77	33	2	106	10	247	502
total	7928	9666	10033	4777	16918	6940	4520	60782	7093	11116	9326	2034	16838	3827	10548	60782

This is not enough because when each age group was considered, the total number of departures did not equal the total number of arrivals. The equalization was carried out for the age groups, using the two dimensional R.A.S. method (Raquillet and Willekens, 1978), giving priority again to the arrivals: that is, the matrix on the left side of Table 2.3 was changed so that the row sums became equal to the corresponding arrival totals, in the last column of the same table. The outcome of this procedure is given in Table 2.4.

Table 2.4 presents data which were good enough already to disaggregate the numbers of the flow matrix (Table 2.2) into age groups. This was done by using a three-dimensional R.A.S. method. The numbers from the last age group of 70+ were extrapolated to 85+ according to the percentage distribution of the arrivals for the whole state. This procedure, however, was insignificant because most of the numbers are very small. Then the migration data were ready for analysis.

3. MULTIREGIONAL LIFE TABLE

The concept of a life table is a basic one in demography. Such tables describe the evolution of a hypothetical cohort of babies born at a particular point in time. This evolution is expressed in a number of statistics: probabilities of dying and surviving, number of survivors, number of years to be lived, and expectations of life. The life table may be treated also as presenting a stationary population, one in which the number of births is equal to the number of deaths. This makes the life table a useful tool for the study of mortality.

The main difference between the single-region life table and the multiregional life table is that while the former is built for a single-region population, exposed to unchanging mortality rates and closed to migration, the latter focuses on several regions, and both mortality and migration schedules are accounted for. The region of residence is taken into consideration, giving the multiregional life table a spatial dimension.

In order to build a multiregional life table, one needs observed regional age-specific rates for dying and migrating. These can be computed by dividing the regional annual number of events for a given age group to the midyear population of the region in that age group. Such input data are used to derive the basic parameters of the multiregional life table: the probabilities for dying and migrating. They are used to determine the numbers of survivors expected at exact age x in each region, the number of years lived in each region by the initial unit cohort, the survivorship proportions, and the life expectancies. For details regarding the construction of the multiregional life table from such input data, the reader may refer to Rogers (1975a) or Willekens and Rogers (1976).

Appendix B gives the observed regional age-specific rates for fertility, death, and outmigration for the 7 regions. Appendix C gives the most important characteristics of the 7-region life table for Bulgaria.

3.1 Life History of the Birth Cohort

Age-specific probabilities of dying and migrating are the basis for the construction of a multiregional life table. They permit the computation of the expected number of survivors, deaths, and migrations, for a given set of regional radices, i.e., the hypothetical multiregional cohort. In this study, the radix for each region was set equal to 100,000.

The probabilities of dying and migrating are computed for age x, x = 0, 5,...,85+. In Table 3.1 they are given at age 20. They are estimated by assuming the possibility for multiple transitions during the 5-year period of time.

Of the 100,000 babies that were born in the Sofia region (Appendix C), 97,361 will be alive 5 years later; 94,119 of them will have remained in the same region, 1,283 will have moved to the N.West regions, 559 to the North region, etc. Five years later, the initial cohort will diminish to 97,152, and only 91,788 will have remained in Sofia, 2,048 will be living in the N.West, etc.

Table 3.1   Probabilities of dying and migrating at age 20
for 7 regions of Bulgaria, 1975.

from / to	N.West	North	N.East	S.West	South	S.East	Sofia
N.West	0.91147	0.00647	0.00224	0.00425	0.00508	0.00286	0.01195
North	0.01035	0.94810	0.01575	0.00258	0.00627	0.00624	0.00603
N.East	0.00489	0.01170	0.95971	0.00218	0.00494	0.01226	0.00429
S.West	0.00169	0.00075	0.00051	0.93924	0.00094	0.00055	0.00230
South	0.00794	0.00778	0.00456	0.00707	0.95549	0.02767	0.00847
S.East	0.00096	0.00156	0.00264	0.00079	0.00365	0.92710	0.00184
Sofia	0.05708	0.01952	0.00963	0.03866	0.01929	0.01862	0.96160
Total	0.99439	0.99588	0.99504	0.99477	0.99566	0.99529	0.99648
Death	0.00561	0.00412	0.00496	0.00523	0.00434	0.00471	0.00352
Total	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The multiregional life table has a number of applications.
Assume for example, that the exact age 20 is the age of entering
the labor force. Table 3.2 gives the probabilities that an in-
dividual born in a particular region will survive to exact age
20 and live in the same region. For Sofia, it is derived by
dividing the survivors at exact age 20 in Sofia, 86,767, by the
initial birth cohort of 100,000.

Table 3.2   Probabilities of surviving to exact age 20
in the same region.

Region	N.West	North	N.East	S.West	South	S.East	Sofia
Probability	0.744	0.814	0.826	0.765	0.860	0.754	0.868

It may be noticed that this probability is high for the Sofia and South regions, and low for the N.West, S.East and S.West regions. This suggests that the young population of the latter three regions tends to leave the region of birth before entering the labor force, while the natives in Sofia and South prefer to take up employment in the same region.

3.2 Expectations of Life

The concept of life expectancy is very important in the single-region life table, but it is perhaps even more important in the multiregional life table. Life expectancies at birth are presented in Table 3.3. They reveal a number of interesting items of information. For example, considering again the Sofia region, the life expectancy of a baby born in this region is 70.62 years, 59.49 of which will be lived in the same region, 3.80 years in the N.West, etc. For the South region, the life expectancy is 70.63 years, and 61.24 of them will be lived in the same region, a much higher proportion than in the N.West region, for example.

Table 3.3 Life expectancies at birth for the 7 regions
of Bulgaria, 1975

No.	Region of residence	Region of birth						
		1	2	3	4	5	6	7
1	N.West	52.98	2.32	0.92	2.27	1.64	1.06	3.80
2	North	3.83	58.57	5.19	1.45	1.98	2.08	2.01
3	N.East	1.70	3.46	59.37	1.06	1.38	3.18	1.30
4	S.West	0.87	0.38	0.26	54.98	0.40	0.26	0.79
5	South	2.97	2.69	1.69	3.44	61.24	7.71	2.60
6	S.East	0.43	0.60	0.92	0.47	1.11	53.43	0.63
7	Sofia	8.62	3.15	1.74	7.22	2.88	2.80	59.49
	Total	71.40	71.17	70.09	70.89	70.63	70.52	70.62

The expectation of life at birth in the multiregional life table is a good measure of the level of migration. We shall refer to the spatial migration level as $_i\theta_j$, where $_i\theta_j = {_ie_j}(0)/{_ie}(0)$. Thus the spatial migration level from region i to region j is the proportion of a total life expectancy expected to be lived in region j by an individual born in region i (Table 3.4).

The numbers in the main diagonal of the Table 3.4 represent the levels of "non-migration". They are lowest for the N.West, S.West, and S.East regions, and highest for the South region, the N.East region and the Sofia region. Note that the region of Sofia does not have the lowest outmigration level, as might be expected. Its relatively high outmigration is compensated for by an even higher inmigration.

Table 3.4　Spatial migration levels for the 7 regions of Bulgaria, 1975

No.	Region of residence	Region of birth						
		1	2	3	4	5	6	7
1	N.West	0.742	0.033	0.013	0.032	0.023	0.015	0.054
2	North	0.054	0.823	0.074	0.020	0.028	0.030	0.029
3	N.East	0.023	0.049	0.847	0.015	0.019	0.045	0.018
4	S.West	0.012	0.005	0.004	0.775	0.006	0.004	0.011
5	South	0.042	0.038	0.024	0.049	0.867	0.108	0.037
6	S.East	0.006	0.008	0.013	0.007	0.016	0.758	0.009
7	Sofia	0.121	0.044	0.025	0.102	0.041	0.040	0.842
	Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000

4. POPULATION PROJECTION AND STABILITY

If a population that is closed to migration is exposed to an unchanging regime of fertility and mortality it will reach a stable age structure which increases at a constant rate of natural increase through time. Achievement of stability has the property of "forgetting" the initial age distribution, i.e., the stabilization of a closed population is an ergodic process. The same is true when a multiregional population is in addition subjected to unchanging age-specific migration rates. This is the case of a multiregional population projected to stability. The theory on this subject can be found in Rogers (1975a).

Appendix D gives a population projection for the 7 regions of Bulgaria to the year 2025 and the stable equivalent of the 1975 population of the 7 regions. In this projection, fertility, mortality, and migration rates are kept constant at the level of 1975. The details of such computations are explained in Willekens and Rogers (1976).

Table 4.1 presents some characteristics of the initial (1975) Bulgarian population, the projected population in 2025, and the stable equivalent population. The mean age, the regional share of the national population (SHA), and the growth ratio (λ) for the stable equivalent refer also to the stable population, which would be reached in the long run, under the assumptions for the stability of the observed rates.

4.1 Mean Ages

The numbers for the mean ages show that the projection brings greater uniformity among the 7 regions: the difference between the highest and the lowest mean ages in 1975 is 4.37 years, in 2025 it is 2.95 years, and under stability it is 1.95 years. The greatest changes are to be observed in the S.West and Sofia regions. In the S.West region, during the 50 years of projection the mean age will rise by 4 years, because of the high level of outmigration. This will lead to the ageing of its population and the rising of the CDRs.

Table 4.1   Characteristics for the initial population and the stable
equivalent population in 1975, the 7 regions of Bulgaria

	Population	total	N.West	North	N.East	S.West	South	S.East	Sofia
abs.	initial	8727	1043	1400	1487	696	2164	867	1070
	2025 (th)	10107	981	1492	1873	653	2718	881	1510
num.	stable equiv.	8748	741	1355	2123	247	2333	559	1389
M.AGE	initial	35.18	38.97	37.87	33.81	34.19	33.60	34.33	34.37
	2025	36.55	37.81	37.68	35.19	38.14	35.90	36.37	36.88
	stable equiv.	36.42	37.37	37.46	35.51	36.36	36.09	35.51	37.23
SHA	initial	100.00	11.95	16.04	17.04	7.98	24.80	9.93	12.26
	2025	100.00	9.71	14.76	18.53	6.46	26.89	8.71	14.94
	stable equiv.	100.00	8.47	15.49	24.26	2.83	26.67	6.39	15.88
λ	2025	1.0105	1.0006	1.0080	1.0184	0.9837	1.0154	0.9963	1.0212
	stable equiv.	1.0119							

In Sofia, the mean age will rise continuously, because of
delayed childbearing and inmigration at older ages. The older
populations of the N.West and North regions yield high CDRs, and
the mean age will drop a little; its decrease is not large, how-
ever. The mean ages in the remaining three regions rise together
with the rise of the total populations.

4.2 Regional Shares

Changes in the regional shares are not very large during the
50 year projection period. They increase for the N.East (to end
in 2025 with a rise of 1.5 percent), South (2.09 percent), and
Sofia (2.7 percent), and decrease for the remaining 4 regions.
The largest decrease, 2.24 percent, is exhibited in the N.West.

Under stability, the regional shares are strikingly different
for the N.East and S.West regions. The high fertility level and
the low in- and outmigration flows for the N.East contribute to
the great increase in its regional share in the long run. (Al-
though over the 50 year projection period this increase is quite
small, it increases to nearly 25 percent of the total at stabil-
ity.) At the other extreme is the S.West, whose strong outmigra-
tion leads to a diminished share, down to less than 3 percent of
the total, also in the long run.

The increase of the regional share for Sofia is a very impor-
tant one. Sofia has a fertility below reproduction level, but
inmigration leads to an increase of the population.

4.3 Growth Ratio

In 2025, the growth ratio, say λ, is less than 1 for the
S.West and S.East regions, which means that their population would
decrease between 2020 and 2025. The population projection for the
regions shows that during the 50 year period, the intrinsic rate
is usually below zero for the N.West (high mortality and high out-
migration) and S.West (high outmigration) regions.

The growth ratio for the stable population is 1.0119. It is
the positive eigenvalue of the growth matrix and can be used to

derive the spatial intrinsic growth rate $r = \frac{1}{5}\ln\lambda = 2.37$ per thousand. Its value is quite close to the growth ratio for the total population in 2025. However, this is not the case for each individual region. In 2025 each region appears to be far from stable, because of the peculiarities already mentioned: different levels of fertility, young or aged population structures, and large differences in the migration flows.

4.4 Stable Equivalent of the Observed Population

The stable equivalent is the population that, if distributed as the stable population and growing at the stable ratio λ would, in the long run, yield the same result as the observed population under projection (Willekens and Rogers, 1976). This means that the major difference between the stable equivalent population and the observed population is that the effect of the age structure is removed from the growth of the former population.

Figure 4.1 shows the age distributions of the observed and of the stable equivalent populations of Sofia. Note that the stable equivalent population is larger than the observed population (as is shown by the larger area under the former curve), and that the "gaps" in the age groups 30-40 and 55-60 are missing in the stable equivalent population.

The curve for Sofia's stable equivalent population is not like the one that would have been obtained by a single-region analysis. There is a peak for the age group 25-30 which is due to the strong inmigration flow to Sofia of the younger age groups, especially of migrants aged 20-30.

From what has been said about the multiregional population projection and its stable growth, the following inferences can be made:

1) The populations of the 7 regions of Bulgaria are very far from stability, because of the different levels of fertility, the differences in the age structure (which cause higher or lower mortality), and because of the differences in the migration flows.
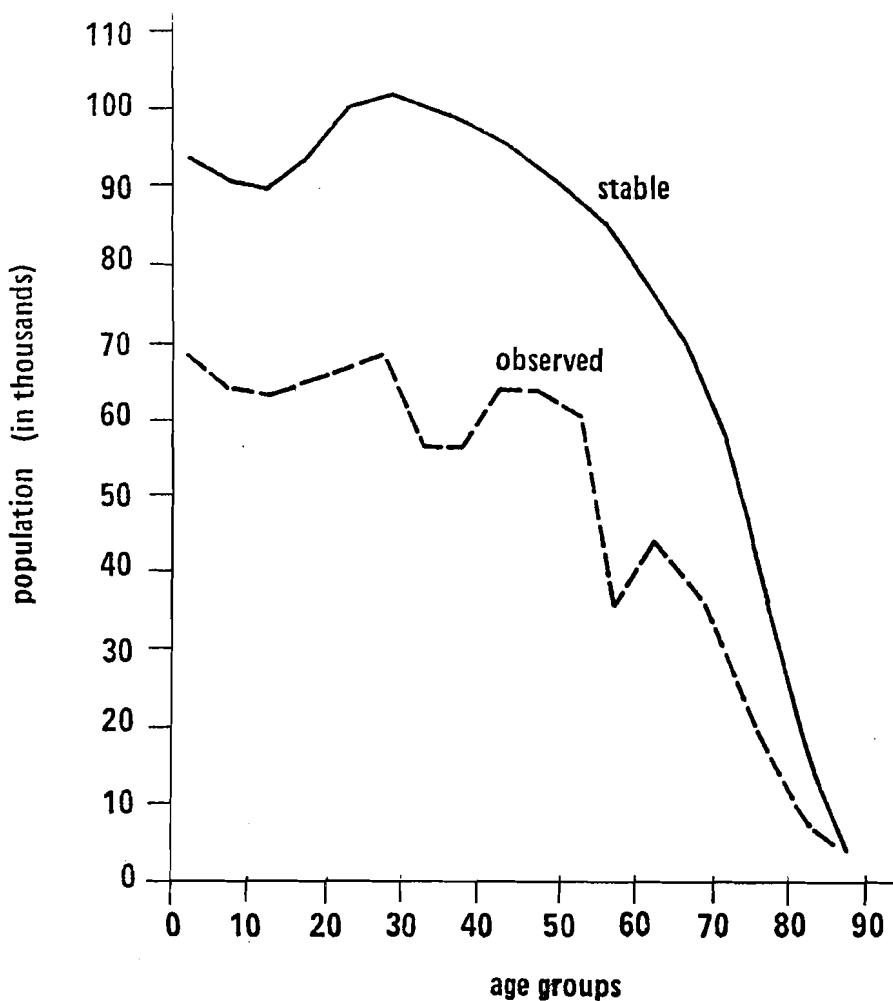
Figure 4.1   Number of people in each age group of the
observed and the stable equivalent
populations of the Sofia region, 1975.

2)   The national population is tending to concentrate in the
N.East and South regions, and to leave the N.West, S.East
regions, and especially the S.West region.

3)   Despite a low fertility level the population of Sofia has
a high growth rate because of the high inmigration flow.

4)   During the next 50 years the regional share will decrease
for the N.West and North regions, and increase in the
South and the Sofia regions.   Since the mean ages for the
last two regions also increase, it can be inferred that
the labor force will also increase.

5)   During the next 50 years the mean age in the S.West re-
gion will increase strongly, i.e., the population will be
ageing rapidly.   (In 1975 it was one of the youngest.)

5. ANALYSIS OF SPATIAL FERTILITY AND MIGRATION PATTERNS

Sections 3 and 4 show clearly that the multiregional life table and the population projection depend strongly on observed population characteristics. They can produce some very useful indicators for the study of the spatial demographic behavior of the population, an example of which is the spatial migration level. In this section observed fertility, mortality, and migration rates, as well as the indicators yielded from the analysis, are discussed.

5.1 Analysis of Observed Population Characteristics

The study of mean ages makes it possible to follow the effect of the age composition on observed rates. Table 5.1 gives the mean ages of observed population characteristics, computed by the following formula:

$$\overline{m}_i = \sum_x (x + 2.5) \cdot c_i(x) / 100 \quad , \tag{1}$$

where $c_i(x)$ is the percentage distribution in region i at age x, i = 1,2,3,...,7. The mean age, therefore, depends on the age structure of the population.

It can be seen, that reflecting their older age structures, the mean ages of the populations of the N.West and North regions are much higher than those of the other five regions. The mean ages of dying are also higher for the same two regions, reflecting again the older age structures of their populations.

The population age structure during the reproductive ages is similar in the different Bulgarian regions, which is why the mean age of childbearing is at the same level in six regions. In the Sofia region, it is a little higher because almost the total population of this region is urban.

The right part of Table 5.1 is a "flow matrix" of the mean ages of outmigrants. The mean ages are highest for departures from, and arrivals to, the Sofia region. The lowest mean ages for departures and arrivals can be observed for the S.West region.

Table 5.1 Mean ages of populations, births, deaths, and outmigrations for the 7 regions of Bulgaria, 1975*

No.	region	population	births	deaths	outmigration to:						
					1	2	3	4	5	6	7
1	N.West	38.97	24.04	69.04	-	18.21	18.75	17.05	19.23	17.91	23.07
2	North	37.87	24.22	69.00	19.20	-	19.52	17.12	20.08	19.09	25.30
3	N.East	33.81	24.32	65.32	19.11	18.95	-	17.25	19.96	18.98	24.50
4	S.West	34.19	24.37	66.15	17.73	17.55	17.71	-	18.25	17.21	22.50
5	South	33.60	24.17	65.76	19.35	19.08	19.65	17.50	-	19.20	24.29
6	S.East	34.33	24.23	65.73	18.98	18.90	19.36	17.19	19.80	-	24.08
7	Sofia	34.37	25.35	64.71	24.93	24.49	25.30	22.68	26.53	25.15	-

*as calculated using Formula 1.

In Bulgaria students finishing their primary education can
choose to continue with their obligatory secondary education in
a number of specialized professional schools. In order to do
this in the selected schools they have to change their place of
settlement. This explains the comparatively young mean ages of
the migrants and the high number of moves in the 10-14 and 15-19
age groups.

Appendix B gives the observed age-specific, gross, and crude
fertility, mortality, and outmigration rates for the 7 regions of
Bulgaria. The mean ages here are computed with the formula:

$$\bar{m}_i = \frac{\sum_x (x + 2.5).f_i(x)}{\sum_x f_i(x)} \quad , \tag{2}$$

where $f_i(x)$ is the age-specific rate for region i. The mean ages
are shown in Table 5.2.

Table 5.2 Mean ages for births, deaths, and outmigration
for the 7 regions of Bulgaria*

No.	Region	Births	Deaths	Outmigration to:						
				1	2	3	4	5	6	7
1	N.West	24.06	77.89	–	18.65	18.96	17.12	19.72	17.93	24.08
2	North	24.25	78.44	19.46	–	19.74	16.89	20.69	19.06	28.67
3	N.East	24.43	78.72	20.56	20.89	–	17.47	22.18	19.94	30.65
4	S.West	24.60	79.11	18.60	18.61	18.41	–	20.05	17.69	26.33
5	South	24.45	79.18	21.04	20.87	21.55	17.81	–	20.27	29.83
6	S.East	24.36	78.88	19.84	21.05	20.87	17.39	21.69	–	29.29
7	Sofia	25.44	80.04	26.73	27.20	27.04	22.93	30.46	26.12	–

*as calculated using Formula 2.

Formula (2) gives the mean ages with the effect of the age structure being eliminated, i.e., they are the mean ages of the schedules. The mean ages computed with Formula (1) are referred to as $m_i(1)$, and those calculated using Formula (2) are denoted as $m_i(2)$. Comparing $m_i(1)$ with $m_i(2)$, reveals the effects of age composition. For example, when $m_i(2)$ is much greater tham $m_i(1)$, the age structure is very young. This is most convenient for analyses of the mortality schedules. For example, it can be inferred that the N.West region has a slightly higher mortality level, and the Sofia region a slightly lower one, than previously indicated.

For fertility data $m_i(1)$ and $m_i(2)$ are almost the same. For migrations, however, $m_i(2)$ is much higher than $m_i(1)$ when the Sofia region is considered. (There is almost no difference between the $m_i(1)$ and $m_i(2)$, $i = 1,2$, i.e., for the N.West and the North regions, because the age structures of their populations are very old.) The oldest mean ages are for the migration schedules of the migrants to the Sofia region, and the youngest to the S.West region. The population of Sofia is young, and the mean ages of the fertility and the migration schedules are high. The reason for the higher mean age of childbearing in Sofia is delayed childbearing; its age-specific fertility rates for the age groups 30-50 are the largest among all the regions. The mean ages of migrations to Sofia are the highest in Bulgaria because of the large number of movers in the age groups beyond 20---moves caused by factors such as changing of jobs, students in higher schools, etc.

A comparison of the crude rates (Appendix B) among the regions shows some of the features that have been outlined above: high CDRs and low CBRs in the N.West and North regions, reflecting their old age structure; and a low CDR in the Sofia region, reflecting its comparatively young age structure. The gross death rate (which is the sum of the age-specific death rates) for Sofia is very large, however, because of the higher age-specific death rates for the ages above 70. The GDRs are very low for the N.West and North regions because of the low age-specific death rates for the older part of the population.

The gross fertility rate (GFR) is the sum of the age-specific fertility rates. When multiplied by 5 (the width of the age groups), it gives the gross reproduction rate (GRR). When GRR $\geq$ 1 each person (in a one-sex population) will reproduce itself if there is no death until the end of the last age of reproduction (i.e., 50 years). When mortality is accounted for, GRR has to be greater than 1.05 approximately, in order to ensure replacement. It is evident that the GFR (hence: fertility) is below the replacement level in the North region (GRR = 1.02) and in Sofia (GRR = 0.97), and very high in the N.East and S.East regions (that is, in Eastern Bulgaria). The GFR for the total national population is equal to 0.22 (i.e., GRR = 1.1) which shows that the lower fertility in the North and Sofia regions is compensated for nationally by the other 5 regions.

The gross migration rates are the sum of the age-specific migration rates. When this sum is multiplied by 5 (like the GFR), one obtains the gross migraproduction rate (GMR). These rates are presented in Table 5.3. The GRR is a measure of fertility. In the same way, the GMR is a measure of outmigration. The GRR shows how many babies each person will produce during the reproduction age period, assuming no mortality, and the GMR shows the number of outmigrations per person, if there is no death during the entire life span. Both measures are cross-sectional; they show the levels of fertility and migration in 1975.

Row 8 of Table 5.3 refers to the GMR of the total population of each one of the 7 regions. The highest number of outmigrations per person is expected for region N.West, which is the main reason for its aged population. The lowest average number of outmigrations is shown for the South region.

The rows 1-7 give a clear picture of migration flows among the 7 regions. We shall refer to $_j\text{GMR}_i$ as the GMR for the moves from region j to region i. The GMR which occupy symmetrical positions to the main diagonal, i.e., $_j\text{GMR}_i$ and $_i\text{GMR}_j$, can be compared to show the difference between the two counter-migration flows:

Table 5.3   Gross migraproduction rates for the 7 regions
of Bulgaria, 1975

No.	Region of residence	Region of birth						
		1	2	3	4	5	6	7
1	N.West	–	0.056	0.018	0.050	0.038	0.021	0.106
2	North	0.089	–	0.125	0.027	0.043	0.044	0.048
3	N.East	0.036	0.082	–	0.020	0.030	0.078	0.031
4	S.West	0.020	0.008	0.005	–	0.009	0.005	0.020
5	South	0.065	0.059	0.035	0.077	–	0.198	0.068
6	S.East	0.008	0.013	0.022	0.009	0.027	–	0.016
7	Sofia	0.244	0.080	0.042	0.201	0.075	0.074	–
	Total	0.461	0.298	0.248	0.385	0.221	0.420	0.290

1) $_j GMR_4 < {}_4 GMR_j$, for all j, i.e., each migration flow from the S.West region to any other region is stronger than the corresponding counter-flow. This shows that the S.West region is the most unattractive one, when the rate and not the magnitude of the flow is considered.

2) $_j GMR_7 > {}_7 GMR_j$, for all j, i.e., the migration flows from each region to the Sofia region is stronger than the counter-flow. The same is true for the South region, and $_7 GMR_5$ is slightly smaller than $_5 GMR_7$. These two regions appear to be the most attractive according to this measure.

This type of analysis makes it possible to rank the regions according to their attractiveness, if the magnitude of the migration flows is not considered. (The average number of outmigrations per person has to be distinguished from the total number of migration moves.) The most attractive regions are Sofia and South; fairly attractive are North and N.East; and the unattractive regions are N.West, S.East, and S.West.

5.2 Spatial Reproduction and Migraproduction Levels

The study of fertility until now has been carried out on the basis of the age-specific and gross fertility rates. The multiregional life table makes it possible to analyze spatial fertility levels with more refined measures, such as spatial net reproduction allocations.

The spatial net reproduction rate is defined as (Rogers, 1975b):

$$_i\text{NRR}_j = \sum_{x=0}^{z} {_iL_j}(x)F_j(x) \quad ,$$

where $_iL_j$ is the number of persons from the multiregional life table population in region j, that were born in region i (Rogers, 1975a). The net reproduction matrix is presented in Table 5.4. The totals in the table refer to the regional net reproduction rates. These are not the conventional regional NRR though, as these include the impact of migration.

Table 5.4   Spatial net reproduction rates for
the 7 regions of Bulgaria, 1975

No.	Region of residence	Region of birth						
		1	2	3	4	5	6	7
1	N.West	0.778	0.034	0.013	0.034	0.023	0.015	0.044
2	North	0.054	0.798	0.074	0.020	0.027	0.028	0.023
3	N.East	0.028	0.058	0.972	0.018	0.022	0.053	0.017
4	S.West	0.015	0.006	0.004	0.820	0.006	0.004	0.011
5	South	0.046	0.042	0.026	0.056	0.945	0.123	0.032
6	S.East	0.007	0.010	0.016	0.008	0.018	0.881	0.008
7	Sofia	0.118	0.041	0.023	0.099	0.037	0.036	0.804
	Total	1.045	0.990	1.127	1.054	1.078	1.140	0.938

As in the conventional NRR, the totals in the table represent the number of babies to be born per person from a particular region during the individual's life span, when mortality is accounted for.   It can be seen that the NRRs for the North and Sofia regions are less than 1.00, i.e., below replacement.   This shows the low fertility level in these two regions.   NRRs are very high for the N.East and S.East regions, reflecting the high fertility level in Eastern Bulgaria.   These same inferences were evident when gross fertility rates were examined.

The columns of the net reproduction matrix give the total regional NRR, distributed over the 7 regions.   For instance, a person who is born in the N.West region, will give birth to 1.045 babies; 0.778 of the births will be in the same region, 0.118 in the Sofia region, etc.

The allocations of the net reproduction levels are presented in Table 5.5.   The spatial net reproduction allocation is

$$_i\rho_j = {_i}NRR_j / {_i}NRR \quad .$$

Table 5.5   Net reproduction allocations for the 7 regions
           of Bulgaria, 1975

No.	Region of residence	Region of birth						
		1	2	3	4	5	6	7
1	N.West	0.744	0.035	0.012	0.032	0.021	0.013	0.046
2	North	0.052	0.806	0.065	0.019	0.025	0.025	0.024
3	N.East	0.027	0.059	0.862	0.017	0.020	0.046	0.018
4	S.West	0.014	0.006	0.004	0.778	0.006	0.004	0.012
5	South	0.044	0.043	0.023	0.053	0.876	0.108	0.034
6	S.East	0.007	0.010	0.014	0.007	0.017	0.772	0.009
7	Sofia	0.113	0.042	0.020	0.094	0.034	0.032	0.857
	Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Tables like Table 5.5 were presented for $_iGMR_j$ and the level of migration $_i\theta_j$ in Section 3. Its study can proceed in the same manner. First, the numbers in the main diagonal are high for regions South, N.East, and Sofia, low for S.West and S.East, and especially low for the N.West region. This shows that a person who was born in one of the first three regions mentioned is more likely to give birth in the same region than a person born in one of the remaining four regions. A person from the N.West region would experience only 74.4 percent of total life-time births in the same region, which shows its unattractiveness for childbearing for its natives.

A comparison of the two elements symmetrical to the main diagonal shows the preference of the parent between the two regions. For instance, a person from the N.West region will give 11.3 percent of life-time births in the Sofia region, while a person from Sofia would prefer to give only 4.6 percent of births in the N.West. In this way the regions can be compared for preference of childbearing. Thus, the S.West region will "lose" to any other region, while the South region "gains" to all the regions. When only allocation is considered, the most attractive regions for childbearing are the South and the Sofia regions, fairly attractive are North, and N.East, and unattractive are S.East, N.West and S.West.

One can notice that exactly the same inferences were made when the gross migraproduction rates were analysed. This shows that the patterns for preference of childbearing follow exactly the patterns of migration among the regions, so that the allocations of births are only a result of the migration movement. There exists no outlined trend of moving which should be closely connected with childbearing.

The impact of migration on fertility comes through the age interval 15-49, which is the reproductive period (with a few exceptions for ages below 15). Recall that the mean age of childbearing is 24-25 years of age, and that the largest age-specific fertility rates are those in the age interval 20-30. The impact of migration on fertility comes mainly during these ages. Since

there is no special trend for moves on the occasion of childbearing (i.e., the migrations in the age interval 20-30 follow one and the same schedule among the regions), the differences in the magnitudes of the fertility schedules follow the differences in the magnitudes of the migration schedules.

The allocation of a regional life expectancy $(^{\text{e}}_{ij})$ is a measure of the <u>duration</u>, i.e., the number of years to be lived in a particular region. But migration, like childbearing, is also a <u>recurrent event</u>, in that one person may migrate several times during a life time. A measure for the recurrency of migration can be derived in a way similar to the NRR. This is the <u>net migraproduction rate</u>, which is computed by the formula (Rogers, 1975a):

$$_{i}\text{NMR}_{j} = \sum_{x=0}^{z} {}_{i}L_{j}(x)M_{j}(x) \quad,$$

where $_{i}L_{j}$ is the stationary life table population aged x to x + 5, in region j and born in region i, and $M_{j}(x)$ is the age-specific outmigration rate in region j.

The net migraproduction matrix for Bulgarian regions is presented in Table 5.6. The totals in the last row show the total

Table 5.6 Spatial net migraproduction rates for
the 7 regions of Bulgaria, 1975

No.	Region of residence	Region of birth						
		1	2	3	4	5	6	7
1	N.West	0.355	0.011	0.004	0.011	0.007	0.005	0.015
2	North	0.011	0.245	0.015	0.004	0.006	0.006	0.005
3	N.East	0.004	0.009	0.206	0.003	0.003	0.008	0.003
4	S.West	0.004	0.002	0.001	0.302	0.002	0.001	0.003
5	South	0.007	0.006	0.004	0.008	0.186	0.018	0.005
6	S.East	0.002	0.003	0.004	0.002	0.005	0.323	0.002
7	Sofia	0.027	0.010	0.005	0.023	0.009	0.009	0.237
	Total	0.409	0.285	0.239	0.352	0.217	0.369	0.271

number of migrations per person born in a given region during his
life. The totals indicate the magnitude of the moves per person
from the regional stationary population with the effect of mortal-
ity included. The highest number of moves is to be expected for
a person born in the N.West region, and the lowest for a person
born in the South and N.East regions. The net migraproduction
allocations define each region's share of the total net migra-
production rates. They are presented in Table 5.7.

In the study of GMR, NMR and the spatial life expectancy,
the N.East region exhibits a low migration level and unattractive-
ness, so it can be delineated as a region that stays outside of
the general characteristics of migration movements among the
Bulgarian population. This can be explained by its historical
development as an agricultural region. The Dobrudja area is sit-
uated here, which is known as the "grainery" of Bulgaria. Indus-
try is developed mainly in the Varna district, and it is quite
possible that if this district were not included in the region,
the migration levels would be much lower.

Table 5.7   Net migraproduction allocations for
the 7 regions of Bulgaria, 1975

No.	Region of residence	Region of birth						
		1	2	3	4	5	6	7
1	N.West	0.867	0.039	0.017	0.031	0.034	0.012	0.057
2	North	0.028	0.860	0.064	0.012	0.026	0.016	0.019
3	N.East	0.010	0.030	0.861	0.007	0.015	0.021	0.010
4	S.West	0.009	0.005	0.004	0.857	0.007	0.003	0.011
5	South	0.016	0.022	0.015	0.023	0.857	0.048	0.019
6	S.East	0.004	0.009	0.017	0.006	0.022	0.877	0.009
7	Sofia	0.066	0.034	0.022	0.064	0.040	0.023	0.875
	Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000

A comparison can be made between NMR and θ. Recall that NMR is the average number of migrations per person who is subject to dying during his lifetime, i.e., it is a measure of mobility, and θ is a measure of the level of migration in terms of duration or time spent. If for region i NMR is low, and $_i\theta_i$ is high, then the migration movements out of this region are low. This is the case in the South and N.East regions (also in Sofia). On the other hand, the N.West region has the largest outmigration.

When a comparison is made for the $_i GMR_j$ and $_i\theta_j$, counter-migration flows can be taken into consideration. Then, the most unattractive, both by magnitude and direction of the migration flows, is the S.West region, and the most attractive are Sofia and the South. The N.East region is connected with a very low in- and outmigration flows, but it is rather an unattractive region.

The patterns exhibited above can be explained in the following way. Sofia is the largest city in Bulgaria, with a population of about one million. It is a highly urbanized area, and a center of national, social and cultural life. The largest high schools are situated there. The Southern region is attractive mainly because of the city of Plovdiv, and because of the government planning for fast industrialization and social development in the southern Rhodope regions. The N.West and S.West regions exhibit a high level of outmigration because of their low industrial development. New industrialization in these regions has been planned and already begun (for instance, a large atomic electropower station is under construction on the Danube in the N.West), but its effect in 1975 was still small. The comparatively high level of migration from the S.East region to the N.East region is due mainly to the city of Varna, where the maritime industry is developed, and to the sea resorts around it. Migration levels are low for the North and N.East regions, reflecting their historically important agricultural role in the economic development of Bulgaria.

6. DEMOGRAPHIC POLICY IN BULGARIA

The demographic policy of Bulgaria is carried out in accordance with the socio-economic policy of the state. This means that both demographic growth and the quality of labor resources are regulated by that socio-economic policy.

The main goals of the population policy are as follows:

- to maintain a moderate and stable population growth,

- to care for the individual's health and life,

- to improve job opportunities and living conditions,

- to improve the spatial distribution of the population by regional development.

6.1 Fertility

The aim of Bulgaria's fertility policy is not to obtain a high fertility rate but rather to create a social, economic, and psychological atmosphere suitable for two or three children in a family. This is in fact the criterion for a moderate, stabilized growth of population. Of course, the parents themselves choose the number of children and the time of birth. One main characteristic of Bulgaria's fertility policy is that society accepts a greater share of the family's responsibilities to the child, e.g. summer camps and school meals. The society also gives advantages to young families who need housing.

The normative state documents which concern marriage and the family provide the following benefits. A marriage requires only the agreement of the prospective husband and wife (provided of course, that they are not close relatives or too young) and their decision need not take into account nationality, religion, social, or ethnic positions. In the family, both partners have equal rights and ownership. Divorces are possible only through judicial procedures, and if there are children involved, they are given to the parent who is able to maintain their material and educational conditions of living. Very often in such cases, or in the cases of death, the children receive pensions from the State. The government also

considers non-marital and marital births equal before the law and families with three or more children are given special advantages.

In Bulgaria, motherhood is considered a basic social function and therefore, labor that might damage reproduction is forbidden for women. Also, during pregnancy, a woman is temporarily given another job if what she ordinarily does is considered dangerous to her pregnancy. Because one of the main causes of low marital fertility is the fact that women do hold jobs, special measures have been taken to increase the number of day care centers.

The fertility policy benefits the family directly in several ways. First, for each birth the family receives a certain premium which increases the desire of having a second and third child (a fourth child receives the premium as if it were a first child). Second, for each child under 16 years of age the family receives monthly payments, according to the number of children. Third, if the mother is alone and does not work, for two years after the birth she receives a minimum working salary. The same is true for mothers that are students. Women are allowed a paid "mother's leave" which lasts 10, 12, or 14 months for the first, second, or third child, respectively. A non-paid mother's leave for three years is also possible. All the above regulations also hold for adopted children. Abortions are permitted, except for married women aged 18-40, who have no children or only one child. However, there are also exceptions in this case for health and other such reasons.

These measures are changed periodically, according to the economic development in the country. However, usually any changes made by the government provide an increase in premiums and leave time.

6.2 Health Care

One of the basic directions of social policy in Bulgaria is the continuous advancement of health care systems and quality of medical services. Complex programs for improvement in labor conditions are incorporated in every institution, under the control of the health care institutions. Accident prevention measures are

implemented on a large scale, and special attention is given to the
more serious diseases that affect an individual's life and activ-
ity.

Pregnant women are required to register during their third
month of pregnancy. They are then subject to systematic medical
visits, and when necessary, to education regarding the prenatal
and postnatal periods.

Children from the first day of life until adulthood, are
subject to systematic medical examinations. Because of these
measures, the mortality rate has decreased, and the expectation
of life has increased.

6.3 Migration

The main regulator of internal migration is the territorial
distribution of productive forces. The population movements
follow the development of productive forces, and each person has
the right to choose his own permanent place of residence. In
some of the big cities, however, permanent arrivals are subject
to certain restrictions in order to avoid large concentrations
of population and its undesirable consequences. In regions
where there is a lack of labor supply, salaries and wages are in-
creased, and other advantages are made available in order to
attract workers.

The socio-economic development of the state does not call
for intensive international migration, because of the desire for
the total employment of its active population. After the Second
World War there were many emigrants out of the country. These
consisted mainly of people originally from other nationalities,
and their moves reflected international agreements.

Planning in the socialist economy is a way of regulating
its economic growth according to the labor forces available.
However, some foreign labor is attracted for work in some econom-
ic fields. The development of the socialistic economic integra-
tion among nations has given birth to a new type of economic
migration, which is characteristic of the East European socialist
states. The creation of international enterprises requires the
movements of labor forces from one state to another. This type

of international migration will increase in the future and will be regulated by interstate agreements. (It is not considered the same as permanent departure and arrival movements.)

The regulation of internal migration movements is a comparatively new feature of the population policy in Bulgaria. It was undertaken because of the huge increase in migration during the last 20-25 years, which has been studied in this paper. There is a common opinion that the intensity of migration must be diminished, by introducing a well designed regional investment policy. It is assumed that further urbanization and concentration of the population in certain regions at the expense of other regions will cause undesirable difficulties. Because of this, one of the criteria for regional investment will be its influence on migration. In this respect a population projection including different hypotheses concerning interregional moves will be very useful in the implementation of this investment policy.

6.4 Problems and Perspectives of the Population Policy

Currently, the population growth of Bulgaria does not correspond to the social and economic development of the state, and its possible improvement can be found in the increase of fertility, and the decrease of mortality and migration.

One of the main problems to be solved is the rational use of the available labor force. This would be possible with an increase of qualifications, an optimization of labor force structure, and a minimization of losses due to morbidity and mortality. If the available labor forces are to be used more rationally, it is necessary to implement improved migration regulations by appropriately distributing the productive forces and building a set of settlement systems that focus on the improvement of social systems.

Another problem is that of housing and day care centers, especially in some of the large cities. The future of the population policy lies within the framework of the social policy of the State, and in the National program for the improvement of living conditions. One of the most important achievements toward this goal will be the societal assumption of the total expenses for the upbringing of children.

7. CONCLUSION

Multiregional population analysis has many advantages over single-region analysis. It allows for the study of the spatial distribution of the population by taking into consideration migration movements and their impact on regional fertility, mortality, and age composition. The Sofia region is a good example. The fertility there is below replacement level, showing a population decline in a single-region projection. In the multiregional projection, however, the population of Sofia is growing because of strong net inmigration.

The multiregional analysis generates a large number of population characteristics, some of which are examined in this paper. Together they give snapshots of the demographic development of each region. These may be summarized as follows:

1) The most unfavorable demographic picture is exhibited for the N.West, S.West and S.East regions. They are losing population because of strong outmigration flows. This should lead to a fast ageing of the S.West population; the population of N.West is already aged. As of 1975, the governmental regional policy for uniform development seems to have not been very effective for these three regions.

   In light of the new government policy for faster industrialization of these regions, adopted during the last few years, it might be expected that the outmigration flows will lessen in the short run. This calls for a careful study of the migration flows during the years following 1975; especially the flows towards Sofia from the N.West and the S.West regions, and towards the South and N.East, from the S.East region.

2) The North region exhibits a low fertility level (i.e., the pronatalist policy is not very effective), but to some extent this is compensated for by the inmigration flow. It also has an aged population structure, and if the

inmigration flows lessen, the impact of the low fertility
level will strengthen. The outmigration flow is very
strong towards the South region.

3) The N.East region exhibits a high fertility level and low
migration flows. In the short run, it might be expected
to show slightly diminishing fertility.

4) The Sofia region exhibits high in- and low outmigration
flows. Fertility is very low. This shows that neither
the fertility, nor the migration policies (inmigration to
Sofia are discouraged by restrictions) are effective for
Sofia. In the short run, major changes in fertility and
migration are not expected.

It is evident from the above statements that a multiregional
analysis makes it possible to direct more precisely the national
population policy of a country.

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APPENDIX A

OBSERVED POPULATION CHARACTERISTICS

A.1 Input Data

Table A.1.1 Region: N.West

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	MIGRATION FROM NORTH	MIGRATION FROM N.EAST	N.WEST TO S.WEST	SOUTH	S.EAST	SOFIA
0	70735.	0.	374.	0.	98.	39.	14.	61.	10.	226.
5	67705.	0.	35.	0.	85.	32.	11.	44.	0.	122.
10	67706.	12.	26.	0.	241.	88.	79.	156.	24.	164.
15	65875.	2587.	50.	0.	401.	157.	112.	326.	35.	1005.
20	63065.	6513.	72.	0.	137.	63.	22.	103.	12.	765.
25	69473.	3659.	85.	0.	105.	43.	15.	74.	9.	335.
30	56969.	988.	73.	0.	43.	19.	7.	30.	4.	144.
35	62512.	321.	110.	0.	19.	10.	3.	15.	2.	92.
40	75297.	88.	197.	0.	16.	7.	3.	14.	2.	69.
45	80024.	0.	391.	0.	9.	5.	2.	10.	1.	52.
50	85561.	0.	565.	0.	7.	3.	1.	8.	0.	34.
55	49280.	0.	689.	0.	4.	2.	0.	4.	0.	25.
60	60716.	0.	1060.	0.	3.	2.	0.	3.	0.	32.
65	52595.	0.	1739.	0.	2.	1.	0.	3.	0.	32.
70	56418.	0.	2343.	0.	1.	1.	0.	2.	0.	27.
75	33591.	0.	2361.	0.	1.	0.	0.	1.	0.	17.
80	14839.	0.	1721.	0.	0.	0.	0.	1.	0.	8.
85	9574.	0.	1700.	0.	0.	0.	0.	0.	0.	4.
TOTAL	1042803.	14176.	13400.	0.	1175.	472.	269.	855.	109.	3153.

Table A.1.2 Region: North

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	MIGRATION FROM NORTH	NORTH TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	94469.	0.	531.	80.	0.	109.	7.	69.	20.	86.
5	83645.	0.	52.	76.	0.	121.	7.	69.	21.	64.
10	87050.	27.	36.	212.	0.	291.	45.	209.	55.	73.
15	96563.	3302.	57.	320.	0.	434.	54.	363.	68.	375.
20	99415.	9258.	82.	135.	0.	242.	15.	159.	32.	390.
25	107113.	5346.	103.	89.	0.	139.	9.	97.	21.	147.
30	87569.	1675.	112.	45.	0.	64.	4.	41.	10.	66.
35	85406.	584.	154.	24.	0.	40.	2.	24.	6.	48.
40	101386.	93.	255.	20.	0.	27.	2.	21.	5.	35.
45	102618.	7.	452.	14.	0.	19.	1.	16.	4.	27.
50	107536.	0.	711.	11.	0.	12.	0.	12.	3.	17.
55	64098.	0.	612.	4.	0.	8.	0.	6.	1.	13.
60	78968.	0.	1579.	3.	0.	8.	0.	5.	1.	21.
65	63375.	0.	2292.	2.	0.	5.	0.	4.	1.	18.
70	64896.	0.	3050.	2.	0.	3.	0.	4.	0.	20.
75	38639.	0.	3072.	1.	0.	2.	0.	3.	0.	17.
80	17069.	0.	2239.	1.	0.	1.	0.	2.	0.	13.
85	11012.	0.	2242.	1.	0.	1.	0.	2.	0.	8.
TOTAL	1400117.	20092.	17391.	1041.	0.	1526.	146.	1106.	249.	1447.

Table A.1.3   Region: N.East

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	NORTH	N.EAST TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	128228.	0.	837.	31.	198.	0.	5.	47.	40.	49.
5	119422.	0.	65.	25.	200.	0.	5.	39.	35.	31.
10	114858.	60.	42.	74.	513.	0.	33.	125.	98.	57.
15	110758.	4490.	92.	150.	968.	0.	53.	295.	166.	257.
20	117401.	12420.	117.	53.	386.	0.	12.	108.	65.	228.
25	117679.	7423.	142.	29.	205.	0.	6.	54.	35.	69.
30	102599.	2349.	132.	17.	104.	0.	3.	27.	20.	37.
35	95274.	543.	197.	9.	55.	0.	2.	16.	13.	28.
40	104962.	159.	274.	7.	43.	0.	1.	14.	10.	19.
45	101531.	16.	489.	5.	22.	0.	1.	10.	7.	14.
50	96652.	0.	640.	4.	19.	0.	0.	6.	6.	9.
55	58489.	0.	694.	2.	10.	0.	0.	4.	2.	7.
60	72057.	0.	1258.	1.	12.	0.	0.	4.	2.	13.
65	62408.	0.	2105.	1.	10.	0.	0.	3.	1.	11.
70	41530.	0.	2297.	1.	8.	0.	0.	2.	1.	11.
75	24727.	0.	2514.	0.	5.	0.	0.	2.	0.	6.
80	10924.	0.	1687.	0.	3.	0.	0.	1.	0.	5.
85	7047.	0.	1667.	0.	2.	0.	0.	1.	0.	3.
TOTAL	1486719.	27510.	15048.	410.	2765.	0.	121.	760.	501.	834.

Table A.1.4   Region: S.West

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	NORTH	S.WEST TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	54841.	0.	317.	32.	16.	12.	0.	40.	6.	110.
5	56775.	0.	25.	30.	19.	14.	0.	39.	7.	81.
10	57325.	12.	15.	164.	62.	64.	0.	231.	34.	161.
15	54790.	1921.	39.	190.	90.	74.	0.	309.	32.	713.
20	51104.	5127.	54.	44.	26.	22.	0.	74.	8.	413.
25	51252.	2874.	65.	30.	17.	13.	0.	47.	6.	160.
30	44287.	946.	57.	16.	8.	6.	0.	20.	3.	74.
35	46536.	337.	94.	11.	5.	5.	0.	16.	2.	71.
40	51672.	92.	135.	9.	4.	3.	0.	13.	2.	49.
45	48194.	8.	194.	5.	2.	2.	0.	9.	1.	32.
50	45676.	0.	322.	4.	1.	1.	0.	6.	0.	19.
55	28663.	0.	283.	2.	1.	1.	0.	3.	0.	14.
60	35328.	0.	616.	1.	1.	1.	0.	2.	0.	18.
65	30594.	0.	699.	1.	1.	0.	0.	2.	0.	19.
70	19544.	0.	1071.	1.	1.	0.	0.	1.	0.	14.
75	11637.	0.	1279.	0.	0.	0.	0.	1.	0.	8.
80	5141.	0.	786.	0.	0.	0.	0.	1.	0.	6.
85	3317.	0.	777.	0.	0.	0.	0.	0.	0.	4.
TOTAL	696466.	11317.	6608.	540.	292.	218.	0.	814.	102.	1986.

Table A.1.5   Region: South

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM SOUTH TO						
				N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	176623.	0.	1006.	98.	106.	71.	14.	0.	76.	135.
5	172151.	0.	91.	74.	100.	63.	12.	0.	62.	79.
10	174996.	75.	93.	227.	267.	166.	82.	0.	180.	100.
15	179789.	6425.	125.	424.	459.	306.	120.	0.	278.	634.
20	167740.	17361.	146.	177.	216.	169.	32.	0.	129.	665.
25	163737.	9527.	169.	103.	122.	85.	17.	0.	75.	216.
30	160572.	2032.	181.	53.	50.	44.	9.	0.	39.	108.
35	156625.	946.	242.	33.	32.	29.	4.	0.	27.	86.
40	160355.	252.	419.	25.	24.	18.	4.	0.	20.	55.
45	152826.	16.	600.	16.	12.	11.	2.	0.	14.	39.
50	138376.	0.	915.	12.	9.	6.	1.	0.	9.	22.
55	84676.	0.	654.	5.	5.	5.	0.	0.	3.	18.
60	104357.	0.	1822.	4.	5.	4.	0.	0.	2.	29.
65	90368.	0.	2682.	2.	3.	3.	0.	0.	3.	29.
70	54575.	0.	3147.	2.	2.	1.	0.	0.	2.	20.
75	32994.	0.	3171.	1.	1.	1.	0.	0.	0.	15.
80	14355.	0.	2311.	1.	1.	1.	0.	0.	0.	9.
85	9261.	0.	2283.	0.	1.	0.	0.	0.	0.	7.
TOTAL	2164076.	37432.	20257.	1262.	1427.	983.	297.	0.	919.	2266.

Table A.1.6   Region: S.East

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM S.EAST TO						
				N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	71533.	0.	446.	22.	44.	76.	5.	168.	0.	54.
5	65419.	0.	23.	18.	44.	71.	3.	139.	0.	34.
10	66863.	37.	37.	45.	97.	157.	17.	387.	0.	36.
15	65342.	2613.	50.	95.	187.	323.	28.	933.	0.	257.
20	64351.	6820.	61.	37.	82.	165.	7.	376.	0.	247.
25	65928.	4176.	74.	21.	45.	80.	3.	194.	0.	77.
30	55426.	1212.	71.	13.	24.	47.	2.	104.	0.	44.
35	59787.	413.	109.	6.	11.	27.	1.	56.	0.	30.
40	67050.	106.	175.	5.	9.	16.	1.	45.	0.	19.
45	66485.	6.	252.	3.	5.	11.	0.	32.	0.	14.
50	57004.	0.	379.	2.	3.	6.	0.	10.	0.	6.
55	33938.	0.	341.	1.	2.	4.	0.	9.	0.	10.
60	41830.	0.	730.	1.	2.	4.	0.	9.	0.	9.
65	35223.	0.	1140.	0.	1.	3.	0.	7.	0.	10.
70	24286.	0.	1321.	1.	1.	1.	0.	5.	0.	7.
75	14459.	0.	1331.	0.	1.	1.	0.	3.	0.	4.
80	6388.	0.	978.	0.	1.	1.	0.	2.	0.	3.
85	4121.	0.	958.	0.	0.	0.	0.		0.	
TOTAL	866834.	15583.	8470.	278.	560.	993.	65.	2500.	0.	865.

Table A.1.7   Region: Sofia

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	NORTH	SOFIA TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	80672.	0.	431.	219.	94.	58.	32.	111.	35.	0.
5	65741.	0.	28.	113.	60.	35.	19.	59.	19.	0.
10	58803.	15.	25.	102.	47.	26.	38.	57.	16.	0.
15	75195.	1986.	42.	172.	74.	45.	51.	114.	23.	0.
20	104393.	7812.	73.	265.	129.	91.	50.	182.	40.	0.
25	105771.	5762.	94.	299.	142.	90.	51.	190.	45.	0.
30	83074.	2152.	107.	117.	47.	32.	19.	61.	16.	0.
35	72132.	655.	105.	122.	48.	40.	17.	73.	21.	0.
40	78424.	126.	205.	89.	34.	23.	14.	56.	15.	0.
45	85100.	10.	339.	67.	21.	17.	9.	44.	12.	0.
50	81607.	0.	541.	47.	14.	9.	4.	28.	8.	0.
55	43266.	0.	455.	23.	9.	8.	2.	18.	3.	0.
60	53297.	0.	930.	19.	10.	8.	2.	17.	3.	0.
65	46147.	0.	966.	13.	12.	7.	2.	19.	3.	0.
70	17787.	0.	1278.	4.	3.	1.	1.	4.	1.	0.
75	10590.	0.	1287.	3.	1.	1.	0.	3.	0.	0.
80	4678.	0.	938.	1.	1.	0.	0.	2.	0.	0.
85	3018.	0.	927.	1.	1.	0.	0.	1.	0.	0.
TOTAL	1069975.	18498.	8771.	1674.	747.	491.	311.	1039.	262.	0.

A.2 Percentage Distribution

Table A.2.1 Region: N.West

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST TO						
				N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	6.7832	0.0000	2.7910	0.0000	8.3404	8.2627	5.2045	7.1345	9.1743	7.1678
5	6.5885	0.0000	0.2612	0.0000	7.2340	6.7797	4.0892	5.1462	7.3394	3.8693
10	6.4821	0.0647	0.1940	0.0000	20.5106	18.6441	29.3680	18.2456	22.0183	5.2014
15	6.3171	18.2492	0.3731	0.0000	34.1277	33.2627	41.6357	38.1287	32.1101	31.8744
20	6.0476	45.9438	0.5373	0.0000	11.6596	13.3475	8.1784	12.0468	11.0092	24.2626
25	6.6585	25.8112	0.6343	0.0000	8.9362	9.1102	5.5762	8.6550	8.2569	10.6248
30	5.4650	6.9595	0.5448	0.0000	3.6596	4.0254	2.6022	3.5088	3.6697	4.5671
35	5.9544	2.2644	0.8881	0.0000	1.6170	2.1186	1.1152	1.7544	1.8349	2.9179
40	5.2206	0.6208	1.4701	0.0000	1.3617	1.4831	1.1152	1.6374	1.8349	2.1884
45	7.6739	0.0564	2.9179	0.0000	0.7660	1.0593	0.7435	1.1696	1.8349	1.6492
50	8.2049	0.0000	4.2164	0.0000	0.5957	0.6356	0.3717	0.9357	0.9174	1.0783
55	4.7257	0.0000	3.6493	0.0000	0.3404	0.4237	0.0000	0.4678	0.0000	0.7029
60	5.0224	0.0000	7.9104	0.0000	0.2553	0.4237	0.0000	0.3509	0.0000	1.0149
65	5.0436	0.0000	12.9776	0.0000	0.2553	0.2119	0.0000	0.2339	0.0000	1.8565
70	5.4102	0.0000	17.4851	0.0000	0.1702	0.2119	0.0000	0.1170	0.0000	0.5392
75	3.2212	0.0000	17.6194	0.0000	0.0851	0.0000	0.0000	0.1170	0.0000	0.2537
80	1.4230	0.0000	12.8433	0.0000	0.0851	0.0000	0.0000	0.0000	0.0000	0.1269
85	0.9181	0.0000	12.6866	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	38.9736	24.0445	69.0392	0.0000	18.2064	18.7500	17.0539	19.2310	17.9128	23.0729

Table A.2.2   Region: North

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	NORTH	NORTH TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	6.7487	0.0000	3.0533	7.6849	0.0000	7.1429	4.7945	6.2387	8.0321	5.9433
5	6.3313	0.0000	0.2990	7.3007	0.0000	7.9292	4.7945	6.2387	8.4337	4.4229
10	6.2173	0.1344	0.2070	20.3650	0.0000	19.0695	30.8219	18.0969	22.0884	5.0449
15	6.8825	16.4344	0.3278	30.7397	0.0000	28.4404	36.9863	32.8210	27.3092	25.9157
20	7.1005	46.0780	0.4715	12.9683	0.0000	15.8585	10.2740	14.3761	12.8514	27.5743
25	7.6503	26.6076	0.5923	8.5495	0.0000	9.1088	6.1644	8.7703	6.4337	18.1589
30	6.2544	3.3367	0.6440	4.3228	0.0000	4.1940	2.7397	3.7071	4.0161	4.5612
35	6.1028	1.9112	0.8855	2.3055	0.0000	2.6212	1.3699	2.1700	2.4096	3.3172
40	7.2413	0.4629	1.5238	1.9212	0.0000	1.7693	1.3699	1.8987	2.0080	2.4188
45	7.2864	0.0348	2.4840	1.3449	0.0000	1.2451	0.6649	1.4467	2.0080	1.8659
50	7.6805	0.0000	4.0883	1.0567	0.0000	0.7864	0.0000	1.0850	1.6064	1.1748
55	4.5780	0.0000	3.5191	0.3842	0.0000	0.5242	0.0000	0.5425	0.4016	0.8984
60	5.6422	0.0000	7.9294	0.2882	0.0000	0.5242	0.0000	0.4521	0.4016	1.4513
65	4.8835	0.0000	13.1792	0.1921	0.0000	0.3277	0.0000	0.3617	0.4016	1.2440
70	4.6350	0.0000	17.5378	0.1921	0.0000	0.1966	0.0000	0.3617	0.4016	1.3822
75	2.7597	0.0000	17.6643	0.1921	0.0000	0.1311	0.0000	0.2712	0.0000	1.1748
80	1.2191	0.0000	12.8745	0.0961	0.0000	0.0655	0.0000	0.1808	0.0000	0.8984
85	0.7865	0.0000	12.7192	0.0961	0.0000	0.0655	0.0000	0.1808	0.0000	0.5529
TOTAL	100.0000	100.0000	100.0000	100.0000	0.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	37.8669	24.2169	68.9970	19.1955	0.0000	19.5151	17.1233	20.0769	19.0863	25.3024

Table A.2.3   Region: N.East

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	NORTH	N.EAST TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	8.6236	0.0000	5.5622	7.5610	7.1661	0.0000	4.1322	6.1642	7.9842	5.8753
5	8.0325	0.0000	0.6365	6.6976	7.2385	0.0000	4.1322	5.1316	6.9862	3.7170
10	7.7256	0.2181	0.2104	18.0498	18.5468	0.0000	27.2727	16.4474	19.5609	4.4365
15	7.4492	16.3213	0.6114	36.5054	35.9703	0.0000	43.8017	38.6158	33.1337	30.8153
20	7.8967	45.1472	0.7775	12.9268	13.9703	0.0000	9.9174	14.2105	12.9741	27.3361
25	7.9153	26.9829	0.9304	7.0732	7.4195	0.0000	4.9587	7.1053	6.9860	8.2734
30	6.9007	8.5387	0.8772	4.1463	3.7640	0.0000	4.4793	3.5526	3.9920	4.4365
35	6.4063	2.1956	1.3091	2.1951	1.9906	0.0000	2.4793	2.1051	2.5948	3.3573
40	7.0600	0.5780	1.8268	1.7073	1.5563	0.0000	1.6529	1.8421	1.9960	2.2782
45	6.8292	0.0582	3.2496	1.2195	0.7962	0.0000	0.8264	1.3158	1.3972	1.6787
50	6.5145	0.0000	4.2531	0.9756	2.6877	0.0000	0.8264	1.0526	1.1976	1.0791
55	3.9341	0.0000	4.6119	0.4878	0.3619	0.0000	0.0000	0.5263	0.3992	0.0393
60	4.8467	0.0000	8.3599	0.2439	0.4343	0.0000	0.0000	0.5263	0.3992	1.5588
65	4.1977	0.0000	13.9886	0.2439	0.3619	0.0000	0.0000	0.3947	0.1996	1.3189
70	2.7934	0.0000	15.2645	0.2439	0.2895	0.0000	0.0000	0.2632	0.1996	1.3189
75	1.6632	0.0000	15.3775	0.2439	0.1810	0.0000	0.0000	0.2632	0.0000	0.7194
80	0.7348	0.0000	11.2108	0.0000	0.1086	0.0000	0.0000	0.1316	0.0000	0.5995
85	0.4740	0.0000	11.0779	0.0000	0.0724	0.0000	0.0000	0.1316	0.0000	0.3597
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	0.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	33.8111	24.3166	65.3163	19.1098	18.9549	0.0000	17.2521	19.9605	18.9778	24.5024

Table A.2.4 Region: S.West

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	NORTH	N.EAST	S.WEST TO S.WEST	SOUTH	S.EAST	SOFIA
0	7.8742	0.0000	4.7972	5.9259	5.4795	5.5046	0.0000	4.9140	5.8824	5.5388
5	8.1519	0.0000	0.3783	5.5556	6.5068	6.4220	0.0000	4.7912	6.6627	4.0785
10	8.2308	0.1060	0.2270	30.3704	31.5068	29.3578	0.0000	26.3784	33.3333	9.1138
15	7.8669	16.9745	0.5902	35.1852	33.5616	33.9450	0.0000	37.9607	31.3725	35.9013
20	7.3376	45.3635	0.8172	8.1481	8.9041	10.0917	0.0000	9.0909	7.8431	20.7956
25	7.3316	25.3954	0.9837	5.5556	5.8219	5.9633	0.0000	5.7740	5.8824	8.0564
30	6.3588	8.3591	0.8626	2.9630	2.7397	2.7523	0.0000	2.4570	2.9412	3.7261
35	6.6817	2.9778	1.4225	2.0370	1.7123	2.2936	0.0000	1.9656	1.9608	3.5750
40	7.4192	0.0129	2.0430	1.6667	1.3699	1.3761	0.0000	1.5971	1.9608	2.4673
45	6.9198	0.0707	2.9358	0.9259	0.6849	0.9174	0.0000	1.1057	0.9804	1.6113
50	6.5503	0.0000	4.5702	0.7407	0.3425	0.4587	0.0000	0.7371	0.9804	0.9567
55	4.1155	0.0000	4.2827	0.3704	0.3425	0.4587	0.0000	0.3686	0.0000	0.7049
60	5.0696	0.0000	9.3220	0.1852	0.3425	0.4587	0.0000	0.2457	0.0000	0.9063
65	4.3927	0.0000	10.5781	0.1852	0.3425	0.0000	0.0000	0.2457	0.0000	0.9567
70	2.8062	0.0000	16.2076	0.0000	0.0000	0.0000	0.0000	0.1229	0.0000	0.7049
75	1.6709	0.0000	16.3287	0.0000	0.0000	0.0000	0.0000	0.1229	0.0000	0.4020
80	0.7382	0.0000	11.8947	0.0000	0.0000	0.0000	0.0000	0.1229	0.0000	0.3021
85	0.4763	0.0000	11.7565	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2014
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	34.1915	24.3733	66.1463	17.7315	17.5514	17.7064	0.0000	18.2494	17.2059	22.4950

Table A.2.5 Region: South

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	NORTH	N.EAST	SOUTH TO S.WEST	SOUTH	S.EAST	SOFIA
0	8.1616	0.0000	4.9662	7.7655	7.4282	7.2228	4.7138	0.0000	8.2699	5.9576
5	7.9549	0.0000	0.4492	5.8637	7.0077	6.4850	4.0404	0.0000	6.7465	3.4663
10	8.0864	0.2004	0.2591	17.9873	18.7106	16.8871	27.6094	0.0000	19.5865	4.4131
15	8.3079	17.1645	0.6171	33.5975	32.1654	31.1292	40.4040	0.0000	30.2503	27.9788
20	7.7511	44.3801	0.7297	14.0254	15.1367	17.1923	10.7744	0.0000	14.0370	29.3469
25	7.5661	25.4517	0.8343	8.1616	8.5494	8.6470	5.7239	0.0000	8.1610	9.5322
30	6.5561	7.5657	0.6915	4.5959	4.0645	4.4761	3.0303	0.0000	4.2437	4.7651
35	6.7754	2.5272	1.1946	2.6149	2.2425	2.9502	1.3468	0.0000	2.9380	3.7952
40	7.4145	0.6679	2.0684	1.9810	1.6819	1.8311	1.3468	0.0000	2.1763	2.4272
45	7.0620	0.0427	2.0619	1.2678	0.8409	1.1190	0.6734	0.0000	1.5234	1.7211
50	6.3912	0.0000	4.5170	0.9509	0.6307	0.6104	0.3367	0.0000	0.9793	0.9709
55	3.9128	0.0000	4.2158	0.3962	0.3504	0.5086	0.0000	0.0000	0.3264	0.7944
60	4.8228	0.0000	8.9944	0.3117	0.3504	0.4069	0.0000	0.0000	0.2176	1.2798
65	4.1758	0.0000	13.2399	0.1585	0.3534	0.3252	0.0000	0.0000	0.3254	1.2790
70	2.5219	0.0000	15.5354	0.1565	0.2102	0.1017	0.0000	0.0000	0.2176	0.3826
75	1.5015	0.0000	15.6538	0.0792	0.1402	0.1017	0.0000	0.0000	0.0000	0.6620
80	0.6633	0.0000	11.4284	0.0792	0.0701	0.1017	0.0000	0.0000	0.0000	0.3972
85	0.4279	0.0000	11.2702	0.0000	0.0701	0.0000	0.0000	0.0000	0.0000	0.3089
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	33.6021	24.1742	65.7613	19.3542	19.6802	19.6465	17.5000	0.0000	19.2029	24.2851

Table A.2.6 Region: S.East

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	NORTH	S.EAST TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	8.2522	0.0000	5.2893	8.1481	7.8571	7.6536	4.6154	6.7200	0.0000	6.2428
5	7.5469	0.0000	0.2715	6.6667	7.8571	7.1501	4.6154	5.5600	0.0000	3.9306
10	7.7135	0.2374	0.4368	16.6667	17.3214	15.8107	26.1538	15.4800	0.0000	4.1618
15	7.5380	18.0517	0.5903	35.1852	33.3929	32.5277	43.0769	37.3208	0.0000	29.2486
20	7.4237	43.7656	0.7282	13.7037	14.6429	16.6163	18.7692	15.0400	0.0000	28.5549
25	7.4056	26.7984	0.8737	7.7778	8.0357	8.0564	4.6154	7.7600	0.0000	8.9017
30	6.3941	7.7777	0.8383	4.8148	4.2857	4.7331	3.0769	4.1600	0.0000	5.0867
35	6.8972	2.6503	1.0869	2.2222	1.9643	2.7190	1.5365	2.2400	0.0000	3.4682
40	7.7350	0.6002	2.0661	1.8519	1.6071	1.6113	1.5385	1.8000	0.0000	2.1965
45	7.6700	0.0385	2.9752	1.1111	0.6929	1.1078	0.0000	1.6800	0.0000	1.6185
50	6.6223	0.0000	4.4746	1.7407	0.5357	0.6042	0.0000	0.6000	0.0000	0.9249
55	5.9152	0.0000	4.0260	0.3704	0.3571	0.4026	0.0000	0.4000	0.0000	0.6936
60	4.8256	0.0000	8.6187	0.3704	0.3571	0.3021	0.0000	0.3600	0.0000	0.1561
65	4.1788	0.0000	13.4593	0.0000	0.1786	0.1007	0.0000	0.2800	0.0000	0.0405
70	2.8017	0.0000	15.5962	0.3704	0.1786	0.1007	0.0000	0.2000	0.0000	0.1561
75	1.6680	0.0000	15.7143	0.0000	0.1786	0.1007	0.0000	0.1200	0.0000	0.8092
80	0.7369	0.0000	11.4522	0.0000	0.0000	0.0000	0.0000	0.0800	0.0000	0.4624
85	0.4754	0.0000	11.3105	0.0000					0.0000	0.3468
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	34.3252	24.2346	65.7255	18.9815	18.9018	19.3580	17.1923	19.8040	0.0000	24.0780

Table A.2.7 Region: Sofia

AGE	POPULATION	BIRTHS	DEATHS	MIGRATION FROM N.WEST	NORTH	SOFIA TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	7.5396	0.0000	4.9139	13.0824	12.5037	11.8126	10.2894	10.6833	13.4615	0.0000
5	6.1412	0.0000	0.3192	6.7503	8.0321	7.1283	6.1093	5.6785	7.3077	0.0000
10	5.5032	0.0511	0.2650	5.9737	6.0918	5.2953	12.2186	5.4860	6.1538	0.0000
15	5.2280	10.7363	0.4708	10.2748	9.9063	9.1650	16.3987	10.9721	8.8462	0.0000
20	7.5563	42.2316	0.9323	15.8303	17.2691	16.5936	16.0772	17.5168	15.3846	0.0000
25	8.8854	31.1493	1.0717	17.0614	19.2094	18.3299	16.3987	18.2668	17.3077	0.0000
30	7.7641	11.5256	1.2171	6.9892	6.2918	6.5173	6.1093	5.0710	8.1538	0.0000
35	6.7415	3.5409	1.1971	7.2879	6.4257	6.1466	5.4662	5.8710	8.0769	0.0000
40	7.3295	0.6612	1.2372	5.3166	4.5515	4.6843	4.5016	5.3898	5.7692	0.0000
45	7.9535	0.0541	3.8650	5.0224	2.8112	3.4623	2.8939	4.2346	4.6154	0.0000
50	7.6457	0.0000	6.1681	2.8076	1.8742	1.8330	2.2862	2.6949	3.0769	0.0000
55	4.0436	0.0000	5.1876	1.3740	1.2048	1.6293	1.2862	1.7324	1.1538	0.0000
60	4.9811	0.0000	10.6031	1.1350	1.3387	1.6293	1.6431	1.6362	1.1538	0.0000
65	4.3129	0.0000	11.0136	0.7766	1.6064	1.4257	1.6431	1.8287	1.3846	0.0000
70	1.6624	0.0000	14.5727	0.2369	0.4016	0.2037	0.3215	1.0287	0.0000	0.0000
75	0.9097	0.0000	14.6793	0.1792	0.1339	0.2037	0.0000	0.2287	0.0000	0.0000
80	0.6372	0.0000	10.5689	0.0597	0.1339	0.0000	0.0000	0.1925	0.0000	0.0000
85	0.2821	0.0000						0.0962	0.0000	0.0000
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	34.3684	25.3460	64.7113	24.9283	24.4946	25.3004	22.6769	26.5279	25.1538	0.0000

APPENDIX B

OBSERVED RATES

B.1 Death Rates

Table B.1.1

AGE	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.005287	0.005620	0.006528	0.005780	0.005696	0.006263	0.005343
5	0.000509	0.000587	0.000533	0.000440	0.000529	0.000352	0.000426
10	0.000385	0.000414	0.000366	0.000262	0.000531	0.000553	0.000425
15	0.000759	0.000592	0.000831	0.000712	0.000695	0.000765	0.000559
20	0.001142	0.000625	0.000997	0.001057	0.000870	0.000948	0.000699
25	0.001224	0.000962	0.001198	0.001273	0.001032	0.001122	0.000869
30	0.001281	0.001279	0.001287	0.001287	0.001237	0.001281	0.001208
35	0.001904	0.001802	0.002068	0.002020	0.001650	0.001823	0.001456
40	0.002616	0.002614	0.002610	0.002613	0.002611	0.002610	0.002614
45	0.004886	0.004235	0.004816	0.004025	0.003926	0.003790	0.003984
50	0.006603	0.006612	0.006608	0.006612	0.006612	0.006602	0.006613
55	0.009923	0.009548	0.011865	0.009873	0.010086	0.010048	0.010516
60	0.017458	0.017456	0.017458	0.017446	0.017459	0.017452	0.017449
65	0.033064	0.033521	0.033730	0.022848	0.029579	0.031472	0.020933
70	0.041529	0.046998	0.055309	0.054799	0.057664	0.054393	0.071850
75	0.070287	0.079505	0.093582	0.092721	0.097587	0.092053	0.121530
80	0.115978	0.131173	0.154431	0.152889	0.160989	0.151847	0.200513
85	0.177564	0.200872	0.236555	0.234248	0.246518	0.232468	0.307157
GROSS	0.492400	0.544613	0.630783	0.610905	0.645422	0.615843	0.774243
CRUDE	0.012850	0.012421	0.010122	0.009488	0.009361	0.009771	0.008197
M.AGE	77.8922	78.4360	78.7156	79.1095	79.1781	78.8792	80.0398

B.2 Fertility Rates

Table B.2.1

AGE	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
10	0.000178	0.000310	0.000522	0.000209	0.000429	0.000553	0.000255
15	0.039271	0.034266	0.043539	0.035061	0.035736	0.043050	0.026410
20	0.103274	0.093125	0.105791	0.100325	0.103499	0.105981	0.074835
25	0.052698	0.049910	0.063078	0.056285	0.058185	0.063342	0.054476
30	0.017337	0.019128	0.022896	0.021361	0.020132	0.021867	0.025664
35	0.005135	0.004494	0.006224	0.007242	0.006452	0.006908	0.009081
40	0.001169	0.000917	0.001515	0.001780	0.001558	0.001581	0.001607
45	0.000100	0.000069	0.000158	0.000166	0.000105	0.000090	0.000118
50	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
55	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
60	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
75	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
80	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
85	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
GROSS	0.219162	0.202219	0.240724	0.222429	0.226096	0.243373	0.192445
CRUDE	0.013594	0.014350	0.018504	0.016249	0.017297	0.017977	0.017288
M.AGE	24.0588	24.2499	24.4277	24.5951	24.4453	24.3576	25.4395

B.3 Outmigration Rates

Table B.3.1 Migration from N.West to:

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0,006353	0,000000	0,001385	0,002551	0,003198	0,000862	0,000141	0,003195
5	0,004396	0,000000	0,001237	0,000466	0,000160	0,000640	0,000116	0,001776
10	0,011125	0,000000	0,003565	0,001302	0,001169	0,002308	0,000355	0,002426
15	0,030907	0,000000	0,006087	0,002383	0,001720	0,004949	0,000531	0,015256
20	0,017474	0,000000	0,002172	0,000999	0,000349	0,001633	0,000190	0,012130
25	0,008368	0,000000	0,001512	0,000619	0,000216	0,001066	0,000130	0,004625
30	0,004334	0,000000	0,000755	0,000333	0,000123	0,000526	0,000070	0,002527
35	0,002256	0,000000	0,000304	0,000160	0,000048	0,000240	0,000032	0,001472
40	0,001474	0,000000	0,000212	0,000093	0,000040	0,000186	0,000027	0,000916
45	0,001000	0,000000	0,000112	0,000062	0,000025	0,000125	0,000025	0,000650
50	0,000631	0,000000	0,000082	0,000035	0,000012	0,000094	0,000012	0,000397
55	0,000710	0,000000	0,000081	0,000041	0,000000	0,000081	0,000000	0,000507
60	0,000659	0,000000	0,000049	0,000033	0,000030	0,000049	0,000000	0,000527
65	0,000742	0,000000	0,000057	0,000019	0,000000	0,000057	0,000000	0,000608
70	0,000567	0,000000	0,000035	0,000018	0,000000	0,000035	0,000000	0,000479
75	0,000566	0,000000	0,000030	0,000000	0,000000	0,000030	0,000000	0,000506
80	0,000674	0,000000	0,000067	0,000000	0,000000	0,000067	0,000000	0,000539
85	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000
GROSS	0,092215	0,000000	0,017745	0,007115	0,004039	0,012949	0,001629	0,048737
CRUDE	0,005785	0,000000	0,001127	0,000453	0,000258	0,000823	0,000105	0,003024
M.AGE	21.6164	0.0000	18.6490	18.9629	17.1159	19.7201	17.9314	24.0342

Table B.3.2 Migration from North to:

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0,003926	0,000847	0,000000	0,001154	0,000074	0,000730	0,000212	0,000910
5	0,004039	0,000357	0,000000	0,001365	0,000079	0,000778	0,000237	0,000722
10	0,010167	0,002435	0,000000	0,003343	0,000517	0,002401	0,000632	0,000839
15	0,016749	0,003321	0,000000	0,004594	0,000560	0,003767	0,000736	0,003892
20	0,009878	0,001358	0,000000	0,002434	0,000151	0,001599	0,000322	0,004013
25	0,004687	0,000831	0,000000	0,001298	0,000084	0,000906	0,000196	0,001372
30	0,002627	0,000514	0,000000	0,000731	0,000046	0,000468	0,000114	0,000754
35	0,001685	0,000281	0,000000	0,000468	0,000023	0,000281	0,000070	0,000562
40	0,001085	0,000197	0,000000	0,000266	0,000020	0,000207	0,000049	0,000345
45	0,000794	0,000137	0,000000	0,000186	0,000010	0,000157	0,000039	0,000265
50	0,000511	0,000102	0,000000	0,000112	0,000006	0,000112	0,000028	0,000158
55	0,000499	0,000062	0,000000	0,000125	0,000000	0,000094	0,000016	0,000203
60	0,000481	0,000038	0,000000	0,000101	0,000000	0,000063	0,000013	0,000266
65	0,000439	0,000029	0,000000	0,000073	0,000000	0,000059	0,000015	0,000263
70	0,000462	0,000031	0,000000	0,000046	0,000000	0,000062	0,000015	0,000308
75	0,000621	0,000052	0,000000	0,000052	0,000000	0,000078	0,000000	0,000440
80	0,000996	0,000059	0,000000	0,000059	0,000000	0,000117	0,000000	0,000762
85	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000
GROSS	0,059646	0,011151	0,000000	0,016316	0,001564	0,011878	0,002663	0,016073
CRUDE	0,003939	0,000744	0,000000	0,001090	0,000104	0,000790	0,000178	0,001033
M.AGE	22.1788	19.4620	0.0000	19.7443	16.8923	20.6927	19.0554	20.6652

Table B.3.3 Migration from N.East to:

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.002886	0.000242	0.001544	0.000000	0.000039	0.000367	0.000312	0.000382
5	0.002805	0.000209	0.001675	0.000000	0.000042	0.000327	0.000293	0.000260
10	0.007662	0.000644	0.004466	0.000000	0.000287	0.001088	0.000853	0.000322
15	0.017055	0.001354	0.008740	0.000000	0.000479	0.002663	0.001499	0.002320
20	0.007257	0.000451	0.003288	0.000000	0.000102	0.000923	0.000554	0.001942
25	0.003392	0.000246	0.001742	0.000000	0.000051	0.000459	0.000297	0.000586
30	0.002027	0.000166	0.001014	0.000000	0.000229	0.000263	0.000195	0.000361
35	0.001291	0.000094	0.000577	0.000000	0.000021	0.000168	0.000136	0.000294
40	0.000896	0.000067	0.000410	0.000000	0.000010	0.000133	0.000095	0.000181
45	0.000581	0.000049	0.000217	0.000020	0.000010	0.000098	0.000069	0.000136
50	0.000475	0.000041	0.000196	0.000000	0.000000	0.000063	0.000062	0.000093
55	0.000427	0.000034	0.000171	0.000000	0.000000	0.000068	0.000034	0.000120
60	0.000444	0.000014	0.000167	0.000000	0.000000	0.000056	0.000028	0.000180
65	0.000417	0.000016	0.000160	0.000000	0.000000	0.000048	0.000016	0.000176
70	0.000554	0.000024	0.000193	0.000000	0.000000	0.000048	0.000024	0.000265
75	0.000566	0.000040	0.000202	0.000000	0.000000	0.000081	0.000000	0.000243
80	0.000824	0.000000	0.000275	0.000000	0.000000	0.000092	0.000000	0.000458
85	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
GROSS	0.049549	0.003694	0.025036	0.000020	0.001070	0.006962	0.004468	0.008321
CRUDE	0.003625	0.000276	0.001858	0.000000	0.000081	0.000511	0.000337	0.000561
M.AGE	22.5259	20.5564	20.8910	0.0000	17.4746	22.1766	19.9351	30.6520

Table B.3.4 Migration from S.West to:

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.003939	0.000584	0.000292	0.000219	0.000000	0.000729	0.000109	0.002006
5	0.003347	0.000528	0.000335	0.000247	0.000000	0.000687	0.000123	0.001427
10	0.013362	0.002861	0.001605	0.001116	0.000000	0.004030	0.000593	0.003157
15	0.025844	0.003468	0.001789	0.001351	0.000000	0.005640	0.000584	0.013013
20	0.011486	0.000861	0.000509	0.000430	0.000000	0.001448	0.000157	0.008082
25	0.005346	0.000568	0.000333	0.000295	0.000000	0.000920	0.000118	0.003133
30	0.002868	0.000361	0.000181	0.000135	0.000000	0.000452	0.000068	-0.001671
35	0.002364	0.000236	0.000107	0.000107	0.000000	0.000344	0.000043	0.001526
40	0.001548	0.000174	0.000077	0.000058	0.000000	0.000252	0.000039	0.000948
45	0.001058	0.000104	0.000041	0.000041	0.000000	0.000187	0.000021	0.000664
50	0.000701	0.000088	0.000022	0.000022	0.000000	0.000131	0.000022	0.000416
55	0.000733	0.000070	0.000035	0.000035	0.000000	0.000105	0.000000	0.000488
60	0.000651	0.000026	0.000026	0.000026	0.000000	0.000057	0.000000	0.000510
65	0.000752	0.000033	0.000033	0.000033	0.000000	0.000065	0.000000	0.000621
70	0.000870	0.000051	0.000051	0.000000	0.000000	0.000051	0.000000	0.000716
75	0.000773	0.000000	0.000000	0.000000	0.000000	0.000086	0.000000	0.000687
80	0.001362	0.000000	0.000000	0.000000	0.000000	0.000195	0.000000	0.001167
85	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
GROSS	0.077004	0.010034	0.005438	0.004045	0.000000	0.015378	0.001876	0.040233
CRUDE	0.005674	0.000775	0.000419	0.000313	0.000000	0.001169	0.000146	0.002852
M.AGE	22.8992	18.5994	18.6125	18.4102	0.0000	20.0520	17.6867	26.3335

Table B.3.5 Migration from South to:

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.002831	0.000555	0.000620	0.000402	0.000079	0.000000	0.000430	0.000764
5	0.002265	0.000430	0.000581	0.000366	0.000070	0.000000	0.000360	0.000459
10	0.005840	0.001297	0.001526	0.000949	0.000469	0.000000	0.001029	0.000571
15	0.012353	0.002358	0.002553	0.001702	0.000667	0.000000	0.001546	0.003526
20	0.008275	0.001053	0.001288	0.001008	0.000191	0.000000	0.000769	0.003964
25	0.003774	0.000629	0.000745	0.000519	0.000104	0.000000	0.000458	0.001319
30	0.002246	0.000412	0.000412	0.000313	0.000064	0.000000	0.000277	0.000768
35	0.001439	0.000225	0.000218	0.000135	0.000027	0.000000	0.000164	0.000587
40	0.000910	0.000156	0.000150	0.000112	0.000025	0.000000	0.000125	0.000343
45	0.000615	0.000105	0.000079	0.000072	0.000013	0.000000	0.000092	0.000255
50	0.000426	0.000087	0.000065	0.000043	0.000007	0.000000	0.000065	0.000159
55	0.000425	0.000059	0.000059	0.000059	0.000000	0.000000	0.000035	0.000213
60	0.000422	0.000038	0.000043	0.000038	0.000000	0.000000	0.000019	0.000273
65	0.000465	0.000022	0.000055	0.000033	0.000000	0.000000	0.000033	0.000321
70	0.000513	0.000037	0.000055	0.000018	0.000000	0.000000	0.000037	0.000366
75	0.000585	0.000031	0.000062	0.000031	0.000000	0.000000	0.000000	0.000462
80	0.000836	0.000070	0.000070	0.000070	0.000000	0.000000	0.000000	0.000627
85	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
GROSS	0.044221	0.007566	0.008565	0.005933	0.001716	0.000000	0.005460	0.014982

Table B.3.6 Migration from S.East to:

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.005130	0.000308	0.000615	0.001062	0.000042	0.002349	0.000000	0.000755
5	0.004723	0.200275	0.000673	0.001085	0.000046	0.002125	0.000000	0.000520
10	0.011052	0.000673	0.001451	0.002348	0.000254	0.005788	0.000000	0.000538
15	0.027838	0.001454	0.002862	0.004943	0.000429	0.014279	0.000000	0.003672
20	0.014203	0.000575	0.001274	0.002564	0.000109	0.005843	0.000000	0.003838
25	0.006371	0.000319	0.000683	0.001213	0.000046	0.002943	0.000000	0.001168
30	0.004222	0.000235	0.000433	0.000848	0.000036	0.001876	0.000000	0.000794
35	0.002191	0.000100	0.000184	0.000452	0.000017	0.000937	0.000000	0.000502
40	0.001417	0.000075	0.000134	0.000239	0.000015	0.000671	0.000000	0.000283
45	0.000978	0.000045	0.000075	0.000165	0.000000	0.000481	0.000000	0.000211
50	0.000679	0.000035	0.000052	0.000105	0.000000	0.000348	0.000000	0.000139
55	0.000678	0.000029	0.000059	0.000118	0.000000	0.000295	0.000000	0.000177
60	0.000645	0.000024	0.000048	0.000096	0.000000	0.000239	0.000000	0.000239
65	0.000635	0.000000	0.000055	0.000083	0.000000	0.000248	0.000000	0.000248
70	0.000824	0.000041	0.000041	0.000041	0.000000	0.000288	0.000000	0.000412
75	0.000968	0.000000	0.000069	0.000069	0.000000	0.000346	0.000000	0.000484
80	0.001409	0.000000	0.000157	0.000157	0.000000	0.000470	0.000000	0.000626
85	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
GROSS	0.083964	0.004187	0.008865	0.015588	0.000993	0.039525	0.000000	0.014807
CRUDE	0.006060	0.000311	0.000646	0.001146	0.000075	0.002884	0.000000	0.000998
M.AGE	22.6667	19.8434	21.0496	20.8688	17.3878	21.6900	0.0000	29.2873

Table B.3.7 Migration from Sofia to:

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.006805	0.002715	0.001165	0.000719	0.000397	0.001376	0.000434	0.000000
5	0.004639	0.001719	0.000913	0.000532	0.000289	0.000897	0.000289	0.000000
10	0.004823	0.001593	0.000793	0.000442	0.000645	0.000968	0.000272	0.000000
15	0.006370	0.002287	0.000984	0.000598	0.000678	0.001516	0.000306	0.000000
20	0.007252	0.002539	0.001236	0.000872	0.000479	0.001743	0.000383	0.000000
25	0.007724	0.002827	0.001343	0.000851	0.000482	0.001796	0.000425	0.000000
30	0.003515	0.001408	0.000566	0.000385	0.000229	0.000734	0.000193	0.000000
35	0.004450	0.001691	0.000665	0.000555	0.000236	0.001012	0.000291	0.000000
40	0.002946	0.001135	0.000434	0.000293	0.000179	0.000714	0.000191	0.000000
45	0.001998	0.000767	0.000247	0.000200	0.000106	0.000517	0.000141	0.000000
50	0.001345	0.000575	0.000171	0.000110	0.000049	0.000342	0.000098	0.000000
55	0.001456	0.000532	0.000208	0.000189	0.000046	0.000416	0.000069	0.000000
60	0.001107	0.000356	0.000188	0.000150	0.000038	0.000319	0.000056	0.000000
65	0.001214	0.000282	0.000260	0.000152	0.000043	0.000412	0.000065	0.000000
70	0.000787	0.000225	0.000169	0.000000	0.000056	0.000225	0.000056	0.000000
75	0.000755	0.000283	0.000094	0.000094	0.000000	0.000283	0.000000	0.000000
80	0.000855	0.000214	0.000214	0.000000	0.000000	0.000428	0.000000	0.000000
85	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
GROSS	0.058041	0.021273	0.009654	0.006194	0.003951	0.013699	0.003270	0.000000
CRUDE	0.004226	0.001565	0.000698	0.000459	0.000291	0.000971	0.000243	0.000000
M.AGE	27.4275	26.7261	27.1997	27.0395	22.9256	30.4612	26.1274	0.0000

B.4 Total Population System

Table B.4.1

AGE	POPULATION ABSOLUTE	PERCENT	BIRTHS ABSOLUTE	PERCENT	DEATHS ABSOLUTE	PERCENT	MIGRATION ABSOLUTE	PERCENT	OBSERVED RATES BIRTH	DEATH	MIGRATION
0	677101.	7.7587	0.	0.0000	3944.	4.3849	2821.	7.4594	0.0000000	0.005825	0.004166
5	636856.	7.2975	0.	0.0000	320.	0.3558	2189.	5.7882	0.0000000	0.000502	0.003437
10	627571.	7.1912	238.	0.1646	274.	0.3006	5328.	14.0885	0.0000379	0.000437	0.008490
15	648115.	7.4266	23524.	16.2674	455.	0.5059	11474.	30.3400	0.0362296	0.000702	0.017704
20	667466.	7.6463	65311.	45.1642	605.	0.6726	6582.	17.4044	0.0978849	0.000906	0.009861
25	632723.	7.8022	38767.	26.8083	730.	0.8116	3609.	9.5431	0.0569950	0.001072	0.005302
30	570611.	6.5345	12134.	8.3910	733.	0.8149	1654.	4.3736	0.0212265	0.001285	0.002899
35	568310.	6.5121	3649.	2.5234	1020.	1.1340	1181.	3.1229	0.0064421	0.001795	0.002070
40	659246.	7.5249	914.	0.6321	1670.	1.8567	867.	2.2926	0.0014380	0.002612	0.001356
45	636179.	7.2898	71.	0.0491	2697.	2.9985	600.	1.5865	0.0001112	0.004239	0.000943
50	611212.	7.0266	0.	0.0000	4053.	4.5061	395.	1.0445	0.0000000	0.006609	0.000644
55	362410.	4.1527	0.	0.0000	3728.	4.1448	235.	0.6214	0.0000000	0.010287	0.000645
60	446563.	5.1170	0.	0.0000	7795.	8.6654	263.	0.6954	0.0000000	0.017456	0.000539
65	386710.	4.4312	0.	0.0000	11623.	12.9223	239.	0.6320	0.0000000	0.030056	0.000618
70	279036.	3.1974	0.	0.0000	14507.	16.1287	164.	0.4337	0.0000000	0.051990	0.000588
75	166137.	1.9237	0.	0.0000	14615.	16.2468	107.	0.2829	0.0000000	0.087970	0.000644
80	73394.	0.8410	0.	0.0000	10652.	11.8428	68.	0.1798	0.0000000	0.145134	0.000927
85	47350.	0.5426	0.	0.0000	10524.	11.7005	42.	0.1111	0.0000000	0.222260	0.000887
TOTAL	8726990.	100.0000	144608.	100.0000	89945.	100.0000	37818.	100.0000	0.2227701	0.591137	0.061781
CRUDE									0.0165570	0.010307	0.004333
M.AGE	35.1766		24.3669		66.7234		21.0980		24.4928	78.7869	24.1269

APPENDIX C

MULTIREGIONAL LIFE TABLE OPTION 3

C.1 Probabilities of Dying and Migrating

Table C.1.1 Region: N.West

| AGE | DEATH | MIGRATION FROM N.WEST TO | | | | | | |
		N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.026115	0.943658	0.006636	0.002669	0.000956	0.004174	0.000694	0.015098
5	0.002543	0.975828	0.006077	0.002318	0.000792	0.003179	0.000582	0.008681
10	0.001927	0.944298	0.017046	0.006407	0.005552	0.011268	0.001761	0.011742
15	0.003739	0.854180	0.027633	0.011121	0.007589	0.022987	0.002526	0.070306
20	0.005613	0.911470	0.013351	0.004888	0.001692	0.007945	0.000959	0.057082
25	0.006075	0.953350	0.007383	0.003072	0.001069	0.005273	0.000658	0.023121
30	0.006385	0.972365	0.003709	0.001652	0.000607	0.002603	0.000351	0.012328
35	0.009465	0.979450	0.001505	0.000798	0.000239	0.001198	0.000163	0.007183
40	0.012996	0.979768	0.001248	0.000460	0.000197	0.000921	0.000133	0.004476
45	0.024125	0.971004	0.000550	0.000306	0.000122	0.000613	0.000123	0.003156
50	0.032481	0.964473	0.000396	0.000170	0.000057	0.000453	0.000057	0.001914
55	0.048418	0.948214	0.000367	0.000193	0.000000	0.000388	0.000000	0.002399
60	0.083641	0.913341	0.000227	0.000152	0.000000	0.000228	0.000000	0.002410
65	0.152622	0.844146	0.000244	0.000082	0.000000	0.000247	0.000000	0.002658
70	0.188251	0.809561	0.000144	0.000071	0.000000	0.000141	0.000000	0.001833
75	0.299097	0.699048	0.000106	0.000000	0.000000	0.000102	0.000000	0.001647
80	0.449796	0.548431	0.000197	0.000000	0.000000	0.000187	0.000000	0.001389
85	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table C.1.2 Region: North

| AGE | DEATH | MIGRATION FROM NORTH TO | | | | | | |
		N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.027718	0.004056	0.953436	0.005523	0.000361	0.003526	0.001019	0.004361
5	0.002925	0.004210	0.977195	0.006707	0.000392	0.003848	0.001168	0.003554
10	0.002067	0.011635	0.948810	0.016060	0.002501	0.011701	0.003070	0.004155
15	0.002977	0.015052	0.917747	0.020904	0.002665	0.018027	0.003332	0.019296
20	0.004121	0.006474	0.948098	0.011703	0.000748	0.007775	0.001562	0.019519
25	0.004803	0.004059	0.972227	0.006355	0.000420	0.004468	0.000967	0.006701
30	0.006375	0.002527	0.980663	0.003598	0.000227	0.002313	0.000563	0.003713
35	0.008970	0.001391	0.982722	0.002307	0.000117	0.001391	0.000348	0.002754
40	0.012984	0.000973	0.981680	0.001310	0.000098	0.001022	0.000243	0.001691
45	0.020952	0.000671	0.975171	0.000908	0.000048	0.000768	0.000192	0.001290
50	0.032521	0.000495	0.965008	0.000539	0.000000	0.000540	0.000135	0.000762
55	0.046633	0.000298	0.950996	0.000591	0.000000	0.000446	0.000074	0.000961
60	0.083631	0.000175	0.914164	0.000464	0.000000	0.000291	0.000058	0.001216
65	0.154610	0.000125	0.843490	0.000311	0.000000	0.000252	0.000063	0.001150
70	0.210357	0.000125	0.787868	0.000181	0.000000	0.000241	0.000061	0.001166
75	0.331748	0.000184	0.666229	0.000175	0.000000	0.000261	0.000000	0.001404
80	0.494169	0.000171	0.503281	0.000159	0.000000	0.000315	0.000000	0.001904
85	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table C.1.3 Region: N.East

AGE	DEATH	MIGRATION FROM N.EAST TO						
		N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.032088	0.001179	0.007383	0.954042	0.000190	0.001784	0.001490	0.001844
5	0.002759	0.001051	0.008220	0.983387	0.000209	0.001637	0.001443	0.001295
10	0.001833	0.003237	0.021403	0.962881	0.001409	0.005473	0.004117	0.001647
15	0.004105	0.006494	0.040363	0.913029	0.002273	0.013105	0.006830	0.011801
20	0.004956	0.002239	0.015752	0.939714	0.000507	0.004557	0.002644	0.009630
25	0.005923	0.001232	0.008513	0.977442	0.000255	0.002288	0.001453	0.002894
30	0.006412	0.000825	0.004985	0.983580	0.000146	0.001308	0.000957	0.001787
35	0.010280	0.002472	0.002841	0.983353	0.000104	0.000834	0.000672	0.001444
40	0.012968	0.000331	0.002013	0.982625	0.002047	0.000659	0.000468	0.000888
45	0.023790	0.000241	0.001056	0.973374	0.000048	0.000482	0.000337	0.000672
50	0.032503	0.000223	0.000947	0.965202	0.000000	0.000490	0.000299	0.000448
55	0.057689	0.000162	0.000809	0.940369	0.000000	0.000324	0.000162	0.000565
60	0.083641	0.000064	0.000763	0.914323	0.000000	0.000255	0.000127	0.000826
65	0.155508	0.000069	0.000681	0.842697	0.000000	0.000207	0.000068	0.000770
70	0.242973	0.000096	0.000756	0.754912	0.000000	0.000185	0.000093	0.000984
75	0.379214	0.000140	0.000682	0.618948	0.000000	0.000263	0.000000	0.000753
80	0.557141	0.000001	0.000744	0.440781	0.000000	0.000236	0.000000	0.001098
85	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table C.1.4 Region: S.West

AGE	DEATH	MIGRATION FROM S.WEST TO						
		N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.028478	0.002840	0.001438	0.001073	0.952569	0.003531	0.002536	0.009536
5	0.002201	0.002623	0.001673	0.001234	0.981250	0.003406	0.000614	0.006998
10	0.001337	0.013631	0.007850	0.005478	0.934223	0.019396	0.002881	0.015204
15	0.003530	0.015631	0.008726	0.006472	0.875708	0.026238	0.002751	0.060944
20	0.005231	0.004253	0.002583	0.002176	0.939245	0.007071	0.000787	0.038655
25	0.006325	0.002938	0.001691	0.001288	0.967463	0.004558	0.000591	0.015146
30	0.006415	0.001795	0.000904	0.000678	0.979446	0.002236	0.000337	0.008189
35	0.010036	0.001190	0.000542	0.000539	0.978324	0.001708	0.000217	0.007444
40	0.012978	0.000867	0.000386	0.000289	0.979412	0.001243	0.000192	0.004632
45	0.019927	0.000511	0.000205	0.000204	0.974902	0.000916	0.000103	0.003232
50	0.032521	0.000425	0.000187	0.000186	0.964095	0.000636	0.000106	0.002003
55	0.048182	0.000334	0.000167	0.000166	0.948340	0.000499	0.000000	0.002311
60	0.083587	0.000132	0.000131	0.000131	0.913428	0.000261	0.000000	0.002331
65	0.108065	0.000144	0.000001	0.000000	0.888577	0.000290	0.000000	0.002779
70	0.241074	0.000205	0.000202	0.000000	0.755660	0.000197	0.000000	0.002661
75	0.376492	0.000001	0.000000	0.000000	0.621091	0.000281	0.000000	0.002134
80	0.553302	0.000001	0.000001	0.000000	0.443392	0.000502	0.000000	0.002802
85	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table C.1.5 Region: South

AGE	DEATH	MIGRATION FROM SOUTH TO						
		N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.028079	0.002673	0.002900	0.001947	0.000385	0.958294	0.002056	0.023656
5	0.002638	0.002127	0.002874	0.001822	0.000346	0.986152	0.001771	0.002269
10	0.002645	0.006293	0.007454	0.004696	0.002268	0.968834	0.004952	0.002857
15	0.003467	0.010847	0.012285	0.008204	0.003135	0.937464	0.007069	0.017528
20	0.004340	0.005079	0.006268	0.004941	0.000935	0.955490	0.003654	0.019293
25	0.005148	0.003091	0.003678	0.002573	0.000515	0.976318	0.002233	0.006443
30	0.006413	0.002033	0.002038	0.001549	0.000317	0.982509	0.001359	0.003782
35	0.008220	0.001119	0.001081	0.000904	0.000136	0.984682	0.000907	0.002876
40	0.012972	0.000770	0.000738	0.000553	0.000123	0.982553	0.000613	0.001679
45	0.019442	0.000513	0.000385	0.000352	0.000064	0.977552	0.000448	0.001245
50	0.032525	0.000420	0.000315	0.000210	0.000035	0.965416	0.000314	0.000767
55	0.049189	0.000282	0.000281	0.000280	0.000000	0.948794	0.000168	0.001006
60	0.083649	0.000177	0.000220	0.000176	0.000000	0.914422	0.000088	0.001272
65	0.138119	0.000096	0.000238	0.000143	0.000000	0.859846	0.000143	0.001414
70	0.252022	0.000145	0.000215	0.000070	0.000000	0.746052	0.000141	0.001354
75	0.392296	0.000106	0.000206	0.000100	0.000000	0.605872	0.000000	0.001420
80	0.574025	0.000193	0.000187	0.000179	0.000000	0.423932	0.000000	0.001485
85	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table C.1.6 Region: S.East

AGE	DEATH	MIGRATION FROM N.WEST	NORTH	S.EAST TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.030802	0.001501	0.002972	0.005074	0.000206	0.011205	0.944632	0.003607
5	0.001767	0.001374	0.003330	0.005340	0.000250	0.010437	0.974960	0.002562
10	0.002751	0.003346	0.007134	0.011326	0.001257	0.027795	0.943717	0.002675
15	0.003795	0.006937	0.013827	0.022571	0.002078	0.064989	0.866889	0.018914
20	0.004713	0.002864	0.006236	0.012256	0.000550	0.027665	0.927100	0.018616
25	0.005590	0.001599	0.003380	0.005932	0.000232	0.014316	0.963252	0.005698
30	0.006385	0.001168	0.002143	0.004164	0.000181	0.009188	0.972070	0.003902
35	0.009072	0.000506	0.000913	0.002224	0.000084	0.004609	0.980133	0.002460
40	0.012965	0.000371	0.000662	0.001173	0.000074	0.003297	0.980068	0.001388
45	0.018778	0.000223	0.000369	0.000808	0.000000	0.002353	0.976442	0.001027
50	0.032476	0.000169	0.000253	0.000505	0.000000	0.001682	0.964243	0.000672
55	0.049011	0.000141	0.000281	0.000557	0.000000	0.001399	0.947773	0.000837
60	0.083610	0.000110	0.000220	0.000438	0.000000	0.001096	0.913431	0.001094
65	0.145853	0.000001	0.000236	0.000354	0.000000	0.001071	0.851395	0.001091
70	0.239471	0.000165	0.000163	0.000159	0.000000	0.001106	0.757404	0.001532
75	0.374258	0.000001	0.000234	0.000227	0.000000	0.001127	0.622647	0.001505
80	0.550462	0.000001	0.000426	0.000408	0.000000	0.001210	0.445985	0.001508
85	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table C.1.7 Region: Sofia

AGE	DEATH	MIGRATION FROM N.WEST	NORTH	SOFIA TO N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.026386	0.012829	0.005593	0.003455	0.001888	0.006593	0.002064	0.941191
5	0.002133	0.008403	0.004501	0.002641	0.001419	0.004435	0.001420	0.975049
10	0.002120	0.008213	0.003968	0.002223	0.003116	0.004829	0.001338	0.974193
15	0.002801	0.010539	0.004923	0.002988	0.003192	0.007503	0.001466	0.966588
20	0.003515	0.011948	0.006035	0.004289	0.002295	0.008474	0.001843	0.961600
25	0.004456	0.013548	0.006570	0.004179	0.002333	0.008764	0.002065	0.958083
30	0.006419	0.006872	0.002791	0.001903	0.001122	0.003615	0.000944	0.976333
35	0.007273	0.008255	0.003264	0.002721	0.001150	0.004961	0.001425	0.970950
40	0.012935	0.005543	0.002125	0.001438	0.000872	0.003497	0.000936	0.972604
45	0.019732	0.003824	0.001203	0.000973	0.000515	0.002521	0.000688	0.970545
50	0.032528	0.002767	0.000825	0.000531	0.000236	0.001650	0.000471	0.960992
55	0.051229	0.002514	0.000986	0.000872	0.000219	0.001969	0.000328	0.941883
60	0.083600	0.001630	0.000859	0.000687	0.000172	0.001460	0.000257	0.911336
65	0.099596	0.001231	0.001136	0.000663	0.000194	0.001815	0.000285	0.895281
70	0.304410	0.000861	0.000638	0.000209	0.000209	0.000831	0.000209	0.692632
75	0.465881	0.000922	0.000302	0.000293	0.000000	0.000871	0.000000	0.531732
80	0.667600	0.002551	0.000535	0.000000	0.000000	0.001012	0.000000	0.333302
85	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

C.2 Expected Number of Survivors at Exact Age X in Each Region

Table C.2.1 Initial Region of Cohort: N.West

AGGREGATED	AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
702000.	0	100000.	100000.	0.	0.	0.	0.	0.	0.
680034.	5	97389.	94366.	664.	267.	96.	417.	69.	1510.
678383.	10	97141.	92102.	1232.	491.	171.	722.	127.	2296.
676959.	15	96953.	87014.	2767.	1093.	684.	1773.	295.	3329.
674603.	20	96596.	74430.	5036.	2061.	1286.	3788.	511.	9400.
671518.	25	96088.	68021.	5665.	2469.	1364.	4363.	591.	13615.
667907.	30	95538.	65077.	6141.	2732.	1430.	4783.	662.	14714.
663631.	35	94927.	63410.	6330.	2855.	1460.	4949.	694.	15229.
657723.	40	94069.	62251.	6381.	2922.	1462.	5042.	721.	15290.
649187.	45	92847.	61009.	6373.	2934.	1459.	5077.	735.	15179.
635601.	50	93729.	59384.	6272.	2898.	1039.	5049.	741.	14947.
614938.	55	67780.	57322.	6093.	2820.	1394.	4932.	728.	14491.
584080.	60	83470.	54394.	5835.	2681.	1325.	4736.	696.	13803.
535237.	65	76490.	49705.	5362.	2473.	1213.	4367.	641.	12729.
462745.	70	65594.	41976.	4582.	2099.	1060.	3793.	550.	11544.
349721.	75	51363.	33993.	3605.	1591.	819.	2847.	420.	6089.
217477.	80	34046.	23772.	2408.	988.	509.	1738.	262.	4370.
97996.	85	17273.	13040.	1220.	436.	225.	747.	117.	1486.

Table C.2.2   Initial Region of Cohort: North

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	100000.	0.	100000.	0.	0.	0.	0.	0.
5	97228.	406.	95344.	552.	36.	553.	102.	436.
10	96945.	802.	93180.	1186.	74.	720.	213.	770.
15	96744.	1858.	88459.	2649.	313.	1814.	498.	1152.
20	96451.	2976.	81379.	4325.	540.	3422.	765.	3043.
25	96045.	3307.	77300.	5159.	586.	3997.	869.	4827.
30	95572.	3554.	75272.	5580.	618.	4334.	941.	5274.
35	94963.	3698.	73885.	5786.	633.	4478.	975.	5507.
40	94113.	3779.	72655.	5885.	636.	4555.	998.	5606.
45	92891.	3811.	71356.	5892.	636.	4580.	1007.	5609.
50	90933.	3774.	69601.	5809.	628.	4555.	1006.	5561.
55	87976.	3693.	67179.	5649.	607.	4450.	985.	5412.
60	83765.	3538.	63900.	5359.	577.	4268.	942.	5181.
65	76760.	3252.	58426.	4935.	528.	3932.	867.	4820.
70	65256.	2759.	49292.	4181.	470.	3407.	744.	4402.
75	50862.	2245.	38843.	3167.	356.	2560.	568.	3123.
80	33298.	1580.	25882.	1968.	221.	1565.	354.	1726.
85	16332.	872.	13029.	872.	98.	675.	158.	627.

Table C.2.3   Initial Region of Cohort: N.East

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	100000.	0.	0.	100000.	0.	0.	0.	0.
5	96791.	118.	738.	95404.	19.	178.	149.	184.
10	96524.	221.	1508.	93826.	39.	338.	284.	308.
15	96346.	536.	3449.	90187.	176.	871.	662.	466.
20	95957.	1117.	6844.	82626.	378.	2124.	1210.	1657.
25	95490.	1283.	7834.	79417.	410.	2518.	1363.	2665.
30	94939.	1400.	8334.	77705.	430.	2727.	1448.	2895.
35	94331.	1474.	8583.	76477.	439.	2829.	1495.	3033.
40	93390.	1522.	8668.	75240.	443.	2885.	1527.	3105.
45	92179.	1545.	8673.	73953.	442.	2911.	1539.	3117.
50	90045.	1537.	8542.	71997.	437.	2901.	1533.	3098.
55	87118.	1512.	8315.	69500.	422.	2843.	1503.	3023.
60	82264.	1456.	7969.	65365.	401.	2732.	1438.	2903.
65	75384.	1341.	7339.	59772.	367.	2524.	1323.	2719.
70	63898.	1140.	6235.	50375.	326.	2191.	1132.	2498.
75	48469.	932.	4953.	38030.	247.	1649.	864.	1794.
80	30227.	659.	3327.	23541.	154.	1013.	538.	995.
85	13544.	363.	1693.	10377.	68.	438.	240.	365.

Table C.2.4   Initial Region of Cohort: S.West

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	100000.	0.	0.	0.	100000.	0.	0.	0.
5	97152.	284.	144.	107.	95257.	353.	54.	954.
10	96938.	537.	308.	228.	93473.	679.	113.	1601.
15	96805.	1803.	1052.	748.	87335.	2493.	384.	2991.
20	96466.	2987.	1858.	1330.	76516.	4746.	609.	8420.
25	95981.	3189.	2096.	1546.	71899.	5208.	667.	11377.
30	95407.	3434.	2292.	1692.	69594.	5552.	726.	12119.
35	94795.	3566.	2379.	1760.	68181.	5677.	753.	12479.
40	93893.	3688.	2432.	1817.	66720.	5781.	778.	12677.
45	92675.	3749.	2453.	1832.	65359.	5817.	793.	12672.
50	90809.	3728.	2427.	1814.	63726.	5785.	794.	12534.
55	87856.	3661.	2364.	1768.	61442.	5651.	781.	12188.
60	83565.	3525.	2276.	1688.	58270.	5421.	746.	11640.
65	76579.	3248.	2101.	1562.	53228.	4992.	685.	10764.
70	67922.	2764.	1796.	1325.	47299.	4329.	587.	9803.
75	51064.	2256.	1433.	1003.	35744.	3249.	448.	6931.
80	31405.	1585.	958.	624.	22200.	1986.	279.	3773.
85	13775.	872.	486.	276.	9843.	858.	124.	1317.

Table C.2.5 Initial Region of Cohort: South

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	100000.	0.	0.	0.	0.	100000.	0.	0.
5	97192.	267.	290.	195.	38.	95829.	206.	367.
10	96936.	470.	564.	371.	72.	94509.	372.	579.
15	96681.	1053.	1261.	818.	288.	91592.	824.	845.
20	96346.	1936.	2363.	1561.	557.	85989.	1376.	2563.
25	95926.	2257.	2850.	1989.	616.	82266.	1605.	4343.
30	95431.	2483.	3142.	2209.	653.	80411.	1746.	4786.
35	94819.	2624.	3283.	2330.	674.	79056.	1817.	5035.
40	94031.	2708.	3340.	2396.	677.	77889.	1863.	5157.
45	92811.	2747.	3357.	2413.	678.	76563.	1881.	5172.
50	90978.	2730.	3314.	2387.	669.	74867.	1877.	5134.
55	88019.	2681.	3230.	2325.	649.	72294.	1837.	5003.
60	83671.	2577.	3100.	2215.	617.	68608.	1755.	4799.
65	76673.	2375.	2856.	2043.	564.	62748.	1611.	4475.
70	66143.	2017.	2432.	1735.	502.	53965.	1382.	4109.
75	49526.	1645.	1932.	1315.	380.	40267.	1056.	2931.
80	30194.	1157.	1298.	820.	236.	24402.	657.	1624.
85	12992.	640.	660.	366.	105.	10348.	293.	579.

Table C.2.6 Initial Region of Cohort: S.East

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	100000.	0.	0.	0.	0.	0.	100000.	0.
5	96920.	150.	297.	507.	21.	1120.	94463.	361.
10	96746.	284.	615.	1009.	43.	2095.	92102.	599.
15	96483.	605.	1285.	2036.	167.	4609.	86936.	844.
20	96119.	1214.	2543.	3900.	357.	10045.	75418.	2643.
25	95672.	1432.	3035.	4764.	398.	11757.	69977.	4310.
30	95148.	1591.	3310.	5145.	422.	12552.	67452.	4677.
35	94539.	1697.	3462.	5384.	437.	12988.	65651.	4921.
40	93695.	1758.	3510.	5476.	442.	13128.	64370.	5010.
45	92479.	1790.	3522.	5477.	444.	13139.	63104.	5005.
50	90684.	1782.	3475.	5395.	437.	13012.	61629.	4954.
55	87738.	1751.	3383.	5246.	423.	12679.	59434.	4821.
60	83389.	1687.	3248.	4976.	402.	12126.	56335.	4615.
65	76416.	1557.	2992.	4582.	368.	11159.	51461.	4296.
70	65489.	1322.	2547.	3885.	328.	9661.	43817.	3929.
75	49557.	1083.	2022.	2942.	249.	7261.	33190.	2812.
80	30774.	761.	1359.	1830.	155.	4440.	20666.	1563.
85	13687.	419.	696.	816.	69.	1910.	9217.	560.

Table C.2.7 Initial Region of Cohort: Sofia

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	100000.	0.	0.	0.	0.	0.	0.	100000.
5	97361.	1283.	559.	345.	189.	659.	206.	94119.
10	97152.	2048.	984.	598.	320.	1077.	338.	91788.
15	96947.	2713.	1358.	818.	603.	1543.	457.	89457.
20	96669.	3315.	1825.	1101.	845.	2258.	557.	86767.
25	96316.	4089.	2326.	1486.	1003.	2960.	694.	83757.
30	95872.	5058.	2869.	1843.	1173.	3674.	856.	80399.
35	95257.	5490.	3077.	1994.	1245.	3933.	919.	78599.
40	94532.	6037.	3300.	2193.	1311.	4281.	1020.	76390.
45	93305.	6347.	3417.	2276.	1352.	4489.	1077.	74346.
50	91425.	6454.	3430.	2295.	1358.	4587.	1107.	72193.
55	88451.	6429.	3376.	2259.	1327.	4556.	1104.	69400.
60	83955.	6274.	3285.	2190.	1274.	4467.	1071.	65395.
65	76936.	5839.	3064.	2051.	1175.	4184.	996.	59628.
70	68463.	5803.	2656.	1770.	1055.	3710.	866.	53403.
75	48879.	4898.	2130.	1349.	809.	2815.	668.	37012.
80	27534.	2900.	1432.	846.	502.	1740.	416.	19698.
85	10395.	1602.	733.	374.	223.	760.	185.	6518.

C.3 Number of Years Lived in Each Region by the Initial Unit Cohort

Table C.3.1   Initial Region of Cohort: N.West

AGE AGGREGATED	AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
4.928691	0	4.934713	4.859146	0.016590	0.006673	0.002390	0.010434	0.001735	0.037746
4.851488	5	4.863244	4.661691	0.047402	0.018947	0.006668	0.028492	0.004903	0.095142
4.840568	10	4.852355	4.477886	0.099977	0.039587	0.021376	0.062373	0.010535	0.140621
4.827007	15	4.838723	4.036194	0.195059	0.078832	0.049246	0.136020	0.020148	0.320224
4.807577	20	4.817105	3.561382	0.267515	0.113243	0.066250	0.203781	0.027555	0.577379
4.783664	25	4.790660	3.327451	0.295134	0.132014	0.069841	0.228660	0.031317	0.708242
4.755499	30	4.761640	3.212183	0.311775	0.139678	0.072230	0.243317	0.033882	0.748576
4.719124	35	4.724906	3.141530	0.317790	0.144431	0.073052	0.249782	0.035357	0.762964
4.667538	40	4.672088	3.083487	0.318842	0.146395	0.073047	0.252984	0.036400	0.761734
4.585530	45	4.589381	3.011816	0.316109	0.145797	0.072436	0.253149	0.036894	0.751159
4.466211	50	4.462719	2.917651	0.309116	0.142946	0.078827	0.249520	0.036711	0.735949
4.282207	55	4.281268	2.792909	0.298192	0.137529	0.067991	0.241700	0.035608	0.707337
3.997563	60	3.999001	2.602498	0.279913	0.128859	0.063461	0.227558	0.033431	0.663289
3.564224	65	3.552102	2.292025	0.247845	0.114309	0.057335	0.208985	0.029779	0.606824
2.901665	70	2.923929	1.899227	0.203869	0.092260	0.047479	0.166008	0.024266	0.490820
2.025707	75	2.135210	1.444127	0.150264	0.064488	0.033184	0.114632	0.017049	0.311465
1.126689	80	1.282956	0.920299	0.090701	0.035618	0.018351	0.062123	0.009460	0.146404
0.629390	85	0.906933	0.734398	0.060739	0.018449	0.009626	0.030308	0.005020	0.048393

Table C.3.2 Initial Region of Cohort: North

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	4.930706	0.010140	4.883590	0.013809	0.000902	0.008816	0.002548	0.010901
5	4.854322	0.030202	4.713081	0.043459	0.002752	0.026815	0.007874	0.030141
10	4.842223	0.066520	4.540976	0.095877	0.009666	0.063359	0.017783	0.048041
15	4.829867	0.120860	4.245964	0.174362	0.021317	0.130919	0.031577	0.104868
20	4.812387	0.157085	3.966988	0.237098	0.028149	0.185480	0.040845	0.195741
25	4.790436	0.171534	3.814314	0.268464	0.030089	0.208278	0.045242	0.252515
30	4.763374	0.181297	3.728937	0.284153	0.031254	0.220311	0.047899	0.269521
35	4.726892	0.186923	3.663503	0.291781	0.031711	0.225818	0.049335	0.277821
40	4.675113	0.189746	3.600264	0.294418	0.031811	0.228372	0.050137	0.280365
45	4.595605	0.189616	3.523928	0.292511	0.031610	0.228373	0.050327	0.279239
50	4.472720	0.186676	3.419516	0.286452	0.030873	0.225114	0.049775	0.274314
55	4.293528	0.180779	3.276986	0.275218	0.029598	0.217940	0.048187	0.264819
60	4.013127	0.169759	3.058150	0.257368	0.027617	0.204990	0.045225	0.250018
65	3.550403	0.150295	2.692956	0.227918	0.024945	0.183479	0.040267	0.230544
70	2.902948	0.125113	2.203391	0.183712	0.020650	0.149171	0.032803	0.188109
75	2.103980	0.095629	1.618142	0.128384	0.014430	0.103126	0.023050	0.121218
80	1.240730	0.061310	0.972794	0.071011	0.007980	0.056007	0.012790	0.058838
85	0.793401	0.049125	0.648638	0.036868	0.004186	0.027375	0.006788	0.020423

Table C.3.3 Initial Region of Cohort: N.East

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	4.919781	0.002947	0.018457	4.885105	0.000475	0.004461	0.003725	0.004611
5	4.832892	0.008464	0.056164	4.730756	0.001459	0.012904	0.010835	0.012309
10	4.821773	0.018911	0.123933	4.600327	0.005385	0.030218	0.023659	0.019340
15	4.807575	0.041317	0.257327	4.320335	0.013853	0.074876	0.046797	0.053069
20	4.786159	0.059993	0.366946	4.051072	0.019713	0.116060	0.064326	0.100243
25	4.760721	0.067077	0.404191	3.928037	0.021037	0.131131	0.070283	0.138994
30	4.731740	0.071862	0.422909	3.854562	0.021731	0.138886	0.073582	0.148207
35	4.693019	0.074902	0.431271	3.792934	0.022065	0.142848	0.075551	0.153449
40	4.639226	0.076656	0.433520	3.729812	0.022129	0.144917	0.076645	0.155546
45	4.555590	0.077051	0.430354	3.648746	0.021970	0.145310	0.076792	0.155366
50	4.429063	0.076229	0.421429	3.537426	0.021473	0.143598	0.075901	0.153007
55	4.234552	0.074191	0.407115	3.371620	0.020575	0.139379	0.073531	0.148140
60	3.941203	0.069919	0.382697	3.128018	0.019192	0.131403	0.069234	0.140541
65	3.482037	0.062033	0.339350	2.753657	0.017328	0.117870	0.061392	0.130406
70	2.809173	0.051804	0.279709	2.210124	0.014340	0.096002	0.049897	0.107298
75	1.967400	0.039774	0.207003	1.539276	0.010017	0.066553	0.035031	0.069746
80	1.094256	0.025556	0.125501	0.847905	0.005540	0.036276	0.019437	0.034032
85	0.586260	0.020439	0.084284	0.438680	0.002906	0.017765	0.010315	0.011871

Table C.3.4 Initial Region of Cohort: S.West

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	4.923806	0.007099	0.003594	0.002683	4.881423	0.008827	0.001339	0.023841
5	4.852258	0.020513	0.011294	0.008386	4.718241	0.025804	0.004167	0.063853
10	4.843588	0.053486	0.034007	0.024395	4.520194	0.079293	0.012438	0.114776
15	4.831780	0.119745	0.072767	0.051930	4.096286	0.180964	0.024625	0.285263
20	4.811180	0.154407	0.098856	0.071883	3.710381	0.248851	0.031880	0.494922
25	4.784707	0.165572	0.109697	0.080932	3.537309	0.268991	0.034817	0.587387
30	4.755045	0.174994	0.116766	0.086276	3.444373	0.280711	0.036975	0.614950
35	4.717206	0.181353	0.120274	0.089403	3.372535	0.286444	0.038281	0.628917
40	4.664196	0.185926	0.122128	0.091202	3.301981	0.289944	0.039281	0.633734
45	4.587082	0.186916	0.121995	0.091150	3.227142	0.290050	0.039670	0.630159
50	4.466608	0.184714	0.119787	0.089570	3.129202	0.285910	0.039372	0.618052
55	4.285520	0.179659	0.116000	0.086404	2.992798	0.276800	0.038168	0.595691
60	4.003613	0.169333	0.109420	0.081238	2.787448	0.260312	0.035767	0.560096
65	3.612046	0.150289	0.097420	0.072170	2.513166	0.233031	0.031806	0.514165
70	2.974167	0.125501	0.080709	0.058210	2.076074	0.189467	0.025873	0.418333
75	2.061733	0.096026	0.059782	0.040676	1.448696	0.130882	0.018161	0.267601
80	1.129508	0.061406	0.036102	0.022482	0.801091	0.071101	0.010077	0.127249
85	0.588147	0.049091	0.024178	0.011648	0.420213	0.034805	0.005348	0.042865

Table C.3.5   Initial Region of Cohort: South

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	4.929801	0.006683	0.007250	0.004866	0.003962	4.895735	0.005140	0.009166
5	4.853200	0.018422	0.021359	0.014134	0.002758	4.758450	0.014428	0.023649
10	4.840419	0.038042	0.045645	0.029718	0.009004	4.652503	0.029880	0.035608
15	4.825664	0.074729	0.090612	0.059474	0.021139	4.439510	0.054991	0.085208
20	4.806787	0.104837	0.130315	0.088753	0.029339	4.206375	0.074517	0.172651
25	4.783917	0.118519	0.149778	0.104965	0.031740	4.066926	0.083766	0.228224
30	4.756250	0.127692	0.160607	0.113486	0.033171	3.986670	0.089081	0.245543
35	4.721258	0.133295	0.165580	0.118161	0.033762	3.923624	0.092018	0.254819
40	4.671062	0.136398	0.167433	0.120244	0.033877	3.861292	0.093616	0.258242
45	4.594728	0.136910	0.166772	0.119998	0.033688	3.785751	0.093947	0.257661
50	4.474924	0.135269	0.163595	0.117797	0.032966	3.679042	0.092838	0.253417
55	4.292253	0.131451	0.158252	0.113580	0.031654	3.522563	0.089606	0.245028
60	4.008594	0.123789	0.148912	0.106445	0.029529	3.283908	0.084163	0.231849
65	3.570382	0.109779	0.132194	0.094457	0.026665	2.917837	0.074836	0.214615
70	2.891723	0.091533	0.109088	0.076267	0.022068	2.355816	0.060950	0.176001
75	1.993014	0.070050	0.080739	0.053377	0.015418	1.616722	0.042826	0.113883
80	1.079645	0.044944	0.048931	0.029644	0.008526	0.868741	0.023763	0.055096
85	0.540101	0.036071	0.032838	0.015477	0.004472	0.419767	0.012611	0.018864

Table C.3.6   Initial Region of Cohort: S.East

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	4.922994	0.003753	0.007429	0.012686	0.000516	0.028012	4.861581	0.009016
5	4.841655	0.010842	0.022802	0.037905	0.001596	0.080388	4.664121	0.024001
10	4.830726	0.022216	0.047504	0.076107	0.005261	0.167608	4.475933	0.036096
15	4.815046	0.045475	0.095697	0.148383	0.013105	0.366368	4.058833	0.087185
20	4.794795	0.066143	0.139438	0.216605	0.018877	0.545057	3.634863	0.173811
25	4.770503	0.075569	0.158632	0.247724	0.020493	0.607716	3.435714	0.224654
30	4.742177	0.082194	0.169301	0.263216	0.021460	0.638503	3.327557	0.239946
35	4.705850	0.086374	0.174267	0.271506	0.021961	0.652921	3.250525	0.248274
40	4.654347	0.088704	0.175788	0.273817	0.022147	0.656676	3.186654	0.250362
45	4.579089	0.089297	0.174925	0.271789	0.022036	0.653752	3.118329	0.248961
50	4.460551	0.088327	0.171469	0.266025	0.021510	0.642252	3.026591	0.244375
55	4.278175	0.085945	0.165775	0.255561	0.020641	0.620114	2.894234	0.235906
60	3.995136	0.081096	0.155992	0.238958	0.019270	0.582138	2.694909	0.222772
65	3.547626	0.071974	0.138479	0.211669	0.017414	0.520500	2.381963	0.205628
70	2.876153	0.060111	0.114217	0.170665	0.014425	0.423027	1.925181	0.168526
75	2.008278	0.046096	0.084519	0.119300	0.010084	0.292522	1.346392	0.109365
80	1.111512	0.029511	0.051378	0.066160	0.005577	0.158760	0.747056	0.053070
85	0.587876	0.023618	0.034649	0.034503	0.002925	0.077482	0.396467	0.018233

Table C.3.7   Initial Region of Cohort: Sofia

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	4.934036	0.032073	0.013984	0.008637	0.004721	0.016484	0.005161	4.852977
5	4.862845	0.083254	0.038579	0.023575	0.012732	0.043414	0.013615	4.647666
10	4.852471	0.119020	0.056553	0.035381	0.023084	0.065438	0.019885	4.531110
15	4.840392	0.150708	0.079595	0.047966	0.036228	0.094964	0.025358	4.405593
20	4.824622	0.185113	0.103783	0.064675	0.046212	0.130455	0.031283	4.263102
25	4.804698	0.228679	0.129879	0.083225	0.054411	0.165844	0.038756	4.103903
30	4.778234	0.263692	0.146649	0.095935	0.060451	0.190168	0.044381	3.974958
35	4.744736	0.258183	0.159410	0.104690	0.063883	0.205360	0.048484	3.874726
40	4.695928	0.309623	0.167910	0.111728	0.066578	0.219270	0.052423	3.768396
45	4.618234	0.320031	0.171156	0.114285	0.067767	0.226917	0.054592	3.663486
50	4.496891	0.322072	0.170132	0.113849	0.067128	0.228591	0.055284	3.539835
55	4.310151	0.317576	0.166516	0.111205	0.065012	0.225571	0.054384	3.369886
60	4.022262	0.302814	0.158712	0.106015	0.061202	0.216270	0.051671	3.125578
65	3.634967	0.271044	0.142991	0.095527	0.055744	0.197357	0.046545	2.825760
70	2.933562	0.227522	0.119650	0.077973	0.046594	0.163128	0.038342	2.260353
75	1.910336	0.174931	0.089055	0.054879	0.032768	0.113881	0.027091	1.417731
80	0.948218	0.112528	0.054133	0.030506	0.018121	0.062493	0.015232	0.655405
85	0.403011	0.090199	0.036494	0.015802	0.009505	0.030813	0.007977	0.212220

C.4 Survivorship Proportions

Table C.4.1 Region: N.West

	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.985528	0.959258	0.006402	0.002518	0.000881	0.003712	0.000643	0.012114
5	0.997763	0.960274	0.011462	0.004342	0.003142	0.007181	0.001167	0.010194
10	0.997177	0.900542	0.022100	0.008662	0.006461	0.016943	0.002110	0.040359
15	0.995364	0.880401	0.019800	0.008303	0.004957	0.016022	0.001800	0.064081
20	0.994147	0.931447	0.008995	0.004022	0.001405	0.006702	0.000821	0.040756
25	0.993757	0.962584	0.005578	0.002363	0.000839	0.003941	0.000500	0.017952
30	0.992088	0.975860	0.002624	0.001231	0.000426	0.001915	0.000260	0.009773
35	0.988774	0.979602	0.001276	0.000628	0.000218	0.001058	0.000147	0.005845
40	0.981483	0.975429	0.000798	0.000382	0.000160	0.000766	0.000128	0.003820
45	0.971743	0.967786	0.000472	0.000238	0.000089	0.000532	0.000090	0.002536
50	0.959680	0.956490	0.000390	0.000180	0.000029	0.000419	0.000029	0.002143
55	0.934410	0.931241	0.000305	0.000171	0.000000	0.000306	0.000000	0.002385
60	0.883409	0.880310	0.000231	0.000115	0.000000	0.000234	0.000000	0.002518
65	0.830899	0.828315	0.000194	0.000074	0.000000	0.000190	0.000000	0.002126
70	0.762048	0.760120	0.000121	0.000036	0.000000	0.000118	0.000000	0.001653
75	0.638759	0.637079	0.000137	0.000000	0.000000	0.000131	0.000000	0.001413
80	0.799056	0.797874	0.000168	0.000000	0.000000	0.000137	0.000000	0.000878

Table C.4.2 Region: North

	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.984511	0.004160	0.965031	0.006142	0.000378	0.003705	0.001099	0.003996
5	0.997501	0.007855	0.963207	0.011300	0.001441	0.007735	0.002108	0.003856
10	0.997470	0.013058	0.933822	0.018261	0.002556	0.014791	0.003157	0.011825
15	0.996453	0.011131	0.932020	0.016707	0.001742	0.013056	0.002492	0.019304
20	0.995537	0.005370	0.959889	0.009144	0.000591	0.006192	0.001281	0.013151
25	0.994416	0.003310	0.976377	0.004999	0.000323	0.003398	0.000766	0.005243
30	0.992332	0.001969	0.981689	0.002958	0.000172	0.001857	0.000458	0.003229
35	0.989031	0.001182	0.982204	0.001811	0.000107	0.001206	0.000296	0.002226
40	0.983057	0.000820	0.978455	0.001108	0.000073	0.000894	0.000218	0.001491
45	0.973325	0.000582	0.970153	0.000724	0.000024	0.000653	0.000163	0.001026
50	0.960537	0.000396	0.958127	0.000561	0.000000	0.000491	0.000105	0.000856
55	0.935313	0.000235	0.933043	0.000525	0.000000	0.000366	0.000066	0.001078
60	0.882448	0.000148	0.880412	0.000382	0.000000	0.000268	0.000059	0.001179
65	0.819796	0.000124	0.818039	0.000244	0.000000	0.000238	0.000060	0.001091
70	0.736061	0.000147	0.734264	0.000171	0.000000	0.000239	0.000031	0.001209
75	0.603159	0.000169	0.601076	0.000157	0.000000	0.000265	0.000000	0.001493
80	0.668437	0.000165	0.666670	0.000124	-0.000000	0.000238	-0.000000	0.001240

Table C.4.3 Region: N.East

	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.982323	0.001124	0.007837	0.968371	0.000201	0.001724	0.001478	0.001588
5	0.997702	0.002145	0.014703	0.972252	0.000809	0.003557	0.002763	0.001472
10	0.997044	0.004791	0.030542	0.938463	0.001816	0.009258	0.005369	0.006804
15	0.995465	0.004436	0.028876	0.936232	0.001424	0.008866	0.004910	0.010721
20	0.994564	0.001760	0.012301	0.968365	0.000385	0.003804	0.002082	0.006225
25	0.993629	0.001028	0.006782	0.980467	0.000200	0.001796	0.001209	0.002348
30	0.991664	0.000650	0.003924	0.983465	0.000125	0.001072	0.000817	0.001611
35	0.988380	0.000401	0.002429	0.982990	0.000076	0.000746	0.000571	0.001168
40	0.981660	0.000285	0.001535	0.978039	0.000048	0.000570	0.000403	0.000780
45	0.971903	0.000220	0.001000	0.969342	0.000024	0.000440	0.000317	0.000560
50	0.955157	0.000181	0.000876	0.953005	0.000000	0.000361	0.000230	0.000503
55	0.929756	0.000113	0.000779	0.927746	0.000000	0.000288	0.000144	0.000687
60	0.882008	0.000065	0.000709	0.880113	0.000000	0.000228	0.000097	0.000796
65	0.804427	0.000080	0.000704	0.802552	0.000000	0.000190	0.000078	0.000823
70	0.698322	0.000112	0.000695	0.696425	0.000000	0.000210	0.000049	0.000832
75	0.552634	0.000079	0.000665	0.550832	0.000000	0.000234	0.000000	0.000824
80	0.518927	0.000000	0.000684	0.517313	0.000000	0.000186	0.000000	0.000745

Table C.4.4 Region: S.West

	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.984464	0.002746	0.001559	0.001158	0.966560	0.003489	0.000576	0.008376
5	0.998227	0.008061	0.004736	0.003338	0.957968	0.011324	0.001737	0.011063
10	0.997584	0.014321	0.008308	0.005950	0.905976	0.022646	0.002779	0.037605
15	0.995646	0.010521	0.005780	0.004485	0.905303	0.017304	0.001842	0.050410
20	0.994227	0.003671	0.002159	0.001743	0.952910	0.005886	0.000697	0.027160
25	0.993620	0.002362	0.001287	0.000977	0.973350	0.003399	0.000462	0.011784
30	0.991788	0.001501	0.000724	0.000610	0.978890	0.001977	0.000279	0.007806
35	0.988494	0.001025	0.000462	0.000413	0.978861	0.001474	0.000204	0.006055
40	0.983569	0.000687	0.000294	0.000246	0.977180	0.001079	0.000147	0.003936
45	0.973840	0.000467	0.000155	0.000155	0.969567	0.000774	0.000104	0.002617
50	0.959776	0.000379	0.000136	0.000135	0.956361	0.000566	0.000054	0.002144
55	0.934555	0.000232	0.000148	0.000148	0.931347	0.000379	0.000000	0.002302
60	0.904707	0.000135	0.000135	0.000066	0.901565	0.000271	0.000000	0.002534
65	0.829182	0.000171	0.000169	0.000000	0.826039	0.000236	0.000000	0.002566
70	0.700471	0.000110	0.000107	0.000000	0.697739	0.000224	0.000000	0.002290
75	0.555573	0.000001	0.000001	0.000000	0.553009	0.000346	-0.000000	0.002217
80	0.526845	-0.000000	0.000000	0.000000	0.524551	0.000395	0.000000	0.001900

Table C.4.5 Region: South

	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.984461	0.002424	0.002904	0.001900	0.000368	0.971923	0.001932	0.003009
5	0.997359	0.004187	0.005141	0.003251	0.001303	0.977575	0.003340	0.002564
10	0.996940	0.008406	0.009821	0.006400	0.002666	0.953493	0.005900	0.010254
15	0.996093	0.008179	0.009354	0.006655	0.002098	0.946004	0.005515	0.018298
20	0.995257	0.004164	0.005028	0.003788	0.000735	0.965642	0.002993	0.012905
25	0.994221	0.002570	0.002864	0.002063	0.000416	0.979360	0.001804	0.005145
30	0.992685	0.001584	0.001563	0.001266	0.000227	0.983584	0.001138	0.003324
35	0.989415	0.000943	0.000989	0.000767	0.000129	0.983624	0.000761	0.002282
40	0.983813	0.000640	0.000561	0.000452	0.000094	0.980074	0.000530	0.001462
45	0.974082	0.000466	0.000349	0.000281	0.000050	0.971552	0.000380	0.001005
50	0.959280	0.000350	0.000297	0.000243	0.000018	0.957251	0.000241	0.000881
55	0.934018	0.000228	0.000249	0.000227	0.000000	0.932059	0.000128	0.001127
60	0.890317	0.000135	0.000225	0.000157	0.000000	0.888354	0.000113	0.001334
65	0.809126	0.000118	0.000223	0.000105	0.000000	0.807236	0.000138	0.001305
70	0.687945	0.000123	0.000203	0.000080	0.000000	0.686156	0.000074	0.001309
75	0.538999	0.000133	0.000187	0.000123	0.000000	0.537229	0.000000	0.001328
80	0.484616	0.000196	0.000173	0.000147	0.000000	0.483079	0.000000	0.001021

Table C.4.6   Region: S.East

	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.983468	0.001446	0.003164	0.005242	0.000219	0.010911	0.959363	0.003123
5	0.997750	0.002358	0.005218	0.008281	0.000745	0.018976	0.959551	0.002621
10	0.996726	0.005065	0.010427	0.016689	0.001648	0.045673	0.906442	0.010781
15	0.995746	0.004991	0.010123	0.017960	0.001331	0.047861	0.894746	0.018735
20	0.994850	0.002271	0.004859	0.009243	0.000397	0.021382	0.944477	0.012222
25	0.994010	0.001380	0.002762	0.005064	0.000205	0.011810	0.967965	0.004825
30	0.992279	0.000842	0.001533	0.003205	0.000132	0.006935	0.976451	0.003131
35	0.988989	0.000437	0.000787	0.001702	0.000079	0.003956	0.980100	0.001928
40	0.984144	0.000296	0.000515	0.000989	0.000037	0.002825	0.978273	0.001208
45	0.974440	0.000196	0.000310	0.000656	0.000000	0.002014	0.970415	0.000849
50	0.959392	0.000155	0.000266	0.000527	0.000000	0.001536	0.956158	0.000750
55	0.934126	0.000125	0.000248	0.000496	0.000000	0.001239	0.931063	0.000956
60	0.886641	0.000056	0.000224	0.000389	0.000020	0.001067	0.883817	0.001088
65	0.810983	0.000076	0.000198	0.000255	0.000000	0.001051	0.808172	0.001231
70	0.702286	0.000088	0.000187	0.000182	-0.000000	0.001065	0.699326	0.001438
75	0.557899	0.000001	0.000294	0.000281	-0.000000	0.001080	0.554858	0.001385
80	0.533398	-0.000000	0.000390	0.000331	-0.000000	0.000953	0.530705	0.001019

Table C.4.7   Region: Sofia

	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.985588	0.010791	0.005098	0.003087	0.001675	0.005591	0.001768	0.957578
5	0.997877	0.008261	0.004247	0.002446	0.002256	0.004651	0.001379	0.974638
10	0.997535	0.009183	0.004450	0.002598	0.003113	0.006164	0.001381	0.970646
15	0.996837	0.011360	0.005419	0.003617	0.002780	0.007922	0.001657	0.964082
20	0.996017	0.012855	0.006310	0.004231	0.002327	0.008638	0.001963	0.959693
25	0.994576	0.010343	0.004714	0.003059	0.001745	0.006241	0.001518	0.966956
30	0.993146	0.007565	0.003020	0.002304	0.001135	0.004277	0.001182	0.973663
35	0.989892	0.006919	0.002700	0.002086	0.001014	0.004235	0.001183	0.971755
40	0.983656	0.004682	0.001665	0.001205	0.000695	0.003011	0.000812	0.971586
45	0.973939	0.003297	0.001014	0.000753	0.000376	0.002084	0.000579	0.965838
50	0.958280	0.002632	0.000901	0.000695	0.000226	0.001799	0.000399	0.951628
55	0.933008	0.002062	0.000919	0.000776	0.000194	0.001784	0.000291	0.927067
60	0.908685	0.001409	0.000974	0.000662	0.000181	0.001607	0.000266	0.903585
65	0.803546	0.001044	0.000883	0.000432	0.000194	0.001291	0.000242	0.799461
70	0.629391	0.000855	0.000475	0.000234	0.000114	0.000808	0.000114	0.626791
75	0.463936	0.000740	0.000363	0.000170	0.000000	0.000856	0.000000	0.461807
80	0.325340	0.000602	0.000532	-0.000000	-0.000000	0.000867	0.000000	0.323339

C.5 Expectations of Life

Table C.5.1   Initial Region of Cohort: N.West

AGE AGGREGATED	AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
70.763275	0	71.389740	52.975899	3.826831	1.690056	0.074611	2.967825	0.430050	8.616268
67.767197	5	68.237000	49.406990	3.912411	1.736737	0.895815	3.036693	0.439800	8.808554
62.926006	10	63.404373	44.733902	3.873576	1.721655	0.891232	3.015094	0.435873	8.733040
58.053108	15	58.522617	40.202137	3.777978	1.684167	0.870914	2.956615	0.425853	8.604954
53.247150	20	53.729687	36.172302	3.590009	1.608781	0.823152	2.823624	0.406569	8.305251
48.480335	25	49.000362	32.657055	3.330572	1.499428	0.758554	2.626465	0.380040	7.748247
43.729034	30	44.268120	29.362249	3.040833	1.371975	0.689819	2.402250	0.349449	7.051545
38.994675	35	39.536827	26.167313	2.731960	1.233660	0.618167	2.161385	0.316004	6.308332
34.322620	40	34.874901	23.066563	2.419070	1.091383	0.546151	1.915584	0.281302	5.554845
29.741062	45	30.301008	20.049107	2.107503	0.948074	0.474665	1.660322	0.245801	4.807538
25.323574	50	25.950077	17.197601	1.808295	0.889512	0.405887	1.420254	0.210875	4.089655
21.090504	55	21.737680	14.451400	1.516802	0.673855	0.338832	1.191969	0.176137	3.388613
17.072353	60	17.730986	11.851581	1.237959	0.543885	0.274872	0.963950	0.142571	2.716166
13.402145	65	14.121047	9.530808	0.984994	0.425058	0.216991	0.754423	0.111877	2.096896
10.118389	70	11.051278	7.619622	0.770755	0.321392	0.165624	0.568753	0.085060	1.520071
7.561866	75	8.420700	6.033219	0.587399	0.230820	0.119077	0.403138	0.061385	0.985662
5.623477	80	6.432201	4.860221	0.444812	0.158806	0.082175	0.271491	0.042531	0.572164
4.433814	85	5.250724	4.251820	0.351649	0.106611	0.055731	0.175467	0.029065	0.280172

Table C.5.2 Initial Region of Cohort: North

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	71.191765	2.322608	58.572121	3.462863	0.379540	2.693743	0.602452	3.158437
5	68.150032	2.378392	55.219093	3.547380	0.389433	2.761468	0.617006	3.237266
10	63.342026	2.354194	50.518959	3.512926	0.387733	2.741885	0.610688	3.215642
15	58.468109	2.290314	45.929855	3.421102	0.378545	2.682075	0.593573	3.172649
20	53.638548	2.171981	41.667496	3.250740	0.357596	2.554505	0.562641	3.073582
25	48.854462	2.017598	37.713078	3.017605	0.329798	2.372173	0.522490	2.881716
30	44.083656	1.848094	33.908527	2.751625	0.299946	2.165976	0.477735	2.631752
35	39.350739	1.669049	30.199570	2.470071	0.268960	1.947890	0.430363	2.364836
40	34.683300	1.485496	26.579449	2.182331	0.237692	1.725525	0.381827	2.090979
45	30.106623	1.300769	23.053282	1.894087	0.206574	1.502373	0.332875	1.816663
50	25.701193	1.120261	19.674480	1.613202	0.176261	1.283585	0.284699	1.548706
55	21.481020	0.945725	16.448891	1.341821	0.147093	1.070847	0.237690	1.288954
60	17.435154	0.777448	13.363632	1.080712	0.119152	0.864497	0.192111	1.037602
65	13.798175	0.627244	10.599184	0.844051	0.094048	0.676340	0.150726	0.806582
70	10.789862	0.507503	8.340910	0.643578	0.072401	0.514400	0.115591	0.595479
75	8.136010	0.405147	6.369381	0.464521	0.052290	0.366695	0.083811	0.394165
80	6.108961	0.331662	4.869531	0.323986	0.036537	0.250414	0.058795	0.238037
85	4.858049	0.300794	3.971652	0.225745	0.025630	0.167617	0.041561	0.125049

Table C.5.3 Initial Region of Cohort: N.East

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	70.092430	0.919130	5.192163	59.368839	0.261159	1.690458	0.916733	1.743944
5	67.333206	0.946555	5.345221	56.289940	0.269325	1.741890	0.943275	1.796994
10	62.512424	0.940403	5.301811	51.544449	0.268558	1.733337	0.934657	1.789209
15	57.623264	0.922512	5.182970	46.864872	0.263465	1.705174	0.911828	1.772440
20	52.847271	0.883203	4.935863	42.552933	0.250098	1.634072	0.866764	1.724338
25	48.093319	0.824687	4.575707	38.518482	0.230676	1.520516	0.823635	1.619619
30	43.357857	0.758820	4.176517	34.604534	0.209888	1.391217	0.734268	1.482612
35	38.621387	0.687533	3.755129	30.741503	0.188205	1.252957	0.660999	1.335061
40	33.985119	0.614253	3.331146	26.989676	0.166473	1.112616	0.586757	1.184196
45	29.398865	0.539164	2.904618	23.298071	0.144654	0.970024	0.511320	1.031014
50	25.036383	0.466373	2.495525	19.798100	0.123684	0.831638	0.438157	0.882906
55	20.793556	0.394541	2.095623	16.402761	0.103191	0.694747	0.365754	0.736938
60	16.872847	0.327631	1.724375	13.271979	0.084268	0.566307	0.297949	0.600339
65	13.184688	0.264785	1.374097	10.333356	0.066501	0.443684	0.233567	0.468699
70	10.105369	0.215301	1.090021	7.881397	0.051336	0.338973	0.179475	0.348865
75	7.526240	0.176955	0.859902	5.830289	0.038092	0.248805	0.133658	0.238540
80	5.559711	0.152165	0.694039	4.256586	0.027941	0.178786	0.098431	0.151763
85	4.328699	0.150910	0.622316	3.239030	0.021456	0.131170	0.076164	0.087652

Table C.5.4 Initial Region of Cohort: S.West

AGE ***	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	70.897194	2.271027	1.454776	1.068638	54.978462	3.442187	0.468245	7.221853
5	67.902077	2.330290	1.493719	1.088966	51.565510	3.534000	0.480593	7.409004
10	63.046570	2.314277	1.485368	1.082721	46.812157	3.515189	0.477355	7.359502
15	58.129505	2.257032	1.452274	1.059004	42.206921	3.438095	0.465161	7.251020
20	53.325405	2.140848	1.381955	1.008901	38.189192	3.262608	0.441065	6.980840
25	48.581879	1.990779	1.285933	0.939099	34.435764	3.019801	0.410076	6.500423
30	43.859425	1.829225	1.178700	0.859927	30.935564	2.756047	0.376052	5.923908
35	39.126366	1.656430	1.063130	0.774403	27.501732	2.477711	0.339474	5.313426
40	34.478107	1.479189	0.945244	0.686683	24.173962	2.196432	0.301964	4.694633
45	29.898626	1.298019	0.825892	0.597303	20.928869	1.912453	0.263548	4.072542
50	25.461592	1.118854	0.708519	0.509200	17.805120	1.632341	0.225278	3.462281
55	21.233406	0.946215	0.595989	0.424365	14.841849	1.361778	0.188035	2.875173
60	17.195219	0.779804	0.487775	0.342756	12.022470	1.100456	0.152014	2.309945
65	13.535763	0.629819	0.389386	0.267939	9.479252	0.860918	0.119176	1.789272
70	9.945963	0.488970	0.295674	0.195894	6.989413	0.627746	0.087565	1.260702
75	7.401244	0.404436	0.235117	0.146494	5.228535	0.463706	0.065771	0.857185
80	5.469353	0.351842	0.191941	0.106677	3.888876	0.337226	0.049115	0.541675
85	4.269602	0.356369	0.175515	0.084561	3.050581	0.252662	0.038822	0.311173

Table C.5.5   Initial Region of Cohort: South

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	70.633728	1.638391	1.979899	1.380763	0.400738	61.241241	1.113176	2.879525
5	67.602165	1.678849	2.029641	1.415647	0.411326	57.973370	1.140048	2.953286
10	62.774181	1.664281	2.012969	1.404807	0.409568	53.217686	1.128176	2.936692
15	57.933208	1.629304	1.971069	1.377776	0.401335	48.545868	1.100247	2.907610
20	53.126026	1.557488	1.883876	1.320838	0.380798	44.106831	1.046998	2.829284
25	48.347652	1.454936	1.756273	1.234098	0.351871	39.914886	0.973899	2.661685
30	43.585400	1.338288	1.608432	1.130507	0.320437	35.860226	0.891173	2.436337
35	38.850487	1.212254	1.449427	1.018115	0.287521	31.887100	0.802974	2.193096
40	34.155079	1.080656	1.285482	0.900985	0.254025	27.981607	0.711844	1.940479
45	29.571157	0.947940	1.121977	0.783270	0.220863	24.189034	0.620333	1.687741
50	25.116705	0.816556	0.961276	0.667156	0.188285	20.515320	0.529571	1.438540
55	20.876966	0.690323	0.807726	0.555752	0.157161	17.025120	0.441897	1.198985
60	16.831938	0.569091	0.660564	0.448982	0.127497	13.699831	0.357529	0.968445
65	13.140093	0.459584	0.526640	0.351133	0.100621	10.667269	0.280394	0.754452
70	9.834037	0.366779	0.410621	0.264225	0.076327	7.954103	0.211891	0.550091
75	7.294622	0.305018	0.328123	0.198881	0.057376	5.866030	0.159915	0.379280
80	5.364424	0.268312	0.270808	0.149438	0.043050	4.267402	0.120465	0.244949
85	4.157311	0.277649	0.252761	0.119133	0.034426	3.231071	0.097070	0.145202

Table C.5.6   Initial Region of Cohort: S.East

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	70.522484	1.057244	2.082283	3.182578	0.259300	7.713801	53.427101	2.800181
5	67.684341	1.086972	2.140795	3.270637	0.267008	7.930052	50.109001	2.879872
10	62.801109	1.077713	2.121061	3.237315	0.265037	7.861167	45.377792	2.860223
15	57.966026	1.057635	2.077626	3.167287	0.261111	7.708948	40.862785	2.830633
20	53.175663	1.014321	1.985918	3.024895	0.248464	7.356924	36.794525	2.750626
25	48.412319	0.949923	1.849447	2.812608	0.229893	6.821569	33.167080	2.581799
30	43.665607	0.875741	1.692928	2.567767	0.209623	6.220493	29.739124	2.359931
35	38.930401	0.794433	1.524738	2.305865	0.188272	5.585123	26.410664	2.121306
40	34.258942	0.709410	1.352472	2.036882	0.166531	4.938629	23.179562	1.875453
45	29.676228	0.622814	1.180158	1.767561	0.144771	4.293440	20.038109	1.629374
50	25.214228	0.536673	1.010627	1.502843	0.123337	3.657525	16.996128	1.387094
55	20.976980	0.454023	0.849131	1.250105	0.102962	3.048334	14.117282	1.155144
60	16.940552	0.374636	0.694616	1.008830	0.083579	2.463666	11.382738	0.932487
65	13.258224	0.302696	0.553864	0.788178	0.065988	1.926672	8.894775	0.726052
70	10.053361	0.243302	0.434828	0.596481	0.050407	1.453366	6.741764	0.533212
75	7.481561	0.200221	0.344139	0.443855	0.037504	1.066973	5.024307	0.364562
80	5.522200	0.172442	0.279548	0.327107	0.027627	0.767672	3.715904	0.231700
85	4.295223	0.172558	0.253160	0.252088	0.021373	0.566108	2.896723	0.133214

Table C.5.7   Initial Region of Cohort: Sofia

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	70.615601	3.799070	2.009181	1.295852	0.792122	2.596419	0.630264	59.492687
5	67.461578	3.869086	2.049269	1.322108	0.808740	2.649853	0.642044	56.120487
10	62.601379	3.791708	2.013970	1.308679	0.797375	2.610870	0.629411	51.457367
15	57.729000	3.676991	1.957849	1.266946	0.775257	2.548915	0.610236	46.892803
20	52.887444	3.531639	1.881128	1.220960	0.740026	2.457991	0.585755	42.469940
25	48.072353	3.352406	1.780279	1.158294	0.694762	2.331566	0.555426	38.199619
30	43.283165	3.129389	1.653043	1.076844	0.641222	2.169367	0.517570	34.095730
35	38.546497	2.872773	1.507666	0.983085	0.581901	1.983737	0.474321	30.143011
40	33.822903	2.589951	1.350597	0.879878	0.518785	1.781711	0.426670	26.275311
45	29.234966	2.292183	1.188405	0.771708	0.454254	1.570146	0.376099	22.582170
50	24.784821	1.989276	1.025637	0.662575	0.389474	1.354238	0.324121	19.039499
55	20.533943	1.692023	0.867769	0.556153	0.326674	1.141324	0.272515	15.677505
60	16.499767	1.404371	0.715903	0.453460	0.266732	0.933766	0.222332	12.503203
65	12.777045	1.138905	0.574927	0.357035	0.211517	0.737854	0.175455	9.581351
70	9.048856	0.883950	0.437818	0.261688	0.156278	0.540898	0.129183	6.639647
75	6.672681	0.772632	0.367604	0.207013	0.123558	0.423875	0.102498	4.675501
80	4.907485	0.736276	0.329148	0.168184	0.100335	0.338876	0.083566	3.151099
85	3.877090	0.867740	0.351087	0.152020	0.091445	0.296430	0.076745	2.041624

APPENDIX D

THE DISCRETE MODEL OF MULTIREGIONAL DEMOGRAPHIC GROWTH

D.1 Multiregional Projection Matrix

Table D.1.1 Region: N.West

AGE	FIRST ROW						
	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	0.000414	0.000010	0.000006	0.000002	0.000008	0.000002	0.000010
10	0.084379	0.002158	0.000988	0.000599	0.001683	0.000258	0.003268
15	0.316411	0.005631	0.002619	0.001383	0.004793	0.000598	0.014120
20	0.370210	0.002380	0.001142	0.000381	0.001771	0.000266	0.008269
25	0.168587	0.000840	0.000367	0.000128	0.000561	0.000088	0.002429
30	0.054297	0.000215	0.000094	0.000034	0.000148	0.000024	0.000637
35	0.015258	0.000055	0.000023	0.000008	0.000037	0.000006	0.000141
40	0.003076	0.000011	0.000004	0.000002	0.000007	0.000001	0.000025
45	0.000243	0.000001	0.000000	0.000000	0.000001	0.000000	0.000002
50	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
55	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
60	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
75	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
80	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

AGE	SURVIVORSHIP PROPORTIONS						
	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.959258	0.006402	0.002518	0.003881	0.003712	0.000643	0.012114
5	0.960274	0.011462	0.004342	0.003142	0.007181	0.001167	0.010194
10	0.900542	0.022100	0.008662	0.006461	0.016943	0.002110	0.040359
15	0.880401	0.019800	0.008303	0.004957	0.016022	0.001800	0.064081
20	0.931447	0.008995	0.004022	0.001405	0.006702	0.000821	0.040756
25	0.962584	0.005578	0.002363	0.000839	0.003941	0.000500	0.017952
30	0.975860	0.002624	0.001231	0.000426	0.001915	0.000260	0.009773
35	0.979602	0.001276	0.000628	0.000218	0.001058	0.000147	0.005845
40	0.975429	0.000798	0.000382	0.000160	0.000766	0.000128	0.003820
45	0.967786	0.000472	0.000238	0.000089	0.000532	0.000090	0.002536
50	0.956490	0.000390	0.000180	0.000029	0.000419	0.000029	0.002143
55	0.931241	0.000305	0.000171	0.000000	0.000306	0.000000	0.002385
60	0.880310	0.000231	0.000115	0.000000	0.000234	0.000000	0.002518
65	0.828315	0.000194	0.000074	0.000000	0.000190	0.000000	0.002126
70	0.760120	0.000121	0.000036	0.000000	0.000118	0.000000	0.001653
75	0.637079	0.000137	0.000000	0.000000	0.000131	0.000000	0.001413
80	0.797874	0.000168	0.000000	0.000000	0.000137	0.000000	0.000878

Table D.1.2 Region: North

AGE	FIRST ROW						
---	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	0.000005	0.000730	0.000017	0.000001	0.000009	0.000003	0.000004
10	0.001418	0.078907	0.002037	0.000235	0.001445	0.000376	0.000949
15	0.003438	0.295647	0.005168	0.000487	0.003868	0.000808	0.004200
20	0.001416	0.344378	0.002388	0.000147	0.001513	0.000381	0.002516
25	0.000490	0.167475	0.000754	0.000048	0.000472	0.000129	0.000702
30	0.000144	0.057479	0.000208	0.000014	0.000133	0.000038	0.000200
35	0.000031	0.013174	0.000044	0.000003	0.000028	0.000008	0.000038
40	0.000005	0.002404	0.000007	0.000000	0.000005	0.000001	0.000006
45	0.000000	0.000168	0.000000	0.000000	0.000000	0.000000	0.000000
50	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
55	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
60	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
75	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
80	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

AGE	SURVIVORSHIP PROPORTIONS						
---	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.004160	0.965031	0.006142	0.000378	0.003705	0.001099	0.003996
5	0.007855	0.963207	0.011300	0.001441	0.007735	0.002108	0.003856
10	0.013058	0.933822	0.018261	0.002556	0.014791	0.003157	0.011825
15	0.011131	0.932820	0.016707	0.001742	0.013056	0.002492	0.019304
20	0.005370	0.959809	0.009144	0.000591	0.006192	0.001281	0.013151
25	0.003310	0.976377	0.004999	0.000323	0.003398	0.000766	0.005243
30	0.001969	0.981689	0.002958	0.000172	0.001857	0.000458	0.003229
35	0.001182	0.982204	0.001811	0.000107	0.001206	0.000296	0.002226
40	0.000820	0.978455	0.001108	0.000073	0.000894	0.000218	0.001491
45	0.000582	0.970153	0.000724	0.000024	0.000653	0.000163	0.001026
50	0.000396	0.958127	0.000561	0.000000	0.000491	0.000105	0.000856
55	0.000235	0.933043	0.000525	0.000000	0.000366	0.000066	0.001078
60	0.000148	0.880412	0.000382	0.000000	0.000268	0.000059	0.001179
65	0.000124	0.818039	0.000244	0.000000	0.000238	0.000060	0.001091
70	0.000147	0.734264	0.000171	0.000000	0.000239	0.000031	0.001209
75	0.000169	0.601076	0.000157	0.000000	0.000265	0.000000	0.001493
80	0.000165	0.666670	0.000124	-0.000000	0.000238	-0.000000	0.001240

Table D.1.3 Region: N.East

AGE	FIRST ROW N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	0.000002	0.000016	0.001241	0.000001	0.000005	0.000005	0.000002
10	0.000524	0.002916	0.094212	0.000166	0.000906	0.000637	0.000538
15	0.001350	0.007869	0.340971	0.000386	0.002586	0.001533	0.002300
20	0.000481	0.003044	0.407606	0.000094	0.000871	0.000634	0.001214
25	0.000171	0.001107	0.208906	0.000031	0.000281	0.000224	0.000345
30	0.000051	0.000311	0.070877	0.000009	0.000082	0.000068	0.000103
35	0.000013	0.000077	0.018840	0.000002	0.000020	0.000017	0.000022
40	0.000003	0.000016	0.004077	0.000000	0.000004	0.000003	0.000004
45	0.000000	0.000001	0.000385	0.000000	0.000000	0.000000	0.000000
50	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
55	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
60	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
75	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
80	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

AGE	SURVIVORSHIP PROPORTIONS N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.001124	0.007837	0.968371	0.000201	0.001724	0.001478	0.001588
5	0.002145	0.014703	0.972252	0.000809	0.003557	0.002763	0.001472
10	0.004791	0.030542	0.938463	0.001816	0.009258	0.005369	0.006804
15	0.004436	0.028876	0.936232	0.001424	0.008866	0.004910	0.010721
20	0.001760	0.012301	0.968365	0.000385	0.003446	0.002082	0.006225
25	0.001028	0.006782	0.980467	0.000200	0.001796	0.001289	0.002348
30	0.000650	0.003924	0.983465	0.000125	0.001072	0.000817	0.001611
35	0.000401	0.002429	0.982990	0.000076	0.000746	0.000571	0.001168
40	0.000285	0.001535	0.978039	0.000048	0.000570	0.000403	0.000780
45	0.000220	0.001000	0.969342	0.000024	0.000440	0.000317	0.000560
50	0.000181	0.000876	0.953005	0.000000	0.000361	0.000230	0.000503
55	0.000113	0.000779	0.927746	0.000000	0.000288	0.000144	0.000687
60	0.000065	0.000709	0.880113	0.000000	0.000228	0.000097	0.000796
65	0.000080	0.000704	0.802552	0.000000	0.000190	0.000078	0.000823
70	0.000112	0.000695	0.696425	0.000000	0.000210	0.000049	0.000832
75	0.000079	0.000665	0.550832	0.000000	0.000234	0.000000	0.000824
80	0.000000	0.000684	0.517313	0.000000	0.000186	0.000000	0.000745

Table D.1.4   Region: S.West

| AGE | FIRST ROW | | | | | | |
	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	0.000004	0.000004	0.000005	0.000489	0.000013	0.000002	0.000009
10	0.001501	0.000770	0.000643	0.078043	0.002137	0.000318	0.002808
15	0.003157	0.001587	0.001357	0.307262	0.004983	0.000576	0.010688
20	0.001042	0.000554	0.000484	0.375773	0.001532	0.000216	0.005432
25	0.000378	0.000202	0.000160	0.188121	0.000511	0.000077	0.001654
30	0.000121	0.000060	0.000048	0.069437	0.000157	0.000024	0.000511
35	0.000035	0.000017	0.000014	0.021929	0.000045	0.000007	0.000131
40	0.000007	0.000004	0.000003	0.004741	0.000009	0.000001	0.000024
45	0.000001	0.000000	0.000000	0.000405	0.000001	0.000000	0.000002
50	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
55	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
60	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
75	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
80	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

| AGE | SURVIVORSHIP PROPORTIONS | | | | | | |
	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.002746	0.001559	0.001158	0.966560	0.003489	0.000576	0.008376
5	0.008061	0.004736	0.003338	0.957968	0.011324	0.001737	0.011063
10	0.014321	0.008308	0.005950	0.905976	0.022646	0.002779	0.037605
15	0.010521	0.005780	0.004485	0.905303	0.017304	0.001842	0.050410
20	0.003671	0.002159	0.001743	0.952910	0.005886	0.000697	0.027160
25	0.002362	0.001287	0.000977	0.973350	0.003399	0.000462	0.011784
30	0.001501	0.000724	0.000618	0.978898	0.001977	0.000279	0.007806
35	0.001025	0.000462	0.000413	0.978861	0.001474	0.000204	0.006055
40	0.000687	0.000294	0.000246	0.977180	0.001079	0.000147	0.003936
45	0.000467	0.000155	0.000155	0.969567	0.000774	0.000104	0.002617
50	0.000379	0.000136	0.000135	0.956361	0.000566	0.000054	0.002144
55	0.000232	0.000148	0.000148	0.931347	0.000379	0.000000	0.002302
60	0.000135	0.000135	0.000066	0.901565	0.000271	0.000000	0.002534
65	0.000171	0.000169	0.000000	0.826039	0.000236	0.000000	0.002566
70	0.000110	0.000107	0.000000	0.697739	0.000224	0.000000	0.002290
75	0.000001	0.000001	0.000000	0.553009	0.000346	-0.000000	0.002217
80	-0.000000	0.000000	0.000000	0.524551	0.000395	0.000000	0.001900

Table D.1.5   Region: South

AGE	FIRST ROW N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
2	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	0.003003	0.000005	0.000005	0.000001	0.001026	0.000006	0.000004
10	0.000925	0.000955	0.000724	0.000246	0.084469	0.000708	0.000826
15	0.002528	0.002637	0.002064	0.000581	0.327181	0.001771	0.003962
20	0.001080	0.001201	0.000979	0.000180	0.390900	0.000874	0.002445
25	0.000371	0.000418	0.000306	0.000060	0.190694	0.000297	0.020679
30	0.000109	0.000114	0.000084	0.000017	0.064815	0.000087	0.000195
35	0.000029	0.000031	0.000022	0.000004	0.019545	0.000023	0.000046
40	0.000006	0.000006	0.000004	0.000001	0.004065	0.000004	0.000008
45	0.000000	0.000000	0.000000	0.000000	0.000256	0.000000	0.000000
50	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
55	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
60	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
75	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
80	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

AGE	SURVIVORSHIP PROPORTIONS N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.002424	0.002904	0.001900	0.000368	0.971923	0.001932	0.003009
5	0.004187	0.005141	0.003251	0.001303	0.977575	0.003340	0.002564
10	0.008406	0.009821	0.006400	0.002666	0.953493	0.005900	0.010254
15	0.008179	0.009354	0.006655	0.002090	0.946004	0.005515	0.018298
20	0.004164	0.005028	0.003788	0.000735	0.965642	0.002993	0.012905
25	0.002570	0.002864	0.002063	0.000416	0.979360	0.001804	0.005145
30	0.001584	0.001563	0.001266	0.000227	0.983584	0.001138	0.003324
35	0.000993	0.000909	0.000767	0.000129	0.983624	0.000761	0.002282
40	0.000640	0.000561	0.000452	0.000094	0.980074	0.000530	0.001462
45	0.000466	0.000349	0.000281	0.000050	0.971552	0.000380	0.001005
50	0.000350	0.000297	0.000243	0.000018	0.957251	0.000241	0.000881
55	0.000228	0.000249	0.000227	0.000000	0.932059	0.000128	0.001127
60	0.000135	0.000225	0.000157	0.000000	0.888354	0.000113	0.001334
65	0.000118	0.000223	0.000105	0.000000	0.807236	0.000138	0.001305
70	0.000123	0.000203	0.000080	0.000000	0.686156	0.000074	0.001309
75	0.000133	0.000187	0.000123	0.000000	0.537229	0.000000	0.001328
80	0.000196	0.000173	0.000147	0.000000	0.483079	0.000000	0.001021

Table D.1.6 Region: S.East

AGE	FIRST ROW N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	0.000002	0.000006	0.000014	0.000001	0.000027	0.001291	0.000004
10	0.000571	0.001035	0.001912	0.000153	0.004556	0.096208	0.000885
15	0.001558	0.002864	0.005542	0.000369	0.014080	0.335171	0.004067
20	0.000619	0.001224	0.002484	0.000100	0.005376	0.403046	0.002374
25	0.000220	0.000446	0.000821	0.000033	0.001767	0.205423	0.000684
30	0.000065	0.000124	0.000231	0.000010	0.000511	0.069550	0.000199
35	0.000017	0.000033	0.000060	0.000003	0.000134	0.020558	0.000046
40	0.000003	0.000006	0.000011	0.000000	0.000024	0.004057	0.000008
45	0.000000	0.000000	0.000001	0.000000	0.000001	0.000219	0.000000
50	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
55	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
60	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
75	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
80	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

AGE	SURVIVORSHIP PROPORTIONS N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.001446	0.003164	0.005242	0.000219	0.010911	0.959363	0.003123
5	0.002358	0.005218	0.008281	0.000745	0.018976	0.959551	0.002621
10	0.005065	0.010427	0.016689	0.001648	0.045673	0.906442	0.010781
15	0.004991	0.010123	0.017960	0.001331	0.047861	0.894746	0.010735
20	0.002271	0.004859	0.009243	0.000397	0.021382	0.944477	0.012222
25	0.001380	0.002762	0.005064	0.000205	0.011810	0.967965	0.004825
30	0.000842	0.001533	0.003205	0.000132	0.006935	0.976451	0.003181
35	0.000437	0.000787	0.001702	0.000079	0.003956	0.980100	0.001928
40	0.000296	0.000515	0.000989	0.000037	0.002825	0.978273	0.001298
45	0.000196	0.000310	0.000656	0.000000	0.002014	0.970415	0.000849
50	0.000155	0.000266	0.000527	0.000000	0.001536	0.953158	0.000750
55	0.000125	0.000248	0.000496	0.000000	0.001239	0.931063	0.000956
60	0.000056	0.000224	0.000389	0.000000	0.001067	0.883817	0.001093
65	0.000076	0.000198	0.000255	0.000000	0.001051	0.803172	0.001231
70	0.000088	0.000187	0.000182	-0.000000	0.001065	0.699326	0.001438
75	0.000201	0.000294	0.000281	-0.000000	0.001080	0.554850	0.001385
80	-0.000000	0.000390	0.000331	-0.000000	0.000953	0.530705	0.001219

Table D.1.7 Region: Sofia

AGE	FIRST ROW N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	0.000008	0.000005	0.000004	0.000002	0.000007	0.000003	0.000603
10	0.001294	0.000559	0.000372	0.000328	0.000757	0.000213	0.062832
15	0.004438	0.001939	0.001371	0.000915	0.002832	0.000686	0.239181
20	0.003689	0.001668	0.001208	0.000621	0.002286	0.000633	0.308463
25	0.001708	0.000777	0.000515	0.000278	0.000963	0.000286	0.192406
30	0.000648	0.000275	0.000184	0.000102	0.000352	0.000109	0.083728
35	0.000190	0.000081	0.000054	0.000030	0.000104	0.000032	0.025823
40	0.000029	0.000012	0.000008	0.000004	0.000015	0.000005	0.004176
45	0.000002	0.000001	0.000001	0.000000	0.000001	0.000000	0.000285
50	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
55	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
60	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
75	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
80	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

AGE	SURVIVORSHIP PROPORTIONS N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	0.010791	0.005098	0.003087	0.001675	0.005591	0.001768	0.957578
5	0.008261	0.004247	0.002446	0.002256	0.004651	0.001379	0.974638
10	0.009183	0.004450	0.002598	0.003113	0.006164	0.001381	0.970646
15	0.011360	0.005419	0.003617	0.002780	0.007922	0.001657	0.964082
20	0.012855	0.006310	0.004231	0.002327	0.008638	0.001963	0.959693
25	0.010343	0.004714	0.003059	0.001745	0.006241	0.001518	0.966956
30	0.007565	0.003020	0.002304	0.001135	0.004277	0.001182	0.973663
35	0.006919	0.002700	0.002086	0.001014	0.004235	0.001183	0.971755
40	0.004682	0.001665	0.001205	0.000695	0.003011	0.000812	0.971586
45	0.003297	0.001014	0.000753	0.000376	0.002084	0.000579	0.965838
50	0.002632	0.000901	0.000695	0.000226	0.001799	0.000399	0.951628
55	0.002062	0.000915	0.000776	0.000194	0.001704	0.000291	0.927067
60	0.001409	0.000974	0.000662	0.000181	0.001607	0.000266	0.903585
65	0.001044	0.000883	0.000432	0.000194	0.001291	0.000242	0.799461
70	0.000859	0.000475	0.000234	0.000114	0.000808	0.000114	0.626791
75	0.000740	0.000363	0.000170	0.000000	0.000856	0.000000	0.461807
80	0.000602	0.000532	-0.000000	-0.000000	0.000867	0.000000	0.323339

D.2 Multiregional Population Projection

Table D.2.1 Year: 1975

POPULATION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	677101.	70735.	94489.	128208.	54841.	176623.	71533.	80672.
5	636856.	68705.	88645.	119420.	56775.	172151.	65419.	65741.
10	627571.	67596.	87050.	114858.	57325.	174996.	66863.	58883.
15	648115.	65875.	96363.	110758.	54790.	179789.	65342.	75198.
20	667466.	63065.	99415.	117401.	51104.	167740.	64351.	104390.
25	680723.	69433.	107113.	117679.	51062.	163737.	65928.	105771.
30	570611.	56989.	87569.	102594.	44287.	140672.	55426.	83074.
35	568310.	62510.	85446.	95274.	46536.	146625.	59787.	72132.
40	639246.	75297.	101386.	104962.	51672.	160455.	67050.	78424.
45	636179.	80024.	102018.	101531.	48194.	152826.	66486.	85100.
50	613212.	85561.	107536.	96852.	45676.	138376.	57404.	81807.
55	362410.	49280.	64098.	58489.	28663.	84676.	33938.	43266.
60	446563.	60716.	78998.	72057.	35308.	104357.	41830.	53297.
65	386710.	52595.	68375.	62408.	30594.	90368.	36223.	46147.
70	279036.	56418.	64896.	41530.	19544.	54575.	24286.	17787.
75	166137.	33591.	38639.	24727.	11637.	32494.	14459.	10590.
80	73394.	14839.	17069.	10924.	5141.	14355.	6388.	4678.
85	47350.	9574.	11012.	7047.	3317.	9261.	4121.	3018.
TOT	8726990.	1042803.	1400117.	1486719.	696466.	2164076.	866834.	1069975.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	7.7587	6.7832	6.7487	8.6236	7.8742	8.1616	8.2522	7.5396
5	7.2975	6.5885	6.3313	8.0325	8.1519	7.9549	7.5469	6.1442
10	7.1912	6.4821	6.2173	7.7256	8.2308	8.0864	7.7135	5.5032
15	7.4266	6.3171	6.8825	7.4498	7.8669	8.3079	7.5380	7.0280
20	7.6483	6.0476	7.1005	7.8967	7.3376	7.7511	7.4237	9.7563
25	7.8002	6.6583	7.6503	7.9153	7.3316	7.5661	7.6056	9.8854
30	6.5385	5.4650	6.2544	6.9007	6.3588	6.5003	6.3941	7.7641
35	6.5121	5.9944	6.1028	6.4083	6.6817	6.7754	6.8972	6.7415
40	7.3249	7.2206	7.2413	7.0600	7.4192	7.4145	7.7350	7.3295
45	7.2898	7.6739	7.2864	6.8292	6.9198	7.0620	7.6700	7.9535
50	7.0266	8.2049	7.6805	6.5145	6.5583	6.3942	6.6223	7.6457
55	4.1527	4.7257	4.5780	3.9341	4.1155	3.9128	3.9152	4.0436
60	5.1170	5.8224	5.6422	4.8467	5.0696	4.8222	4.8256	4.9811
65	4.4312	5.0436	4.8835	4.1977	4.3927	4.1758	4.1788	4.3129
70	3.1974	5.4102	4.6350	2.7934	2.8062	2.5219	2.8017	1.6624
75	1.9037	3.2212	2.7597	1.6632	1.6709	1.5015	1.6680	0.9897
80	0.8410	1.4230	1.2191	0.7348	0.7382	0.6633	0.7369	0.4372
85	0.5426	0.9181	0.7865	0.4740	0.4763	0.4279	0.4754	0.2821
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	35.1766	38.9736	37.8669	33.8111	34.1915	33.6021	34.3251	34.3684
SHA	100.0000	11.9492	16.0435	17.0359	7.9806	24.7975	9.9328	12.2605

Table D.2.2   Year: 1980

POPULATION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	709692,	69484,	98444,	133991,	55268,	187968,	74763,	89774,
5	666406,	69943,	93878,	125934,	53347,	173921,	69480,	79902,
10	635364,	68804,	89701,	118858,	55250,	172084,	64134,	66533,
15	625782,	65731,	89445,	112695,	53563,	175069,	62915,	66364,
20	645509,	62788,	97382,	108740,	50925,	178048,	60584,	87042,
25	664177,	61856,	99356,	116611,	49282,	165998,	61944,	109130,
30	676725,	69037,	106983,	117125,	50084,	162819,	64555,	106122,
35	566244,	56817,	87105,	101801,	43536,	139572,	54530,	82881,
40	562089,	62085,	84633,	94231,	45679,	145075,	58892,	71493,
45	628418,	74085,	99693,	103044,	50589,	157947,	65824,	77235,
50	619205,	77915,	99280,	98669,	46779,	148981,	64687,	82893,
55	587959,	82188,	103288,	92503,	43706,	132845,	54992,	78437,
60	338326,	46033,	59940,	54379,	26704,	79105,	31634,	40531,
65	397276,	53562,	69705,	63326,	31842,	92898,	37008,	48736,
70	314902,	43645,	56061,	50145,	25281,	73091,	29307,	37372,
75	199247,	42925,	47713,	28949,	13639,	37522,	16994,	11506,
80	95386,	21421,	23260,	13636,	6435,	17506,	8023,	5105,
85	43530,	11848,	11597,	5657,	2697,	6955,	3390,	1586,
TOT	8976237,	1040167,	1417266,	1540495,	784607,	2247403,	883657,	1142642,

PERCENTAGE DISTRIBUTION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	7.9063	6.6801	6.9468	8.6979	7.8437	8.3638	8.4607	7.8567
5	7.4241	6.7242	6.6239	8.1749	7.5711	7.7387	7.8628	6.9927
10	7.0783	6.6147	6.3292	7.7156	7.8413	7.6570	7.2578	5.8227
15	6.9715	6.3193	6.3111	7.3155	7.6018	7.7898	7.1198	5.8080
20	7.1913	6.0363	6.8711	7.0588	7.2275	7.9224	6.8561	7.6176
25	7.3993	5.9468	7.0104	7.5697	6.9942	7.3862	7.0100	9.5507
30	7.5391	6.6371	7.5486	7.6031	7.1080	7.2447	7.3054	9.2875
35	6.3083	5.4623	6.1460	6.6083	6.1190	6.2104	6.1710	7.2534
40	6.2620	5.9688	5.9716	6.1169	6.4829	6.4552	6.6646	6.2568
45	7.0009	7.1224	7.0342	6.6890	7.1798	7.0280	7.4490	6.7594
50	6.8983	7.4906	7.0050	6.4050	6.6390	6.6290	7.3204	7.2545
55	6.5502	7.9014	7.2878	6.8048	6.2029	5.9111	6.2232	6.8645
60	3.7691	4.4255	4.2293	3.5300	3.7899	3.5198	3.5799	3.5471
65	4.4259	5.1493	4.9183	4.1237	4.5191	4.1336	4.1880	4.2652
70	3.5082	4.1960	3.9556	3.2551	3.5879	3.2523	3.3166	3.2706
75	2.2197	4.1267	3.3665	1.8792	1.9356	1.6696	1.9231	1.0070
80	1.0627	2.0594	1.6412	0.8852	0.9133	0.7789	0.9079	0.4468
85	0.4849	1.1391	0.8041	0.3673	0.3827	0.3095	0.3836	0.1388
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	35.6105	39.3765	38.0428	34.1443	35.0779	34.1232	34.9495	34.9071
SHA	100.0000	11.5880	15.7891	17.1619	7.8497	25.0372	9.8444	12.7296
LAM	1.028561	0.997473	1.012248	1.036171	1.011689	1.038504	1.019407	1.067915

Table D.2.3   Year: 1985

POPULATION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	700248.	68580.	95660.	132298.	54616.	191721.	71832.	85540.
5	698483.	68898.	97823.	131623.	53781.	185054.	72630.	88676.
10	664845.	70154.	94926.	125319.	52020.	173991.	68081.	80354.
15	633558.	66875.	92030.	116451.	51717.	172264.	60461.	73759.
20	623255.	62429.	90864.	110324.	49767.	173299.	58361.	78210.
25	642318.	61383.	97219.	108134.	49072.	175676.	58362.	92471.
30	660280.	61748.	99369.	116014.	48348.	164943.	60696.	109163.
35	671554.	68847.	106375.	116278.	49255.	161603.	63522.	105674.
40	560051.	56575.	86289.	100653.	42753.	138158.	53750.	81872.
45	552576.	61132.	83248.	92580.	44723.	142792.	57819.	70362.
50	611657.	72144.	97017.	100128.	49098.	153936.	64042.	75292.
55	593688.	74880.	95382.	94236.	44761.	143004.	61958.	79465.
60	548886.	76781.	96594.	86012.	40721.	124128.	51261.	73390.
65	300988.	40608.	52889.	47941.	24082.	70419.	27988.	37061.
70	323493.	44450.	57153.	51044.	26312.	75139.	29942.	39453.
75	221636.	33236.	41244.	34953.	17644.	50248.	20509.	23802.
80	114816.	27370.	28720.	15965.	7542.	20216.	9429.	5573.
85	57555.	17101.	15529.	7062.	3376.	8482.	4258.	1747.
TOT	9179888.	1033191.	1428333.	1586938.	709588.	2325074.	894901.	1201862.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	7.6281	6.6376	6.6973	8.3367	7.6969	8.2458	8.0268	7.1173
5	7.6088	6.6684	6.8487	8.2941	7.5791	7.9591	8.1160	7.3782
10	7.2424	6.7900	6.6459	7.8969	7.3310	7.4832	7.6077	6.6858
15	6.9016	6.4727	6.4432	7.3381	7.2883	7.4090	6.7562	6.1371
20	6.7893	6.0423	6.3615	6.9520	7.0135	7.4535	6.5215	6.5074
25	6.9970	5.9411	6.8065	6.8140	6.9156	7.5557	6.5216	7.6940
30	7.1927	5.9764	6.9570	7.3105	6.8135	7.0941	6.7824	9.0828
35	7.3155	6.6636	7.4475	7.3272	6.9413	6.9504	7.0982	8.7925
40	6.1008	5.4758	6.0412	6.3426	6.0251	5.9421	6.0063	6.8121
45	6.0194	5.9169	5.8283	5.8289	6.3026	6.1414	6.4609	5.8544
50	6.6630	6.9826	6.7923	6.3095	6.9192	6.6207	7.1563	6.2646
55	6.4673	7.2475	6.6779	5.9382	6.3081	6.1505	6.9235	6.6118
60	5.9792	7.4314	6.7627	5.4200	5.7387	5.3387	5.7281	6.1064
65	3.2788	3.9304	3.7029	3.0210	3.3939	3.0287	3.1275	3.0836
70	3.5239	4.3022	4.0014	3.2165	3.7081	3.2317	3.3459	3.2827
75	2.4144	3.2168	2.8876	2.2026	2.4865	2.1611	2.2918	1.9804
80	1.2507	2.6491	2.0108	1.0060	1.0629	0.8695	1.0537	0.4637
85	0.6270	1.6552	1.0872	0.4450	0.4757	0.3648	0.4758	0.1453
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	36.0326	39.5965	38.2133	34.5397	35.8501	34.5923	35.6078	35.5592
SHA	100.0000	11.2549	15.5594	17.2871	7.7298	25.3279	9.7485	13.0923
LAM	1.022688	0.993294	1.007809	1.030148	1.007069	1.034561	1.012725	1.051827

Table D.2.4 Year: 2000

POPULATION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	721019.	69900.	98613.	142149.	50462.	196347.	71087.	92461.
5	690672.	68674.	95164.	134674.	50279.	188920.	67694.	85268.
10	680937.	68317.	94737.	130120.	50636.	188051.	66452.	82625.
15	685616.	66909.	98696.	126554.	48780.	188246.	64575.	91857.
20	692086.	64874.	102665.	125320.	46134.	183621.	62258.	107214.
25	657041.	63590.	98532.	119001.	44053.	170979.	57398.	103488.
30	624198.	61631.	93399.	112319.	45499.	167048.	53153.	91143.
35	611800.	60320.	90484.	108086.	46198.	167946.	54269.	84497.
40	626753.	60800.	95733.	105709.	46461.	170810.	55560.	91680.
45	637130.	60875.	96418.	111785.	45766.	159513.	57905.	104868.
50	635561.	66004.	100866.	109697.	46007.	153627.	59880.	99481.
55	513740.	52391.	79401.	91636.	38890.	127265.	49231.	74926.
60	481355.	53546.	72847.	79790.	38692.	124730.	50223.	61526.
65	487193.	57193.	76955.	78374.	39470.	122828.	50576.	61798.
70	401408.	51263.	64591.	62879.	31082.	96207.	41331.	54855.
75	279472.	42814.	51423.	42481.	21183.	61470.	25680.	34420.
80	96998.	16377.	19217.	14808.	7681.	21092.	8793.	9030.
85	73273.	17251.	16918.	10362.	5327.	13480.	6170.	3965.
TOT	9596244.	1002727.	1446660.	1704744.	782599.	2502182.	902234.	1335098.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	7.5136	6.9710	6.8166	8.3384	7.1822	7.8471	7.8789	6.9254
5	7.1973	6.8487	6.5782	7.8999	7.1561	7.5502	7.5030	6.3866
10	7.0959	6.8131	6.5487	7.6328	7.2070	7.5155	7.3653	6.1887
15	7.1446	6.6727	6.8224	7.4236	6.9428	7.5233	7.1572	6.8801
20	7.2120	6.4697	7.0967	7.3513	6.5662	7.3385	6.9005	8.0304
25	6.8469	6.3417	6.8110	6.9806	6.2700	6.8332	6.3617	7.7513
30	6.5045	6.1463	6.4562	6.5886	6.4758	6.6761	5.8913	6.8267
35	6.3754	6.0156	6.2547	6.3403	6.5753	6.7120	6.0149	6.3289
40	6.5312	6.0635	6.6175	6.2009	6.6128	6.8265	6.1588	6.8669
45	6.6394	6.0710	6.6649	6.5573	6.5138	6.3749	6.4179	7.8547
50	6.6230	6.5825	6.9723	6.4348	6.5481	6.1397	6.6369	7.4512
55	5.3536	5.2248	5.4886	5.3754	5.5351	5.0862	5.4565	5.6120
60	5.0161	5.3400	5.0356	4.6805	5.5070	4.9849	5.5665	4.6083
65	5.0769	5.7037	5.3195	4.5974	5.6178	4.9088	5.6056	4.6287
70	4.1830	5.1123	4.4649	3.6416	4.4239	3.8449	4.5810	4.1087
75	2.9123	4.2698	3.5546	2.4919	3.0149	2.4567	2.8463	2.5781
80	1.0108	1.6332	1.3284	0.8687	1.0932	0.8430	0.9745	0.6763
85	0.7636	1.7204	1.1695	0.5961	0.7582	0.5387	0.6839	0.2970
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	36.7138	39.1369	38.2334	35.2041	37.4720	35.6000	36.8851	36.7476
SHA	100.0000	10.4492	15.0753	17.7647	7.3216	26.0746	9.4019	13.9127
LAM	1.013535	0.992857	1.005997	1.023015	0.992025	1.021365	1.000050	1.032205

Table D.2.5 Year: 2025

POPULATION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	763716,	70937,	103341,	156093,	46309,	212279,	70888,	103868,
5	739083,	69934,	101074,	149473,	45894,	205078,	68468,	99162,
10	728568,	69933,	101007,	145141,	45878,	202263,	67123,	97223,
15	723682,	68436,	103502,	139762,	44307,	200243,	64091,	103340,
20	717082,	65679,	105139,	134936,	42176,	195300,	60295,	113556,
25	699665,	64146,	103563,	130894,	41195,	187923,	57681,	114262,
30	676977,	63100,	100644,	125727,	41185,	182282,	55409,	108630,
35	663899,	62375,	98530,	121504,	41617,	179969,	54539,	105364,
40	663061,	62501,	98930,	119672,	41832,	178717,	55295,	106113,
45	660642,	62662,	99689,	119073,	41505,	173801,	56277,	107635,
50	613462,	60773,	93104,	110672,	39790,	159743,	52372,	97008,
55	561989,	56716,	84774,	100289,	39987,	150685,	47390,	82149,
60	518136,	52016,	77223,	90438,	38446,	142664,	45745,	71605,
65	477925,	46596,	72761,	73921,	35521,	130621,	42022,	71484,
70	401696,	39364,	61162,	68302,	29535,	100414,	36066,	66852,
75	287481,	33246,	48334,	48089,	21344,	68228,	26801,	41438,
80	134829,	17503,	23868,	23189,	10424,	31702,	12759,	15385,
85	76021,	15249,	15636,	11252,	5838,	16898,	7407,	4541,
TOT	10107913,	981166,	1492280,	1673431,	652782,	2718010,	880627,	1509616,

PERCENTAGE DISTRIBUTION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	7.5556	7.2299	6.9250	8.3321	7.0941	7.8101	8.0497	6.8804
5	7.3119	7.1277	6.7731	7.9785	7.0305	7.5452	7.7749	6.5687
10	7.2079	7.1275	6.7687	7.7473	7.0281	7.4416	7.6221	6.4402
15	7.1596	6.9750	6.9358	7.4602	6.7874	7.3673	7.2779	6.8455
20	7.0943	6.6940	7.0455	7.2027	6.4609	7.1854	6.8468	7.5221
25	6.9220	6.5377	6.9399	6.9869	6.3107	6.9140	6.5500	7.5690
30	6.6975	6.4311	6.7443	6.7111	6.3091	6.7065	6.2920	7.1959
35	6.5681	6.3573	6.6026	6.4856	6.3754	6.6215	6.1932	6.9795
40	6.5598	6.3701	6.6295	6.3878	6.4083	6.5753	6.2791	7.0292
45	6.5359	6.3865	6.6803	6.3559	6.3582	6.3944	6.3906	7.1299
50	6.0691	6.1940	6.2390	5.9075	6.0955	5.8772	5.9471	6.4260
55	5.5599	5.7805	5.6808	5.3532	6.1256	5.5440	5.3814	5.4417
60	5.1260	5.3015	5.1748	4.8274	5.8895	5.2488	5.1946	4.7433
65	4.7282	4.7498	4.8759	4.2126	5.4414	4.8058	4.7718	4.7352
70	3.9741	4.0120	4.0985	3.6458	4.5245	3.6944	4.0955	4.4284
75	2.8441	3.3884	3.2390	2.5669	3.2697	2.5102	3.0434	2.7450
80	1.3339	1.7839	1.5994	1.2378	1.5969	1.1664	1.4488	1.0191
85	0.7521	1.5541	1.0478	0.6806	0.8943	0.5923	0.8411	0.3008
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	36.5456	37.8067	37.6786	35.1892	38.1355	35.8952	36.3672	36.8771
SHA	100.0000	9.7069	14.7635	13.5343	6.4581	26.8899	8.7123	14.9350
LAM	1.010494	1.000561	1.098044	1.018400	0.983656	1.015494	0.996307	1.021178

D.3 Stable Equivalent to Original Population

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	662471.	54276.	94175.	174034.	18832.	181079.	46201.	93875.
5	644233.	53583.	92666.	168134.	18336.	175840.	44712.	90963.
10	635120.	53643.	92844.	164014.	18253.	173010.	43846.	89509.
15	625837.	52439.	94473.	156394.	18015.	169786.	41728.	93082.
20	615979.	50157.	95088.	148951.	17418.	165078.	39090.	100198.
25	605734.	49034.	94115.	145019.	16949.	160729.	37646.	102241.
30	595063.	48641.	93105.	141929.	16652.	157445.	36727.	100584.
35	583571.	48233.	91609.	138818.	16315.	154156.	35907.	98533.
40	570388.	47703.	89747.	135427.	15933.	150681.	35123.	95774.
45	554060.	46652.	87284.	131225.	15487.	146527.	34192.	92693.
50	532871.	45078.	83987.	125908.	14890.	141088.	32958.	88962.
55	504672.	42950.	79778.	118743.	14096.	133784.	31249.	84068.
60	465355.	39769.	73780.	109023.	12989.	123484.	28815.	77494.
65	409170.	34742.	64386.	94934.	11586.	108614.	25215.	69693.
70	328040.	28541.	52213.	75359.	9471.	86800.	20180.	55479.
75	225549.	21515.	37989.	51893.	6537.	58954.	13964.	34697.
80	123159.	13588.	22629.	28270.	3572.	31370.	7657.	16073.
85	66260.	10733.	14946.	14461.	1852.	15010.	4815.	5242.
TOT	8747551.	741282.	1354813.	2122531.	247183.	2333354.	559226.	1389161.

PERCENTAGE DISTRIBUTION

AGE	TOTAL	N.WEST	NORTH	N.EAST	S.WEST	SOUTH	S.EAST	SOFIA
0	7.5732	7.3219	6.9511	8.1994	7.6188	7.7605	8.2615	6.7577
5	7.3647	7.2284	6.8398	7.9214	7.4180	7.5359	7.9953	6.5481
10	7.2605	7.2365	6.8529	7.7273	7.3843	7.4146	7.8406	6.4434
15	7.1544	7.0741	6.9731	7.3683	7.2883	7.2730	7.4617	6.7006
20	7.0417	6.7662	7.0185	7.0176	7.0465	7.0747	6.9900	7.2128
25	6.9246	6.6148	6.9467	6.8324	6.8569	6.8883	6.7318	7.3599
30	6.8029	6.5618	6.8722	6.6868	6.7368	6.7476	6.5674	7.2406
35	6.6712	6.5067	6.7617	6.5402	6.6003	6.6066	6.4208	7.0930
40	6.5205	6.4352	6.6243	6.3804	6.4459	6.4577	6.2807	6.8944
45	6.3339	6.2934	6.4425	6.1825	6.2655	6.2797	6.1142	6.6726
50	6.0917	6.0812	6.1991	5.9320	6.0237	6.0466	5.8935	6.4040
55	5.7693	5.7946	5.8885	5.5944	5.7025	5.7336	5.5880	6.0517
60	5.3198	5.3649	5.4458	5.1365	5.2548	5.2921	5.1526	5.5785
65	4.6775	4.6867	4.7524	4.4727	4.6873	4.6548	4.5090	5.0169
70	3.7501	3.8502	3.8539	3.5503	3.8316	3.7200	3.6086	3.9937
75	2.5784	2.9024	2.8040	2.4449	2.6444	2.5266	2.4970	2.4977
80	1.4079	1.8331	1.6703	1.3319	1.4451	1.3444	1.3692	1.1571
85	0.7575	1.4479	1.1032	0.6813	0.7491	0.6433	0.7180	0.3774
TOTAL	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
M.AGE	36.4215	37.3672	37.4601	35.5185	36.3613	36.0986	35.5122	37.2283
SMA	100.0000	8.4742	15.4879	24.2643	2.8257	26.6744	6.3929	15.8806
LAM	1.011943	1.011942	1.011944	1.011946	1.011942	1.011940	1.011942	1.011942

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