CONSTRUCTING LIFE TABLES FOR KOREA 1925-70*

Tai Hwan Kwon

Korean life tables were first attempted by H. Choe and S.Harafuji in the late 1930's.[1] These are considered to be pioneering works of the Korean demography. In the more recent years Y. Chang, K.S. Koh, and D. Lee made efforts to reconstruct the Korean life tables covering specific time periods in the past.[2] Even though these works have made valued contributions to advancing our knowledge on mortality trends of the Korean Population, their products lack comparability for the time series analysis of the Korean mortality due to the conflicting assumptions and varied methodologies employed. Problem also arises in these earlier works of the Korean life tables for their failing to take into proper account of peculiar age and sex patterns of the Korean mortality.

The present analysis therefore attempts to make up for these weaknesses in the earlier life tables; that is, in constructing a new series of the Korean life tables we have incorporated to a considerable extent the age and sex patterns of the Korean mortality derived from the census statistics. We also tried to ensure comparability among the life tables covering different periods by employing uniform computational methods for which life tables were constructed.

Registration statistics in Korea are of very limited use in the calculation of any reliable vital rates because of the incompleteness and inaccuracy of the provided information. During 1925–42, when only the deaths at age 10 and over are considered as a whole, the reporting in registration seems to have been more or less complete, and these data were often adopted for the estimation of mortality rates and partly for the construction of life tables. The census statistics are, however, known to be far better even in this period. There is also a doubt about the reliability of information on the age of the dead from registration. In view of social customs in Korea concerning death and overall delayed registration considerable errors in the age reporting of death registration are apparently inevit-

* This is a slightly revised and extended version of a chapter entitled 'Construction of Life Tables and Estimation of Age-Specific Mortality, 1925–66' in the author's Ph. D thesis, *Population Change and Its Components in Korea 1925–66* (Australian National University, 1972).

1. Huiyong Choe, 'Chōsen jumin no seimei hyō' (Korean Life Tables), *Chōsen igakkai zasshi,* (Korean Medical Journal), Vol. 29, No. 11, Seoul, 1939, pp. 2180–2220. Syue Harafuji, 'Dō betsu chōsenjin seimei hyō' (Life Table for Koreans by Province), *Chōsen igakkai zasshi,* Vol. 30, Nos. 7–8, Seoul, 1940, pp.1043–1074.

2. Yunshik Chang, *Population in Early Modernization: Korea* (Ph.D thesis, Princeton), 1967, pp. 164–210 & 355–358. Yunshik Chang, Hae Young Lee, Eui-Young Yu & Tai Hwan Kwon, *A Study of the Korean Population 1966,* Population and Development Studies Center, Seoul National University, Seoul, 1974, pp. 101–107.
Kap Suk Koh and Il Hyun Kim, 'Abridged Life Tables for the Republic of Korea', *Monthly Statistics of Korea,* Vol. 6, Nos. 7–8, Seoul, 1964.
Dongwoo Lee, *Derivation of Life Table Functions from the Recent Korean Censuses* (M.S. Thesis, London School of Hygiene and Tropical Medicine, London University), 1972.

able. For the period after World War II, the data on deaths are considerably defective for all ages, and accordingly any method utilising death data from registration is in no way to be fully justified. On these grounds, we have tried here, to make use of census survival ratios in constructing life tables.

Prior to constructing life tables, it is necessary to evaluate the census survival ratios. The quality of census data is examined adopting Princeton regional model life tables for reference mainly because of their extensive coverage of various mortality experiences. At the same time, the plausibility of employing the Coale and Demeny method of estimating mortality from census survival ratios which is described in the U.N. Manual IV[3] is also examined, and then we have tried to develop suitable methods for Korean data and the observed pattern of Korean mortality.

In order to adopt any method utilising census survival ratios for the estimation of mortality, the population should be supposed to be closed against migration in or out. In Korea, this condition is almost met only for the years after the Korean War. On the other hand, the Korean population during the colonial period could be regarded as closed when the Koreans in Japan and China (mostly Manchuria) are added to those in Korea.[4] The compilation of Koreans in Korea, Japan and China by quinquennial age groups for the colonial period could be carried out with fair reliability.[5] The adjusted age distributions of total Koreans for various years were, however, compared with each other to find out obvious errors if any. The adjusted populations at the 1935 census were found to be over-enumerated, particularly for the ages 15–29. The distributions for the quinquennial age groups between 15–29 were corrected, based on the age compositions of 1930 and 1940. Unlike others, the 1935 census enumerated the population on both *de facto* and *de jure* principles, and this might have resulted in double counts among migrants concentrated in the ages 15–29 or a different degree of completeness compared to other censuses in the colonial period.[6]

For the years between World War II and the Korean War, the condition of closed population could not be established. Poor statistics on the sizeable migration during this period, together with the partition of the nation leaves little possibility of approaching the population based on the concept of closed population. So, the specific mortality for the years 1940–50 is roughly estimated by interpolation from the mortality for 1935–40 and for 1955–60. For the years 1950–55 which include the Korean War, no attempt is made either to construct actual life tables or to estimate specific mortality because of the difficulty of separation of deaths during the war from migration between the two Koreas. Instead, life tables are constructed for this period under the assumption of no war following the method adopted for 1940–50. For the periods since 1955, adjustment for census intervals is necessary. This was carried out taking the 1970 census date as reference point.[7] After examining the relative coverage of enumeration among the censuses of 1955–70 by sex, the 1970 sex

3. A.J. Coale & P. Demeny, *Regional Model Life Tables and Stable Populations*, Princeton University Press, 1966, and United Nations, *Methods of Estimating Basic Demographic Measures from Incomplete Data* (Manual IV, ST/SOA/Series A/42), 1967, pp. 8–12.
4. See, Yunshik Chang, *op. cit.*, 1967, pp. 150–160.
5. Tai Hwan Kwon, *Population Change and Its Components in Korea 1925–66* (Ph.D thesis, Australian National University), 1972, pp.388∼391. Tai Hwan Kwon, Hae Young Lee, Yunshik Chang & Eui-Young Yu, *The Population of Korea*, World Population Year/C.I.C. R.E.D. Monograph, Population and Development Studies Center, Seoul National University, Seoul, 1975, pp. 149–150.
6. Kwon, *op. cit.*, Section 1.3.2 in Chapter I.
7. *Ibid*, Section 10.1.3 in Chapter X.

distributions were slightly adjusted for under/over enumeration; .25% relative under-enumeration for males and the equivalent amount of relative overenumeration for females.[8]

1. CENSUS SURVIVAL RATIOS AND PROPORTIONS SURVIVING IN REGIONAL MODEL LIFE TABLES

Two basic tests are applied to census populations to check the quality of census survival ratios and to find out the most suitable set of model life tables for Korea. Firstly, the compiled age distributions of 1925 to 1940, which are reasonably supposed to be stable or quasi-stable, are compared to regional model stable populations in a range of observed intercensal growth rates and mortality levels to cover the maximum variations in actual mortality and fertility. Then the indices of dissimilarity[9] are calculated to see to what extent the actual age distributions differ from the equivalent model stable populations. It is, however, found that this comparison gives us little idea about which set of the regional models is best fitted to the Korean age compositions. Instead, it only provides crude information on the mortality and fertility levels most closely ascribable to the Korean populations at the censuses of 1925–40.[10]

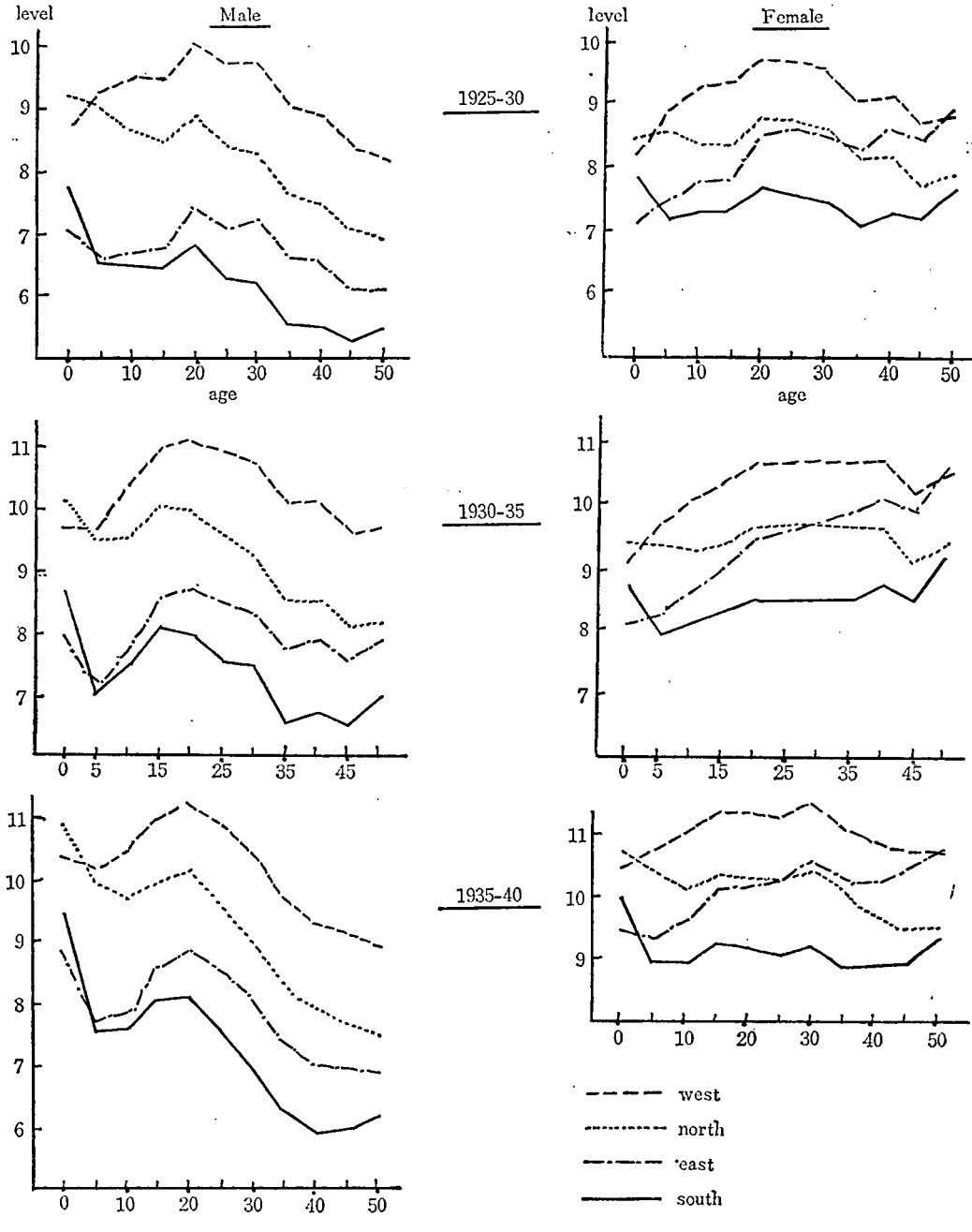
The second method is to compare census survival ratios with the proportions surviving in regional model life tables. The model life table survival ratios corresponding to the census survival ratios are obtained adopting the Coale and Demeny method of estimating age specific mortality based on two census age distributions and model life tables. In the following paragraphs, the procedures are summarized briefly.[11]

1. Preparation of a series of the expected age distributions at the time of the later census corresponding to a series of mortality levels by applying the proportions surviving in model life tables to the population of the earlier census by age.
2. Calculation of the cumulative age distributions of the later census population and the expected populations prepared in (1) from the highest to the lowest ages.
3. Reading the life table mortality levels for the age x and over at which the cumulative census population and the expected cumulative population exactly agree.
4. Selection of the median level of mortality from the nine levels of mortality derived in (3) for the ages from 0 and over and to 40 and over at intervals of five years.
5. Selection of a model life table which the median level of mortality indicates and reading all the life table functions from this life table.

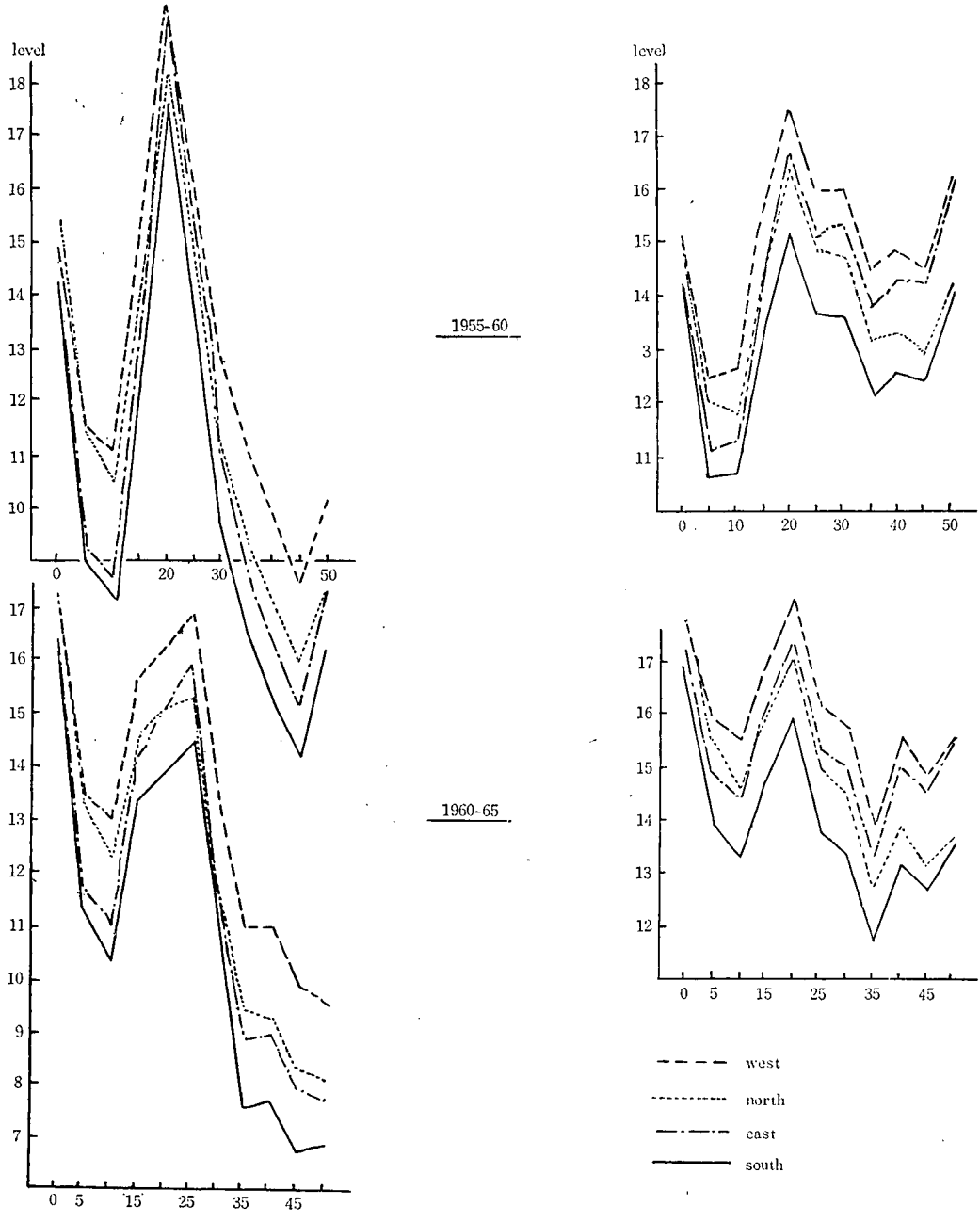
The above method is applied to all the four families of regional model life tables and the results are compared to census results. Two investigations are made here to evaluate the census data; (a) examination of consistency and the patterns of fluctuations in the levels of mortality for the age x and over in each set of regional model, and (b) comparison of census survival ratios and the estimated life table proportions surviving.

8. Chang, *et al, op. cit.*, pp. 12–18.
9. Nathan Keyfitz, *Introduction to the Mathematics of Population,* Addison-Wesley Publ. Co., Menlo Park, 1968, p.47.
10. The dissimilarity index is found to be rather insensitive to differences in mortality level and to different families of regional models. Throughout the census period from 1925 to 1940, the index figures in a possible range of r (growth rate) ranged mostly from 1.5 to 3.0% in any set of regional stable populations.
11. U.N., *op. cit.*, pp. 8–12.

Figiure 1. **Levels of Mortality in Four Families of Regional Model Life Tables Corresponding to Census Survival Ratios from Age X and over to Age X+5 and over, 1925–65**



(Figure 1 Continued.)



Age Patterns of Levels of Mortality in Regional Model Life Tables Which Correspond to Cumulative Census Survival Ratios

The levels of mortality for the age x and over in regional life tables corresponding to the cumulative census survival ratios for the same ages are plotted in Figure 1 and the findings from this figure are presented below.

1. The range of mortality levels for the age x and over in any set of regional model life tables is very narrow during 1925–40. The difference in mortality level by age is, however, considerable for 1955–70. The range of difference is also found to be much smaller for females than for males throughout the entire period. This apparently indicates either that the enumeration of female age distributions has been more complete than that of males or that the female age pattern of mortality is closer to that of regional model life tables than the male pattern is.
2. Very consistent relationships among the four sets of regional model life tables are observed. The levels of mortality in model life tables, which are directly associated with paticular expectations of life at birth $[e_0^0]$, are always the highest in the west models and the lowest in the south models. This difference in the general levels of mortality between the west and the south models is equivalent to 5 to 7 year difference in the expectation of life at birth.
3. During the colonial period, each regional model manifests highly consistent patterns of mortality levels when males and females are considered separately. According to Figure 2.1, the north model seems to fit most closely to the Korean pattern of mortality during the colonial period 1925–40. For females, deviations in the mortality levels are very slight in the north family. Though the range of difference in the level by age is wider, the north set still produces highly desirable curves for males. According to the north curves for males, a consistent downward trend in mortality level is observed with the increase of age. In the case of males, a similar trend is observed from the other models but with much more fluctuations or deviations. This downward trend is again found in the north model for females for the years 1925–30 and 1935–40 though not as distinctively as for males.
4. Unlike during the colonial period, no set of regional model life tables agrees with the observed patterns from the Korean censuses since 1955. The projected levels of mortality from census survival ratios reveal very large fluctuations in any set of models. Needless to say, this is due mostly to systematic errors in census enumeration directly evident from census survival ratios themselves. Larger deviations for 1955–60 are certain to be ascribed to the deliberate misreporting of age in the 1955 census.
5. Despite substantial fluctuations, a downward trend in the level of mortality with the increase of age is again evident for 1960–70 in every set regional model life tables.

From the above observation, it is reasonable to assume that the north model life tables represent the Korean pattern of mortality approximately thoughout the entire period 1925–70 when the downward trend in mortality level is taken into consideration. However, in view of significant differences in the expectation of life at birth and in infant and child mortality depending upon which set of regional model life tables is adopted, these observations are not sufficient to justify fully the selection of any particular set of model life tables.

Comparison of Census and Model Life Table Survival Ratios

Adopting the Coale and Demeny method of estimating mortality described above, the proportions surviving for quinquennial age groups in each set of regional model life tables are calculated for the intercensal periods from 1925 to 1940 and from 1955 to 1970. These four sets of the proportions surviving are then compared with the corresponding census survival ratios by taking differences between the two kinds of ratios as shown in Figure 2. The findings from this comparison are presented below.

1. The difference between the estimated survival ratios from regional model life tables are found to be very substantial for the ages 0–9 and for the old age 50 and onwards. The differences are very minor for the ages in between these two groups. This suggests that while the four sets of regional life tables produce very similar results to each other in adult working ages, the selection of a particular set is of great importance in determining the rates and the patterns of mortality for very young and old ages which are in turn liable to large errors. This again indicates that to determine the set of model life tables best fitted to a particular set of census survival ratios, it is essential to consider the mortality for child and old ages.
2. The pattern of fluctuations in the differences between the census and the estimated model survival ratios is somewhat similar for both males and females over the four decades from 1925 to 1965 though the fluctuations are much greater for the later years because of substantial under/over enumeration in the recent censuses since 1955.
3. For the ages 0–4, the west and the east sets of estimates reveal proportions surviving closer to the census survival ratios for males, and the north and the east sets for females during the colonial period. For the ages 50 and over the east model life tables turn out to be the best fitted to the female ratios. Because of marked errors in census enumeration and age reporting, it is inappropriate to make any comparison between census and model life table survival ratios after 1955.
4. Besides the jags between two consecutive age groups which could be easily supposed to reflect the errors in census enumeration, it is also observed loose up-and-downs over a large range of ages. These loose up-and-downs, which might be considered as the real differences between actual mortality and model life table mortality, are more clearly seen when the jags between successive age groups are smoothed out as shown in Figure 3.

When the census survival ratios for 1925–40, which are regarded as reasonably reliable are graduated and again compared with model life table survival ratios, the typical pattern of Korean mortality from the census and its degree of similarity to that of regional model life tables clearly emerge. The census survival ratios are primarily graduated by the following formula.

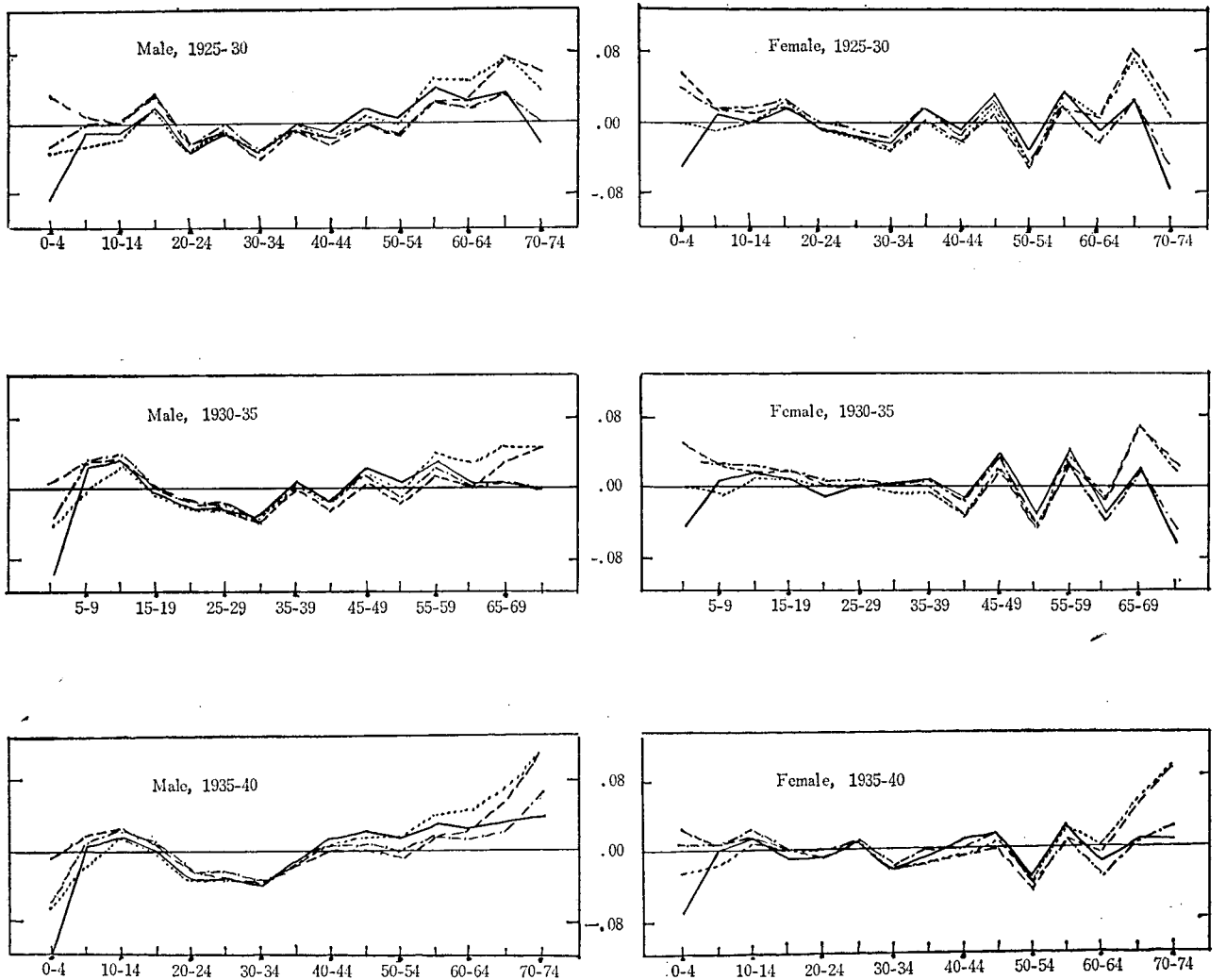
$$
\begin{aligned}
{}_n\bar{S}_x &= ({}_nS_{x-n} + 2{}_nS_x + {}_nS_{x+n})/4 + {}_nS'_x - ({}_nS'_{x-n} + 2{}_nS'_x + {}_nS'_{x+n})/4 \\
&= ({}_nS_{x-n} + 2{}_nS_x + {}_nS_{x+n})/4 + \{2{}_nS'_x - ({}_nS'_{x-n} + {}_nS'_{x+n})\}/4
\end{aligned}
$$

where

${}_n\bar{S}_x$ is the graduated survival ratio for the age group x to $x+n$,
${}_nS_x$ is the census survival ratio for the age group x to $x+n$, and
${}_nS'_x$ is the proportion surviving for the age group x to $x+n$ in the model life table chosen as standard for graduation.

The estimated regional life table survival ratios by the Coale and Demeny method are again adopted here as ${}_nS'_x$ values, and from one set of census survival ratios four sets of

Figure 2. **Differences between Estimated Proportions Surviving from Regional Model Life Tables and Census Survival Ratios, 1925–65**



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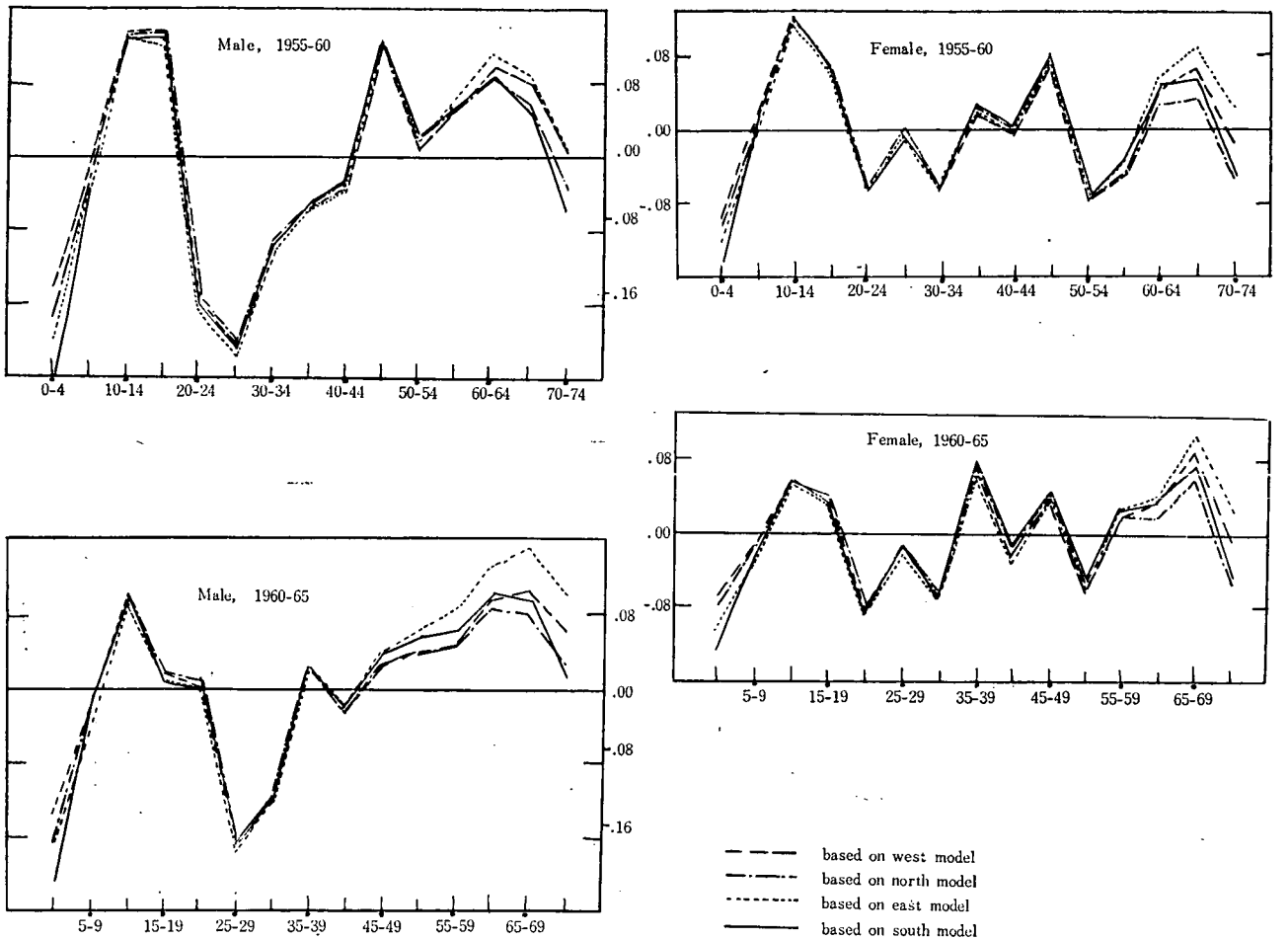
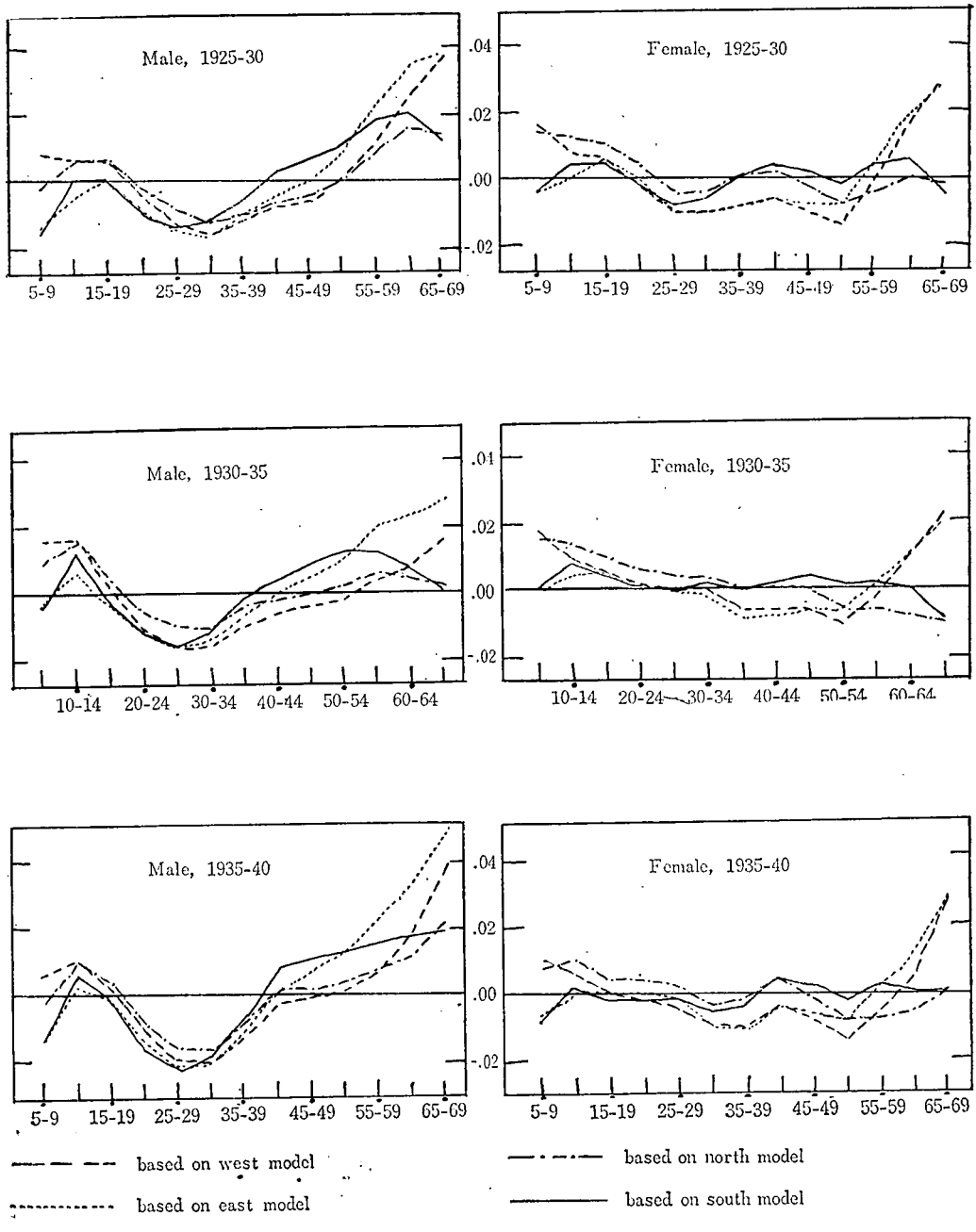


Figure 3. **Differences between Estimated Proportions Surviving from Regional Model Life Tables and Graduated Census Survival Ratios Based on Regional Model Life Tables, 1925–40**



graduated survival ratios are derived which correspond to the four families of regional life tables. Then each set of graduated ratios is compared to the corresponding regional model life survival ratios by taking ${}_nS'_x - {}_n\bar{S}_x$ values which are plotted in Figure 3. In order to see the trends in broad age groups, say child ages (5–14), adult working ages (15–49) and old ages (50 and over), the absolute sum of ${}_nS'_x - {}_n\bar{S}_x$ values regardless of the sign in each broad age group is computed and presented in Table 1.

The following are evident from Figure 3 and Table 1.

1. The pattern of the $S' - \bar{S}$ curve is highly consistent in each regional set for males and females separately during the colonial period between 1925 and 1940, and one regional pattern of the curve is distinctive from the others.
2. For males, as mentioned above, the $\bar{S}$ values (graduated ratios) match closely to the S' values (estimated model ratios) in the east models for almost all ages. For females, the south models generally reveal less deviations from the graduated survival ratios. However, in young adult working ages, the east models show only slight difference from the south models, and the S' values from the north models are closer to the $\bar{S}$ values in the child ages under 15 than those from the south models are. In addition when the differences between the census and the estimated model survival ratios for the ages 0–4 for females are considered, as mentioned above, suffice it to say that for the ages under 15 for females, the proportions surviving from the north model life tables are closest to the census survival ratios.

Table 1. **Absolute Sums of Differences in Broad Age Groups between Graduated Survival Ratios and Corresponding Model Life Table Proportions Surviving for Quinquennal Age Groups, 1925–40**

	Male				Female			
	5—14	15—49	50+	Total	5—14	15—49	50+	Total
1925—30								
west	.017	.057	.073	.147	.025	.047	.061	.133
north	.016	.050	.105	.172	.004	.045	.057	.106
east	.008	.041	.042	.092	.028	.028	.013	.069
south	.016	.046	.063	.124	.009	.028	.018	.052
1930—35								
west	.034	.058	.032	.124	.030	.026	.043	.099
north	.008	.055	.087	.151	.005	.028	.039	.073
east	.028	.034	.019	.081	.031	.031	.025	.086
south	.015	.055	.037	.107	.008	.019	.014	.042
1935—40								
west	.019	.065	.074	.158	.017	.031	.053	.101
north	.015	.077	.124	.216	.007	.029	.052	.088
east	.013	.057	.049	.120	.019	.021	.022	.062
south	.021	.078	.071	.170	.011	.019	.005	.035

2. CONSTRUCTION OF LIFE TABLES FOR 1925–40 and for 1955–70

From the above discussion, we can conclude that in applying the Coale and Demeny method of estimating mortality to the Korean censuses, model life tables are not the most suitable for obtaining somewhat precise mortality rates specified by age and sex. But regional model life tables could be used with some revision in the method to allow the

pattern of Korean mortality to be observed from the census, or with the method being incorporated into another method which is designed to render an estimation of specific mortality closer to the observed pattern from census survival ratios.

In this study, two attempts are made to construct life tables for 1925–70 using census survival ratios and the proportions surviving in regional model life tables. One of them is a slightly revised application of the Coale and Demeny method. The other attempt is to graduate census survival ratios using the proportions surviving in regional model life tables as standard which are obtained by the Coale and Demeny method, and to construct life tables from graduated survival ratios only.

A Revised Application of the Coale and Demeny Method

The first attempt is based on the findings from the observation of the levels of mortality for the age x and over corresponding to the census survival ratios for the same ages. As mentioned earlier, the north family of regional model life tables manifests highly consistent downward curves of mortality levels for both males and females and the least fluctuation in the curves. Taking this to reflect the real difference in the pattern between actual survival ratios and those estimated by adopting north model life tables, we have allowed for this downward trend in estimating mortality and constructing life tables. To do this, it is supposed here that each quinquennial age group is subject to a different level of mortality in the north model life tables instead of applying one selected level to all ages.

In determining mortality levels for each quinquennial age group, the first eleven mortality levels from the age 0 and over to the age 50 and over are used, and the third, sixth and ninth highest levels among the eleven estimated levels from the north model are chosen to represent the highest, middle and lowest levels respectively in the actual mortaily. Then the highest level is, admittedly arbitrary, assumed to be observed in the first quinquennial age group 0–4, the middle in 35–39 and the lowest in the age 70 and onwards. For the other ages, the levels of mortality in the north model life tables are linearly interpolated. The P_x values (proportions surviving) and m_x values (specific death rates) are obtained from this series of mortality levels by reading the points the levels indicate in north model life tables. Discrepancies between P_x and m_x values thus derived are such that they could be easily removed by adjusting m_1 to m_{80} values proportionately over the degree of difference. The maximum discrepancy observed is equivalent to about 1 % of m_x values.

To construct life tables, L_x values are first computed from the estimated P_x values according to the following formulas;

1) $\quad {}_5L_0 = l_0 \cdot {}_5P_b \cdot 5,$

2) $\quad$ when $5 \leq x < 80$, ${}_5L_x = {}_5L_{x-5} \cdot {}_5P_{x-5}$, and

3) $\quad {}_\infty L_{80} = {}_5L_{75} \cdot {}_\infty P_{75} / (1 - {}_\infty P_{75}),$

where ${}_nL_x$ is the person years lived from the exact age x to the exact age $x+n$,

l_0 is the initial size of the birth cohort (assumed as 100,000), and

${}_nP_x$ is the proportion surviving for the ages x to $x+n$ for the next five years.

${}_1L_0$ values are adopted from the north model life tables selected for the ages 0–4. All the other life table functions could be easily obtained from the estimated ${}_nL_x$ and m_x values following the established relationships among the life table functions.

Life Table Construction from Graduated Survival Ratios

The second attempt is based on the observations of the pattern of census survival ratios

in relation with the proportions surviving in regional life tables. We have tried here to construct life tables directly from graduated survival ratios. As demonstrated earlier, the graduation for 1925–40 is highly desirable. However, for the years since 1955, the graduation based on the formula given above is found to be unsatisfactory. So instead of smoothing census survival ratios using the above given formula, a set of graduation factors is introduced which is to be applied to the model life table survival ratios chosen as standard for graduation. The calculation of graduation factors is based on the combined experience of 1925–40, and it is assumed that the differences in survival ratios between the census and the standard model life tables are linearly decreasing with the survival ratios approaching to 1 and the two survival ratios agree exactly when they become 1. On the ground of the previous observation, east model life tables are employed as standard for the graduation of male survival ratios. For females, north model life tables are adopted for the graduation of the ages 0–14 and south model life tables for the age 15 and onwards.

The graduation of census survival ratios up to the ages 65–69 are carried out by the formula,

$$ {}_n\bar{S}_x = {}_nS'_x + {}_ng_x(1 - {}_nS'_x) $$

where ${}_n\bar{S}_x$ is the graduated survival ratio for the ages x to $x+n$,

${}_nS'_x$ is the survival ratio in the standard model life table for the ages x to $x+n$, and

${}_ng_x$ is the graduation factor for the ages x to $x+n$.

The ${}_nS'_x$ values in the formula are calculated exactly following the above mentioned Coale and Demeny method of estimating mortality. The graduation factors (${}_ng_x$) are computed as;

$$ {}_ng_x = ({}_nS'_x - {}_nS_x)/(1 - {}_nS_x) $$

where ${}_xS'_x$ is the average proportion of surviving in the standard model life table for the ages x to $x+n$ for the intercensal periods between 1925 and 1940, and

${}_nS_x$ is the average census survival ratio for the ages x to $x+n$ for the intercensal periods between 1925 and 1940.

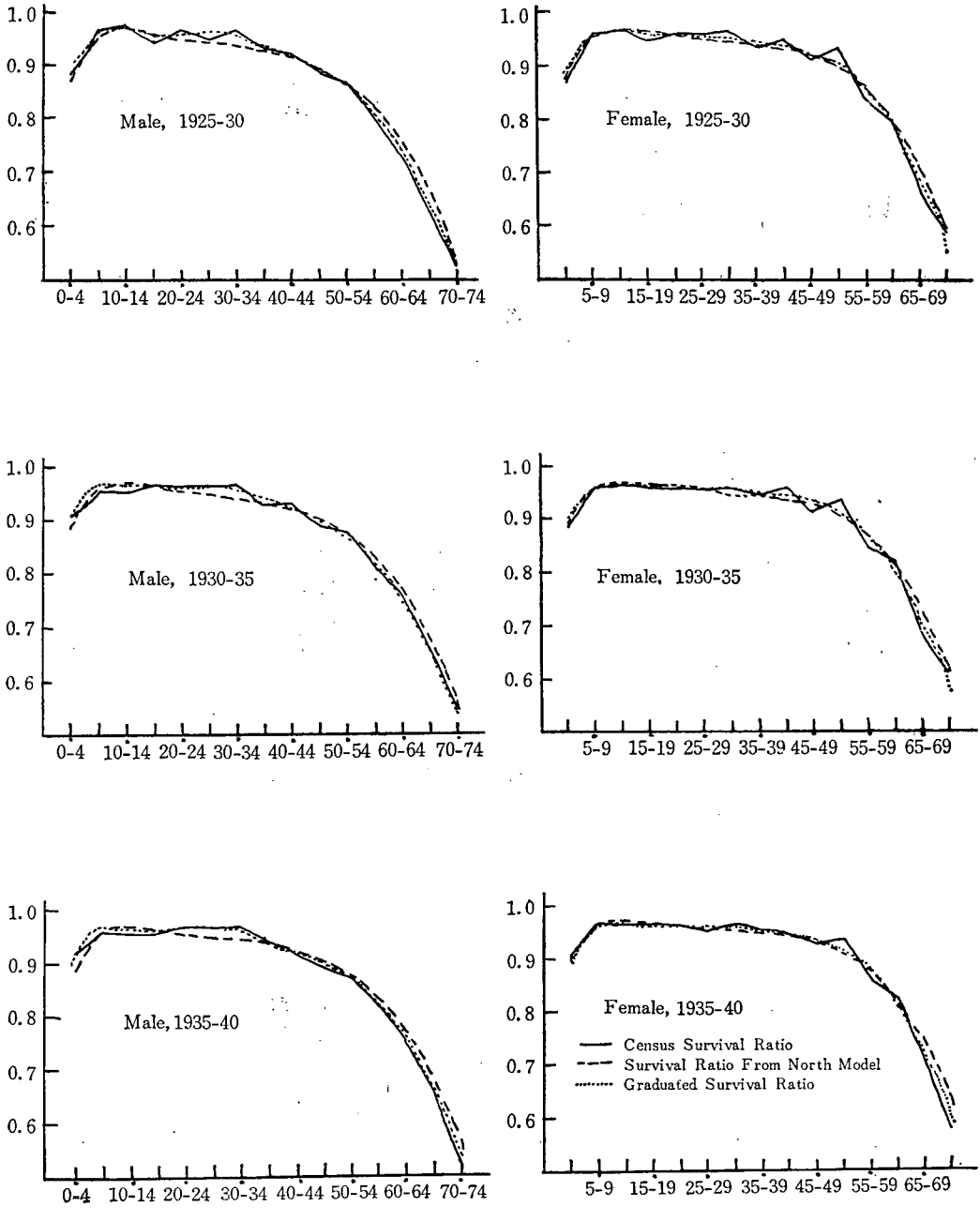
The ${}_5g_x$ values thus derived are presented in Table 2. The graduated survival ratios for the age 70 and onwards are obtained from the standard model life tables by applying the same level of mortality and the same adjustment factors assigned to the ages 65–69.

Table 2. **Graduation Factors for Korean Censuses Survival Ratios, 1925–70**

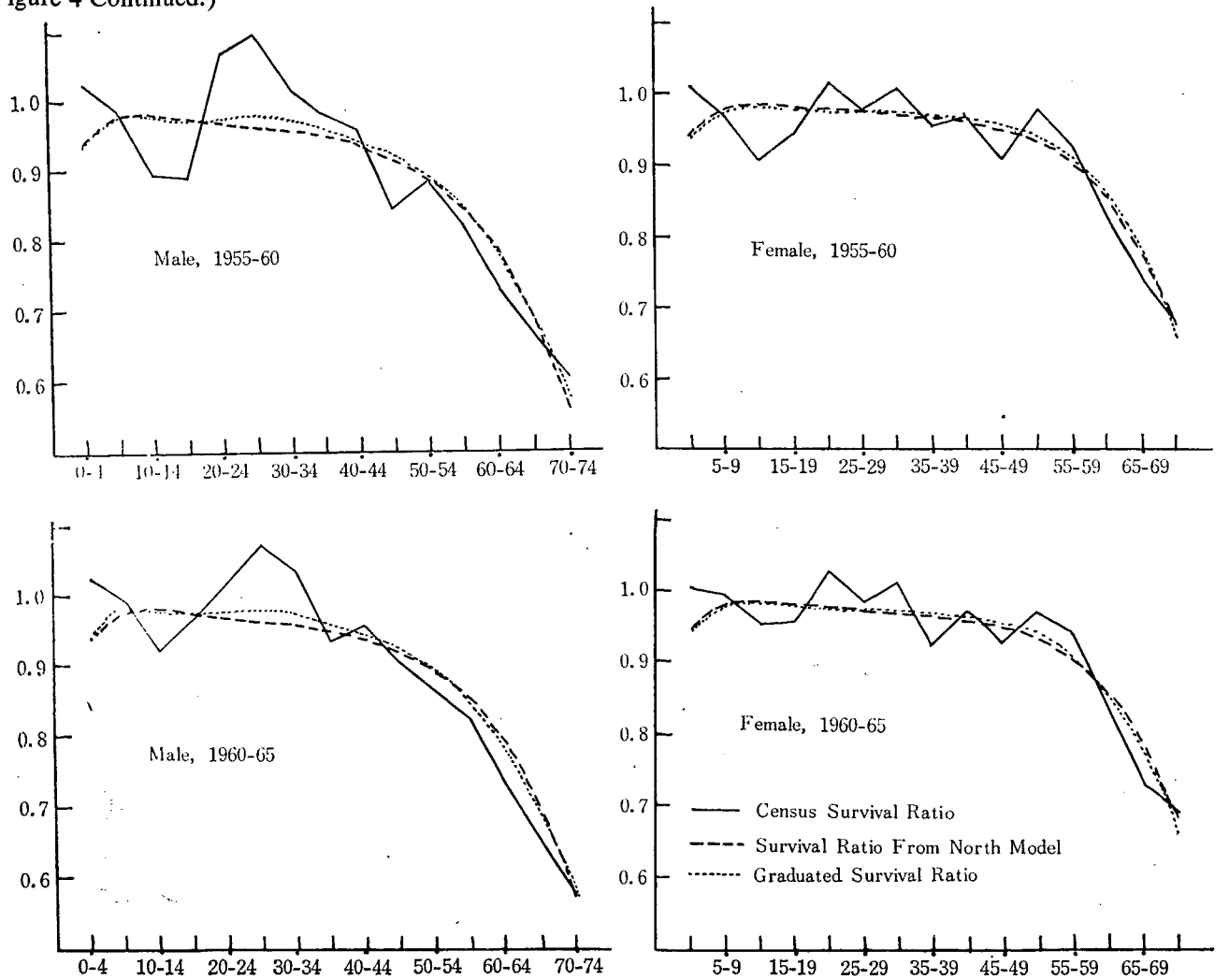
Age	Males	Females	Age	Males	Females
0–4	0.19205	0.02028	35–39	0.09776	−0.03132
5–9	−0.09053	0.05385	40–44	0.01017	−0.08009
10–14	−0.50401	−0.07769	45–49	−0.00786	−0.05576
15–19	−0.15393	−0.08491	50–54	−0.02458	−0.00519
20–24	0.10824	0.01467	55–59	−0.04866	−0.02478
25–29	0.23839	0.06061	60–64	−0.04774	−0.01457
30–34	0.22170	0.04912	65–69	−0.04001	0.01004

Then, the graduated survival ratios (${}_5\bar{S}_x$) are utilized to obtain all the life table functions. From ${}_5\bar{S}_x$ (= ${}_5P_x$ in life table) values, ${}_nL_x$ and l_x values are calculated. Once l_x and ${}_nL_x$ values are known, the other functions become a matter of automatic computation. The most important part of this whole procedure is to calculate ${}_nL_x$ values. The ${}_1L_x$ and ${}_5L_x$ values are calculated following the steps summarized below.

Figure 4. **Census Survival Ratios and Proportions Surviving from Two Sets of Korean Life Tables Based on Census Age Distributions, 1925–65**



(Figure 4 Continued.)



1. Letting ${}_nL'_x$ be temporary substitute for ${}_nL_x$ and assuming ${}_5L'_0$ equals to A (any number), ${}_5L'_x$ values are computed by the formula, ${}_5L'_x = {}_5L'_{x-5} \times {}_5P_{x-5}$
2. Applying Sprague multipliers to the ${}_5L_x$ values, ${}_1L'_x$ values are obtained. It is, however, found that Sprague multipliers are not suitable for estimating ${}_1L'_0 - {}_1L'_4$ from ${}_5L'_0$. So another method is developed to separate ${}_1L_0' - {}_1L_4'$ from ${}_5L_0'$.
3. This method is based on the principle that if the pattern in the number of deaths for six-month-of-age groups is constant, a constant proportional relationship is found among the single year of age distribution of a stationary population. The pattern in the number of deaths of six-month-of-age groups could be easily expressed by a series of separation factors for ${}_1L_x$ values (f_x).[12] The separation factors for Korea are never known, but could be reasonably assumed from the Japanese experiences between 1910 and 1960. The Korean censuses manifest very similar sex pattern of infant and child mortality under age 5 to those from the official life tables of Japan which are very distinctive from the patterns in other countries. The f_x values for the ages 0–4 had changed little in Japan during 1920–40, whereas there was a considerable drop in f_0 value after 1950. However, in Korea, any significant changes in f_x values are unlikely to have happened until 1970 considering that the mortality for the ages 5–14 in Korea during 1965–70[13] was still around the level in the 1940s in Japan. Therefore, the average Japanese experiences between 1920–40 are adopted as the f_x values for Korea during the forty five years between 1925 and 1970 for the ages 0–3, and those observed in the United States in 1910–11 are employed for the ages 4–5. The separation factors adopted in this study are as follows:

	Male	Female		Male	Female
f_0	.24	.25	f_3	.47	.47
$f_{0.5}$	.37	.38	$f_{3.5}$	.48	.48
f_1	.40	.41	f_4	.48	.48
$f_{1.5}$	.43	.43	$f_{4.5}$	.49	.49
f_2	.45	.45	f_5	.49	.49
$f_{2.5}$	.46	.46			

4. Provided the proportion of ${}_1L_5$ (population at age 5) to ${}_6L_0$ (population at ages 0–5) is known, the proportional single year of age distribution of ${}_6L_0$ could be computed by the formula,

$$R_x = 1/6 + k_x[1 - 6R_5],$$

where R_x is the proportion of ${}_1L_x$ to ${}_6L_0$, and k_x is the adjustment factor for ${}_1L_x$ derived from the proportional distributions of deaths in the ages 0–5 by six-month-of-age groups. The general base of this equation is discussed in Appendix. The values for k_x conforming to the above given separation factors (f_x values) are computed as:

	Male	Female		Male	Female
k_0	0.30034	0.29252	k_3	−0.07596	−0.07463
k_1	0.08088	0.08451	k_4	−0.12450	−0.12388
k_2	−0.01409	−0.01185			

12. $f_x = (L_x - l_{x+1})/(l_x - l_{x+1})$
13. Can be calculated from ${}_1L'_5$ to ${}_1L'_{14}$ values with an assumption that the separation factors for these ages are .5.

From the above steps 1 and 2, the values for ${}_1L'_5$ and ${}_6L'_0$ are available and accordingly the value for R_5 becomes known. As a result, the values for ${}_1L'_0 - {}_1L'_4$ are now a matter of simple calculation using the above formula.

5. Applying f_1 to ${}_1L'_0$ and ${}_1L'_1$, the value for l'_1 can be computed. Then, from ${}_1L'_0$ and l'_1 the value for l'_0 can be obtained using f_0. Finally ${}_nL'_x$ values can be converted to ${}_nL_x$ values by applying a convertion factor ($c = l_0 (= 100{,}000)/l'_0$) to all the ${}_nL'_x$ values.

After having ${}_1L_x$ values, l_x values are calculated on the basis of the above given separation factors (f_x) for the ages 0–5 and assuming separation factors being 0.5 for other ages. In constructing life tables for both sexes, the masculinity ratio at birth is supposed as 1.05.

Some Remarks on the Quality of the Estimates

As expected from the earlier discussions and as is evident from Figure 4, the graduated survival ratios are very close to the actual census survival ratios for the colonial intercensal periods between 1925 and 1940. In these periods, the estimated survival ratios based on north model life tables disagree, though not significantly, with either the census or the graduated survival ratios. The graduated survival ratios for these periods reveal higher mortality than the estimated north survival ratios for the adult working ages and lower mortality for old ages. This trend is more obvious for males. Again for males, some discrepancies are seen for the ages 0–4 between the graduated and the estimated model ratios during the colonial period. The graduated ratios usually manifest higher mortality.

On the other hand, the graduated survival ratios and the estimated survival ratios from the north model are in close agreement with each other for both males and females after 1955. The only marked exception is the ratios for males aged 20–39. Lower mortality is observed from the graduated ratios.

Consequently, the two kinds of life tables agree closely in the case of females throughout the entire period, while significant differences are seen for males, particularly during the colonial period. In other words, the decision as to which life tables represent the Korean mortality more closely is of greater importance for males than for females and for the earlier years than the later years. If Korean census survival ratios for 1925–40 are substantially erroneous, the life tables based on the estimated survival ratios from north model life tables might be considered to be more desirable. Otherwise, if the census survival ratios prior to 1940 are only subject to minor errors and the pattern of mortality in this period could be extended to the years after 1955, the life tables based on graduated survival ratios could be more highly recommended. It should not be overlooked, however, that the pattern of infant and child mortality under age 5 has also a great significance on this matter.

3. RESULTING LIFE TABLES FOR KOREA, 1925–70

Two sets of life tables for Korea constructed by adopting the above mentioned methods are presented in the following tables.

Table I.1 Abridged Life Table for Korea, 1925–1930*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	18836	0. 18836	0. 21935	85873	0. 76409	3719320	37. 19
1	81164	11292	0. 13913	0. 03813	296172	0. 87312	3633448	44. 77
5	69872	5259	0. 07527	0. 01577	333571	0. 95404	3337276	47. 76
10	64612	2141	0. 03314	0. 00673	318240	0. 96315	3003706	46. 49
15	62471	2486	0. 03979	0. 00811	306512	0. 95589	2685466	42. 99
20	59985	2756	0. 04594	0. 00941	292992	0. 95355	2378954	39. 66
25	57230	2673	0. 04670	0. 00957	279383	0. 95294	2085961	36. 45
30	54557	2624	0. 04809	0. 00986	266235	0. 94979	1806579	33. 11
35	51933	2780	0. 05353	0. 01099	252867	0. 94263	1540344	29. 66
40	49153	2970	0. 06042	0. 01246	238360	0. 93609	1287476	26. 19
45	46183	3161	0. 06845	0. 01417	223127	0. 92502	1049116	22. 72
50	43021	3550	0. 08251	0. 01720	206397	0. 90441	825989	19. 20
55	39472	4592	0. 11633	0. 02460	186667	0. 85529	619593	15. 70
60	34880	6229	0. 17859	0. 03902	159655	0. 78180	432925	12. 41
65	28651	7568	0. 26414	0. 06063	124818	0. 68415	273271	9. 54
70	21083	7935	0. 37635	0. 09292	85394	0. 54712	148453	7. 04
75	13148	7813	0. 59426	0. 16724	46721	0. 34969	63059	4. 80
80	5335	.5335	1. 00000	0. 32652	16338	0. 0	16338	3. 06

Male

0	100000	18421	0. 18421	0. 21419	86000	0. 77463	3785219	37. 85
1	81579	9851	0. 12076	0. 03269	301313	0. 89266	3699218	45. 34
5	71728	4178	0. 05825	0. 01209	345739	0. 96642	3397905	47. 37
10	67550	1930	0. 02858	0. 00578	334129	0. 96196	3052166	45. 18
15	65620	2736	0. 04170	0. 00851	321419	0. 95657	2718036	41. 42
20	62883	2687	0. 04273	0. 00874	307460	0. 95962	2396617	38. 11
25	60196	2276	0. 03780	0. 00771	295045	0. 96312	2089157	34. 71
30	57921	2242	0. 03870	0. 00789	284163	0. 95581	1794113	30. 98
35	55679	2919	0. 05242	0. 01075	271606	0. 93704	1509949	27. 12
40	52760	3897	0. 07387	0. 01531	254506	0. 91488	1238343	23. 47
45	48863	4689	0. 09596	0. 02014	232842	0. 89205	983837	20. 13
50	44174	5408	0. 12242	0. 02603	207707	0. 85942	750995	17. 00
55	38766	6333	0. 16336	0. 03548	178508	0. 80892	543288	14. 01
60	32433	7273	0. 22425	0. 05037	144398	0. 73741	364780	11. 25
65	25160	7785	0. 30941	0. 07311	106481	0. 63943	220382	8. 76
70	17376	7233	0. 41625	0. 10622	68087	0. 51575	113901	6. 56
75	10143	6295	0. 62060	0. 17926	35116	0. 30466	45814	4. 52
80	3848	3848	1. 00000	0. 35971	10698	0. 0	10698	2. 78

Both Sexes

0	100000	18623	0. 18623	0. 21671	85938	0. 76949	3753073	37. 53
1	81377	10554	0. 12969	0. 03532	298805	0. 88320	3667135	45. 06
5	70823	4706	0. 06644	0. 01385	339803	0. 96049	3368330	47. 56
10	66117	2033	0. 03075	0. 00623	326378	0. 96253	3028527	45. 81
15	64084	2614	0. 04079	0. 00832	314148	0. 95625	2702148	42. 17
20	61470	2720	0. 04426	0. 00906	300402	0. 95673	2388001	38. 85
25	58749	2469	0. 04203	0. 00859	287405	0. 95829	2087598	35. 53
30	56280	2428	0. 04314	0. 00882	275418	0. 95297	1800194	31. 99
35	53852	2851	0. 05295	0. 01086	262465	0. 93967	1524776	28. 31
40	51000	3445	0. 06755	0. 01397	246630	0. 92488	1262311	24. 75
45	47556	3944	0. 08293	0. 01729	228103	0. 90778	1015681	21. 36
50	43612	4501	0. 10321	0. 02174	207068	0. 88130	787578	18. 06
55	39110	5484	0. 14021	0. 03005	182488	0. 83206	580510	14. 84
60	33627	6764	0. 20115	0. 04455	151840	0. 76018	398022	11. 84
65	26863	7679	0. 28586	0. 06653	115426	0. 66302	246181	9. 16
70	19184	7575	0. 39486	0. 09898	76530	0. 53282	130756	6. 82
75	11609	7036	0. 60605	0. 17254	40777	0. 24802	54226	4. 67
80	4573	4573	1. 00000	0. 34004	13449	0. 0	13449	2. 94

*Calculated from graduated census survival ratios.
P(0) = Proportion surviving from birth to 0–4.
P(1) = 5L5/5L0
P(75) = T(80)/T(75)

Table I.2 Abridged Life Table for Korea, 1930–1935*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	17101	0.17101	0.19617	87174	0.78582	4004937	40.05
1	82899	10252	0.12367	0.03353	305737	0.88780	3917763	47.28
5	72647	4815	0.06628	0.01380	348826	0.95924	3612026	49.72
10	67832	2014	0.02969	0.00602	334608	0.96705	3263200	48.11
15	65818	2339	0.03554	0.00723	323583	0.96068	2928591	44.50
20	63478	2601	0.04097	0.00837	310860	0.95852	2605008	41.04
25	60878	2541	0.04174	0.00853	297965	0.95790	2294149	37.68
30	58337	2511	0.04305	0.00880	285421	0.95499	1996184	34.22
35	55825	2686	0.04811	0.00985	272574	0.94827	1710763	30.65
40	53140	2906	0.05469	0.01124	258474	0.94190	1438189	27.06
45	50233	3137	0.06244	0.01288	243456	0.93139	1179715	23.48
50	47097	3569	0.07579	0.01574	226753	0.91216	936258	19.88
55	43527	4618	0.10609	0.02233	206835	0.86825	709505	16.30
60	38909	6374	0.16382	0.03549	179584	0.79797	502670	12.92
65	32535	7996	0.24575	0.05580	143303	0.70466	323086	9.93
70	24540	8657	0.35276	0.08573	100980	0.57135	179783	7.33
75	15883	9140	0.57542	0.15841	57695	0.36586	78803	4.96
80	6744	6744	1.00000	0.31948	21108	0.0	21108	3.13

Male

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	16680	0.16680	0.19101	87323	0.79593	4037044	40.37
1	83320	8920	0.10706	0.02872	310639	0.90524	3949720	47.40
5	74400	3820	0.05134	0.01060	360252	0.96996	3639081	48.91
10	70580	1835	0.02600	0.00525	349430	0.96550	3278829	46.46
15	68745	2605	0.03790	0.00772	337375	0.96050	2929399	42.61
20	66140	2570	0.03886	0.00793	324048	0.96330	2592024	39.19
25	63570	2183	0.03434	0.00699	312156	0.96651	2267976	35.68
30	61387	2157	0.03514	0.00715	301702	0.95986	1955821	31.86
35	59230	2822	0.04764	0.00974	289591	0.94268	1654119	27.93
40	56408	3804	0.06743	0.01393	272992	0.92195	1364528	24.19
45	52605	4651	0.08841	0.01848	251685	0.89994	1091536	20.75
50	47954	5472	0.11410	0.02416	226501	0.86822	839851	17.51
55	42482	6534	0.15381	0.03323	196653	0.81937	613349	14.44
60	35948	7642	0.21258	0.04743	161132	0.75029	416697	11.59
65	28306	8354	0.29512	0.06910	120895	0.65491	255565	9.03
70	19952	7959	0.39890	0.10052	79176	0.53314	134670	6.75
75	11993	7284	0.60731	0.17255	42212	0.31466	55494	4.63
80	4710	4710	1.00000	0.35458	13282	0.0	13282	2.82

Both Sexes

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	16885	0.16885	0.19353	87251	0.79100	4021382	40.21
1	83115	9570	0.11514	0.03105	308248	0.89679	3934131	47.33
5	73545	4305	0.05854	0.01214	354678	0.96482	3625883	49.30
10	69240	1922	0.02776	0.00562	342200	0.96624	3271205	47.24
15	67317	2476	0.03678	0.00749	330647	0.96059	2929005	43.51
20	64842	2585	0.03986	0.00814	317615	0.96102	2598358	40.07
25	62257	2358	0.03787	0.00772	305234	0.96241	2280743	36.63
30	59899	2330	0.03890	0.00793	293760	0.95755	1975510	32.98
35	57569	2755	0.04786	0.00979	281290	0.94532	1681750	29.21
40	54814	3366	0.06141	0.01266	265910	0.93141	1400460	25.55
45	51448	3912	0.07604	0.01580	247671	0.91502	1134550	22.05
50	47536	4544	0.09558	0.02005	226624	0.88967	886879	18.66
55	42992	5599	0.13024	0.02777	201620	0.84383	660255	15.36
60	37393	7023	0.18783	0.04128	170133	0.77484	458635	12.27
65	30369	8179	0.26932	0.06204	131826	0.68129	288502	9.50
70	22190	8299	0.37401	0.09241	89812	0.55410	156676	7.06
75	13891	8189	0.58953	0.16456	49764	0.25574	66864	4.81
80	5702	5702	1.00000	0.33344	17100	0.0	17100	3.00

*Calculated from graduated census survival ratios.

P(0) = Proportion surviving from birth to 0–4.

P(1) = 5L5/5L0

P(75) = T(80)/T(75)

Table I.3 Abridged Life Table for Korea, 1935–1940*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	16080	0.16080	0.18285	87940	0.79861	4167188	41.67
1	83920	9840	0.11487	0.03096	311366	0.89609	4079247	48.61
5	74281	4549	0.06124	0.01271	357814	0.96219	3767881	50.72
10	69732	1929	0.02767	0.00560	344285	0.96927	3410067	48.90
15	67802	2265	0.03340	0.00679	333705	0.96283	3065782	45.22
20	65537	2542	0.03879	0.00791	321302	0.96074	2732076	41.69
25	62996	2490	0.03952	0.00807	308687	0.96012	2410775	38.27
30	60506	2469	0.04080	0.00833	296377	0.95731	2102087	34.74
35	58037	2651	0.04569	0.00935	283725	0.95079	1805711	31.11
40	55386	2887	0.05212	0.01070	269762	0.94452	1521986	27.48
45	52409	3136	0.05973	0.01231	254796	0.93425	1252224	23.85
50	49363	3595	0.07282	0.01510	238043	0.91564	997428	20.21
55	45768	4628	0.10112	0.02123	217962	0.87473	759385	16.59
60	41140	6450	0.15678	0.03383	190658	0.80524	541423	13.16
65	34690	8241	0.23755	0.05368	153525	0.71388	350765	10.11
70	26450	9049	0.34213	0.08257	109599	0.58224	197240	7.46
75	17400	9865	0.56694	0.15459	63813	0.37341	87641	5.04
80	7535	7535	1.00000	0.31623	23828	0.0	23828	3.16

Male

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	16650	0.16650	0.19062	87346	0.79630	4041463	40.41
1	83350	8904	0.10683	0.02865	310801	0.90545	3954117	47.44
5	74446	3814	0.05123	0.01058	360503	0.97001	3643315	48.94
10	70632	1834	0.02596	0.00524	349691	0.96556	3282813	46.48
15	68799	2603	0.03783	0.00771	337648	0.96057	2933121	42.63
20	66196	2567	0.03878	0.00792	324335	0.96337	2595473	39.21
25	63628	2181	0.03427	0.00698	312454	0.96657	2271138	35.69
30	61448	2155	0.03508	0.00714	302009	0.95993	1958684	31.88
35	59292	2820	0.04756	0.00973	289907	0.94277	1656675	27.94
40	56472	3802	0.06733	0.01391	273316	0.92207	1366768	24.20
45	52670	4650	0.08828	0.01845	252016	0.90007	1093452	20.76
50	48020	5473	0.11397	0.02413	226832	0.86836	841436	17.52
55	42548	6538	0.15365	0.03319	196972	0.81955	614603	14.45
60	36010	7648	0.21238	0.04738	161429	0.75051	417631	11.60
65	28362	8363	0.29488	0.06903	121154	0.65517	256202	9.03
70	19999	7972	0.39861	0.10043	79376	0.53343	135048	6.75
75	12027	7302	0.60709	0.17244	42342	0.31483	55672	4.63
80	4726	4726	1.00000	0.35450	13330	0.5	13330	2.82

Both Sexes

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	16372	0.16372	0.18681	87636	0.79743	4102792	41.03
1	83628	9263	0.11076	0.02978	311077	0.90088	4015156	48.01
5	74366	4173	0.05611	0.01162	359191	0.96621	3704079	49.81
10	70193	1880	0.02679	0.00542	347054	0.96736	3344888	47.65
15	68313	2438	0.03569	0.00726	335725	0.96167	2997834	43.88
20	65875	2555	0.03878	0.00791	322855	0.96209	2662109	40.41
25	63320	2331	0.03682	0.00751	310617	0.96344	2339254	36.94
30	60988	2308	0.03784	0.00771	299262	0.95866	2028637	33.26
35	58680	2738	0.04665	0.00954	286891	0.94664	1729376	29.47
40	55942	3356	0.05998	0.01236	271583	0.93295	1442484	25.79
45	52587	3911	0.07438	0.01544	253372	0.91684	1170902	22.27
50	48675	4557	0.09361	0.01962	232301	0.89199	917529	18.85
55	44119	5606	0.12707	0.02706	207211	0.84786	685228	15.53
60	38513	7064	0.18341	0.04021	175687	0.77948	478017	12.41
65	31449	8304	0.26403	0.06063	136945	0.68728	302330	9.61
70	23146	8497	0.36712	0.09028	94119	0.56116	165386	7.15
75	14648	8552	0.58383	0.16192	52815	0.25891	71267	4.87
80	6096	6096	1.00000	0.33039	18451	0.0	18451	3.03

*Calculated from graduated census survival ratios.

P(0) = Proportion surviving from birth to 0–4.

P(1) = 5L5/5L0

P(75) = T(80)/T(75)

Table I.4 Abridged Life Table for Korea, 1940–1945*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	14214	0. 14214	0. 15911	89339	0. 82198	4475177	44. 75
1	85786	8521	0. 09933	0. 02649	321649	0. 91062	4385838	51. 13
5	77264	4052	0. 05244	0. 01083	374254	0. 96741	4064190	52. 60
10	73213	1762	0. 02407	0. 00487	362057	0. 97318	3689936	50. 40
15	71451	2108	0. 02950	0. 00598	352346	0. 96690	3327879	46. 58
20	69343	2402	0. 03463	0. 00705	340684	0. 96493	2975533	42. 91
25	66941	2366	0. 03534	0. 00720	328736	0. 96431	2634849	39. 36
30	64576	2359	0. 03653	0. 00744	317003	0. 96172	2306113	35. 71
35	62217	2556	0. 04109	0. 00838	304868	0. 95556	1989110	31. 97
40	59661	2821	0. 04728	0. 00968	291320	0. 94943	1684242	28. 23
45	56840	3107	0. 05467	0. 01123	276588	0. 93963	1392921	24. 51
50	53732	3589	0. 06679	0. 01381	259890	0. 92222	1116333	20. 78
55	50144	4756	0. 09484	0. 01984	239676	0. 88149	856443	17. 08
60	45388	6663	0. 14681	0. 03154	211272	0. 81901	616767	13. 59
65	38725	8576	0. 22146	0. 04956	173034	0. 73134	405495	10. 47
70	30149	9708	0. 32202	0. 07672	126547	0. 60286	232461	7. 71
75	20440	11259	0. 55080	0. 14758	76290	0. 38831	105914	5. 18
80	9182	9182	1. 00000	0. 30994	29624	0. 0	29624	3. 23

Male

0	100000	15571	0. 15571	0. 17661	88166	0. 80949	4202718	42. 03
1	84429	8327	0. 09863	0. 02630	316581	0. 91293	4114552	48. 73
5	76102	3587	0. 04714	0. 00971	369506	0. 97215	3797971	49. 91
10	72515	1768	0. 02439	0. 00492	359215	0. 96768	3428464	47. 28
15	70747	2515	0. 03555	0. 00723	347606	0. 96295	3069249	43. 38
20	68232	2486	0. 03644	0. 00743	334727	0. 96559	2721644	39. 89
25	65745	2116	0. 03219	0. 00655	323209	0. 96861	2386917	36. 31
30	63629	2094	0. 03291	0. 00669	313063	0. 96240	2063708	32. 43
35	61535	2747	0. 04465	0. 00912	301292	0. 94618	1750645	28. 45
40	58787	3730	0. 06346	0. 01309	285077	0. 92632	1449353	24. 65
45	55057	4610	0. 08373	0. 01746	264072	0. 90485	1164276	21. 15
50	50447	5495	0. 10892	0. 02300	238946	0. 87370	900204	17. 84
55	44952	6647	0. 14787	0. 03184	208767	0. 82587	661259	14. 71
60	38305	7865	0. 20533	0. 04562	172414	0. 75831	452492	11. 81
65	30440	8713	0. 28622	0. 06664	130743	0. 66457	280077	9. 20
70	21728	8432	0. 38806	0. 09704	86888	0. 54399	149334	6. 87
75	13296	7965	0. 59902	0. 16850	47266	0. 32115	62446	4. 70
80	5331	5331	1. 00000	0. 35123	15180	0. 0	15180	2. 85

Both Sexes

0	100000	14909	0. 14909	0. 16801	88738	0. 81558	4335625	43. 36
1	85091	8422	0. 09897	0. 02640	319053	0. 91179	4246887	49. 91
5	76669	3814	0. 04974	0. 01026	371822	0. 96982	3927834	51. 23
10	72855	1765	0. 02423	0. 00490	360601	0. 97037	3556012	48. 81
15	71090	2316	0. 03258	0. 00662	349918	0. 96489	3195410	44. 95
20	68774	2445	0. 03555	0. 00724	337633	0. 96527	2845492	41. 37
25	66329	2238	0. 03374	0. 00687	325905	0. 96649	2507860	37. 81
30	64091	2223	0. 03469	0. 00706	314985	0. 96207	2181955	34. 04
35	61868	2654	0. 04290	0. 00876	303037	0. 95078	1866969	30. 18
40	59213	3287	0. 05551	0. 01141	288122	0. 93772	1563933	26. 41
45	55927	3877	0. 06932	0. 01435	270177	0. 92222	1275810	22. 81
50	52050	4565	0. 08770	0. 01832	249163	0. 89839	1005633	19. 32
55	47485	5724	0. 12055	0. 02557	223845	0. 85492	756470	15. 93
60	41760	7279	0. 17430	0. 03804	191369	0. 79100	532626	12. 75
65	34482	8646	0. 25074	0. 05712	151373	0. 70180	341257	9. 90
70	25836	9054	0. 35047	0. 08523	106234	0. 57820	189884	7. 35
75	16781	9571	0. 57037	0. 15582	61424	0. 26570	83650	4. 98
80	7210	7210	1. 00000	0. 32439	22226	0. 0	22226	3. 08

*Calculated from graduated census survival ratios.
(Mortality levels for all ages are linearly interpolated from those for 1935–40 and for 1955–60 under assumed normal conditions)

P(0) = Proportion surviving from birth to 0–4.
P(1) = 5L5/5L0
P(75) = T(80)/T(75)

Table I.5 Abridged Life Table for Korea, 1945–1950*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	12950	0. 12950	0. 14343	90288	0. 83782	4720815	47. 21
1	87050	7763	0. 08918	0. 02362	328620	0. 92002	4630527	53. 19
5	79287	3712	0. 04681	0. 00963	385405	0. 97075	4301907	54. 26
10	75576	1651	0. 02184	0. 00441	374130	0. 97571	3916504	51. 82
15	73925	1952	0. 02640	0. 00535	365043	0. 97070	3542373	47. 92
20	71974	2206	0. 03065	0. 00622	354347	0. 96886	3177331	44. 15
25	69768	2192	0. 03141	0. 00638	343313	0. 96824	2822984	40. 46
30	67576	2199	0. 03254	0. 00661	332409	0. 96583	2479671	36. 69
35	65377	2406	0. 03680	0. 00749	321051	0. 96002	2147262	32. 84
40	62972	2692	0. 04275	0. 00873	308215	0. 95403	1826212	29. 00
45	60280	3009	0. 04991	0. 01023	294046	0. 94468	1517997	25. 18
50	57271	3514	0. 06136	0. 01265	277780	0. 92837	1223951	21. 37
55	53757	4699	0. 08741	0. 01822	257882	0. 89056	946171	17. 60
60	49058	6662	0. 13580	0. 02901	229660	0. 83190	688289	14. 03
65	42396	8762	0. 20666	0. 04586	191054	0. 74773	458629	10. 82
70	33634	10194	0. 30310	0. 07136	142857	0. 62222	267575	7. 96
75	23440	12552	0. 53550	0. 14121	88888	0. 40309	124718	5. 32
80	10888	10888	1. 00000	0. 30387	35830	0. 0	35830	3. 29

Male

0	100000	14518	0. 14518	0. 16318	88967	0. 82238	4363947	43. 64
1	85482	7764	0. 09082	0. 02409	322223	0. 92001	4274980	50. 01
5	77718	3363	0. 04327	0. 00889	378298	0. 97419	3957257	50. 86
10	74355	1700	0. 02286	0. 00461	368534	0. 96972	3574459	48. 07
15	72655	2424	0. 03336	0. 00678	357375	0. 96522	3205925	44. 13
20	70232	2402	0. 03420	0. 00696	344945	0. 96772	2848550	40. 56
25	67829	2047	0. 03018	0. 00613	333811	0. 97058	2503605	36. 91
30	65782	2029	0. 03084	0. 00626	323990	0. 96475	2169794	32. 98
35	63753	2669	0. 04187	0. 00854	312569	0. 94946	1845804	28. 95
40	61084	3648	0. 05971	0. 01229	296772	0. 93043	1533235	25. 10
45	57437	4557	0. 07935	0. 01651	276126	0. 90942	1236463	21. 53
50	52879	5505	0. 10411	0. 02192	251114	0. 87880	960337	18. 16
55	47374	6743	0. 14233	0. 03055	220679	0. 83194	709223	14. 97
60	40631	8067	0. 19855	0. 04394	183592	0. 76580	488544	12. 02
65	32564	9050	0. 27791	0. 06437	140595	0. 67358	304953	9. 36
70	23514	8887	0. 37794	0. 09384	94702	0. 55412	164358	6. 99
75	14627	8649	0. 59126	0. 16481	52476	0. 32739	69656	4. 76
80	5979	5979	1. 00000	0. 34800	17180	0. 0	17180	2. 87

Both Sexes

0	100000	13753	0. 13753	0. 15347	89611	0. 82991	4538029	45. 38
1	86247	7764	0. 09001	0. 02386	325343	0. 92001	4448418	51. 58
5	78484	3533	0. 04502	0. 00925	381764	0. 97250	4123074	52. 53
10	74951	1676	0. 02236	0. 00451	371264	0. 97266	3741310	49. 92
15	73275	2193	0. 02993	0. 00607	361115	0. 96792	3370046	45. 99
20	71081	2306	0. 03245	0. 00660	349532	0. 96828	3008931	42. 33
25	68775	2118	0. 03079	0. 00626	338446	0. 96942	2659399	38. 67
30	66657	2112	0. 03168	0. 00644	328097	0. 96528	2320954	34. 82
35	64546	2541	0. 03936	0. 00802	316706	0. 95468	1992857	30. 88
40	62005	3181	0. 05131	0. 01052	302354	0. 94217	1676151	27. 03
45	58824	3802	0. 06463	0. 01335	284867	0. 92717	1373797	23. 35
50	55022	4534	0. 08240	0. 01717	264122	0. 90423	1088929	19. 79
55	50488	5746	0. 11380	0. 02406	238827	0. 86282	824808	16. 34
60	44742	7382	0. 16499	0. 03582	206064	0. 80174	585981	13. 10
65	37360	8909	0. 23847	0. 05393	165209	0. 71541	379917	10. 17
70	28451	9525	0. 33478	0. 08059	118192	0. 59427	214708	7. 55
75	18926	10553	0. 55757	0. 15024	70238	0. 27226	96516	5. 10
80	8373	8373	1. 00000	0. 31865	26278	0. 0	26278	3. 14

*Calculated from graduated census survival ratios.

(Mortality levels for all ages are linearly interpolated from those for 1935–40 and for 1955–60 under assumed normal conditions)

P(0) = Proportion surviving from birth to 0–4.

P(1) = 5L5/5L0

P(75) = T(80)/T(75)

Table I.6 Abridged Life Table for Korea, 1950–1955*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	11690	0. 11690	0. 12814	91232	0. 85359	4970956	49. 71
1	88310	7008	0. 07936	0. 02088	335563	0. 92907	4879724	55. 26
5	81302	3365	0. 04139	0. 00849	396523	0. 97401	4544161	55. 89
10	77936	1530	0. 01963	0. 00396	386217	0. 97817	4147638	53. 22
15	76406	1793	0. 02347	0. 00475	377786	0. 97422	3761421	49. 23
20	74613	2012	0. 02696	0. 00547	368047	0. 97251	3383635	45. 35
25	72602	2016	0. 02777	0. 00563	357929	0. 97189	3015588	41. 54
30	70586	2035	0. 02883	0. 00585	347868	0. 96964	2657659	37. 65
35	68550	2250	0. 03282	0. 00667	337306	0. 96416	2309792	33. 69
40	66301	2555	0. 03854	0. 00786	325217	0. 95831	1972485	29. 75
45	63745	2899	0. 04548	0. 00930	311659	0. 94938	1647268	25. 84
50	60846	3426	0. 05630	0. 01158	295883	0. 93410	1335609	21. 95
55	57420	4622	0. 08050	0. 01672	276384	0. 89900	1039726	18. 11
60	52798	6630	0. 12557	0. 02668	248469	0. 84389	763342	14. 46
65	46168	8905	0. 19289	0. 04247	209681	0. 76299	514873	11. 15
70	37263	10637	0. 28547	0. 06649	159984	0. 64024	305192	8. 19
75	26625	13873	0. 52106	0. 13544	102428	0. 41765	145208	5. 45
80	12752	12752	1. 00000	0. 29808	42779	0. 0	42779	3. 35

Male

0	100000	13500	0. 13500	0. 15044	89740	0. 83483	4523223	45. 23
1	86500	7220	0. 08347	0. 02203	327673	0. 92665	4433483	51. 25
5	79280	3145	0. 03967	0. 00813	386795	0. 97611	4105810	51. 79
10	76135	1630	0. 02141	0. 00432	377555	0. 97166	3719015	48. 85
15	74505	2330	0. 03127	0. 00635	366855	0. 96738	3341460	44. 85
20	72175	2315	0. 03208	0 ·00652	354888	0. 96974	2974605	41. 21
25	69860	1976	0. 02828	0. 00574	344149	0. 97244	2619717	37. 50
30	67884	1961	0. 02888	0. 00586	334664	0. 96698	2275568	33. 52
35	65923	2586	0. 03923	0. 00799	323614	0. 95256	1940904	29. 44
40	63337	3558	0. 05618	0. 01154	308262	0. 93432	1617290	25. 53
45	59779	4495	0. 07520	0. 01561	288015	0. 91376	1309028	21. 90
50	55284	5503	0. 09954	0. 02091	263177	0. 88364	1021013	18. 47
55	49781	6824	0. 13707	0. 02934	232553	0. 83769	757837	15. 22
60	42957	8253	0. 19213	0. 04237	194808	0. 77290	525284	12. 23
65	34704	9371	0. 27003	0. 06224	150567	0. 68212	330476	9. 52
70	25333	9331	0. 36835	0. 09086	102705	0. 56372	179909	7. 10
75	16002	9343	0. 58389	0. 16138	57897	0. 33349	77205	4. 82
80	6658	6658	1. 00000	0. 34485	19308	0. 0	19308	2. 90

Both Sexes

0	100000	12617	0. 12617	0. 13947	90468	0. 84398	4741629	47. 42
1	87383	7117	0. 08144	0. 02147	331522	0. 92784	4651162	53. 23
5	80266	3253	0. 04052	0. 00831	391540	0. 97507	4319640	53. 82
10	77014	1581	0. 02053	0. 00414	381780	0. 97487	3928099	51. 01
15	75432	2068	0. 02742	0. 00556	372187	0. 97077	3546319	47. 01
20	73364	2167	0. 02954	0. 00600	361307	0. 97112	3174132	43. 27
25	71197	1995	0. 02802	0. 00569	350871	0. 97217	2812825	39. 51
30	69202	1997	0. 02886	0. 00585	341105	0. 96830	2461954	35. 58
35	67205	2422	0. 03604	0. 00733	330293	0. 95834	2120849	31. 56
40	64783	3069	0. 04737	0. 00970	316533	0. 94634	1790556	27. 64
45	61714	3717	0. 06022	0. 01241	299549	0. 93184	1474023	23. 88
50	57997	4490	0. 07741	0. 01608	279131	0. 90973	1174475	20. 25
55	53507	5750	0. 10746	0. 02264	253934	0. 87024	895344	16. 73
60	47758	7461	0. 15623	0. 03376	220984	0. 81184	641410	13. 43
65	40296	9144	0. 22692	0. 05097	179403	0. 72823	420426	10. 43
70	31152	9968	0. 31999	0. 07630	130646	0. 60943	241023	7. 74
75	21184	11553	0. 54537	0. 14510	79619	0. 27866	110377	5. 21
80	9631	9631	1. 00000	0. 31312	30757	0. 0	30757	3. 19

*Calculated from graduated census survival ratios.

(Mortality levels for all ages are linearly interpolated from those for 1935–40 and for 1955–60 under assumed normal conditions)

P(0) = Proportion surviving from birth to 0–4.

P(1) = 5L5/5L0

P(75) = T(80)/T(75)

Table I.7 Abridged Life Table for Korea, 1955–1960*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	10277	0. 10277	0. 11136	92292	0. 87129	5247014	52. 47
1	89723	6161	0. 06867	0. 01794	343351	0. 93884	5154722	57. 45
5	83562	2975	0. 03561	0. 00727	408999	0 ·97750	4811371	57. 58
10	80586	1387	0. 01721	0. 00347	399797	0. 98083	4402372	54. 63
15	79200	1626	0. 02052	0. 00415	392132	0. 97757	4002575	50. 54
20	77574	1822	0. 02349	0. 00475	383337	0. 97597	3610443	46. 54
25	75752	1842	0. 02432	0. 00492	374125	0. 97534	3227106	42. 60
30	73910	1872	0. 02533	0. 00513	364899	0. 97326	2852980	38. 60
35	72038	2092	0. 02904	0. 00589	355142	0. 96809	2488081	34. 54
40	69946	2416	0. 03454	0. 00703	343809	0. 96237	2132939	30. 49
45	67530	2789	0. 04130	0. 00843	330872	0. 95381	1789130	26. 49
50	64741	3337	0. 05154	0. 01057	315589	0. 93952	1458258	22. 52
55	61405	4541	0. 07395	0. 01532	296502	0. 90701	1142669	18. 61
60	56864	6587	0. 11585	0. 02450	268930	0. 85529	846167	14. 88
65	50276	9039	0. 17979	0. 03930	230013	0. 77751	577236	11. 48
70	41237	11080	0. 26870	0. 06196	178838	0. 65738	347223	8. 42
75	30156	15293	0. 50712	0. 13008	117564	0. 43228	168385	5. 58
80	14864	14864	1. 00000	0. 29247	50821	0. 0	50821	3. 42

Male

0	100000	12489	0. 12489	0. 13798	90509	0. 84720	4684945	46. 85
1	87511	6679	0. 07632	0. 02005	333093	0. 93307	4594437	52. 50
5	80832	2926	0. 03620	0. 00740	395250	0. 97798	4261344	52. 72
10	77907	1556	0. 01997	0. 00403	386547	0. 97356	3866094	49. 62
15	76351	2232	0. 02924	0. 00593	376326	0. 96948	3479547	45. 57
20	74118	2224	0. 03001	0. 00610	364841	0. 97170	3103221	41. 87
25	71894	1901	0. 02644	0. 00536	354516	0. 97424	2738380	38. 09
30	69993	1888	0. 02697	0. 00547	345383	0. 96916	2383865	34. 06
35	68105	2498	0. 03668	0. 00746	334732	0. 95556	2038481	29. 93
40	65607	3459	0. 05273	0. 01081	319856	0. 93814	1703749	25. 97
45	62148	4421	0. 07114	0. 01473	300070	0. 91797	1383893	22. 27
50	57727	5490	0. 09510	0. 01993	275455	0. 88835	1083823	18. 78
55	52237	6893	0. 13196	0. 02817	244701	0. 84328	808368	15. 48
60	45343	8428	0. 18587	0. 04084	206351	0. 77982	563667	12. 43
65	36915	9685	0. 26236	0. 06019	160917	0. 69044	357316	9. 68
70	27230	9776	0. 35901	0. 08799	111103	0. 57307	196399	7. 21
75	17454	10066	0. 57667	0. 15809	63670	0. 33965	85296	4. 89
80	7389	7389	1. 00000	0. 34168	21626	0. 0	21626	2. 93

Both Sexes

0	100000	11410	0. 11410	0. 12486	91379	0. 85895	4959125	49. 59
1	88590	6426	0. 07254	0. 01901	338097	0. 93593	4867747	54. 95
5	82164	2950	0. 03590	0. 00734	401957	0. 97774	4529650	55. 13
10	79214	1473	0. 01860	0. 00375	393010	0. 97717	4127693	52. 11
15	77740	1936	0. 02491	0. 00504	384037	0. 97351	3734683	48. 04
20	75804	2028	0. 02675	0. 00542	373863	0. 97384	3350646	44. 20
25	73776	1872	0. 02538	0. 00514	364081	0. 97479	2976783	40. 35
30	71904	1880	0. 02615	0. 00530	354903	0. 97122	2612702	36. 34
35	70024	2300	0. 03284	0. 00667	344688	0. 96186	2257798	32. 24
40	67724	2950	0. 04356	0. 00890	331541	0. 95040	1913110	28. 25
45	64773	3625	0. 05596	0. 01150	315095	0. 93633	1581569	24. 42
50	61149	4440	0. 07260	0. 01505	295033	0. 91505	1266474	20. 71
55	56709	5746	0. 10132	0. 02128	269970	0. 87742	971441	17. 13
60	50963	7530	0. 14776	0. 03179	236878	0. 82162	701472	13. 76
65	43433	9370	0. 21574	0. 04814	194622	0. 74064	464594	10. 70
70	34063	10412	0. 30568	0. 07223	144145	0. 62410	269972	7. 93
75	23651	12615	0. 53341	0. 14023	89960	0. 28505	125827	5. 32
80	11035	11035	1. 00000	0. 30767	35867	0. 0	35867	3. 25

*Calcuated from graduated census survival ratios.

P(0) = Proportion surviving from birth to 0–4.

P(1) = 5L5/5L0

P(75) = T(80)/T(75)

Table I.8 Abridged Life Table for Korea, 1960–1965*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	9783	0.09783	0.10558	92662	0.87747	5347963	53.48
1	90217	5865	0.06501	0.01695	346073	0.94217	5255300	58.25
5	84352	2837	0.03363	0.00686	413363	0.97870	4909227	58.20
10	81515	1335	0.01638	0.00330	404559	0.98174	4495864	55.15
15	80180	1562	0.01948	0.00393	397172	0.97879	4091305	51.03
20	78618	1747	0.02222	0.00449	388748	0.97723	3694134	46.99
25	76871	1773	0.02306	0.00467	379896	0.97660	3305386	43.00
30	75098	1806	0.02405	0.00487	371006	0.97457	2925490	38.96
35	73292	2028	0.02767	0.00561	361572	0.96951	2554484	34.85
40	71264	2359	0.03310	0.00673	350547	0.96384	2192913	30.77
45	68905	2741	0.03977	0.00811	337871	0.95543	1842365	26.74
50	66165	3295	0.04980	0.01021	322812	0.94149	1504494	22.74
55	62870	4500	0.07157	0.01481	303925	0.90992	1181681	18.80
60	58370	6556	0.11232	0.02371	276547	0.85943	877757	15.04
65	51814	9070	0.17505	0.03816	237673	0.78277	601210	11.60
70	42744	11226	0.26262	0.06034	186043	0.66359	363537	8.50
75	31519	15823	0.50204	0.12817	123456	0.43770	177493	5.63
80	15695	15695	1.00000	0.29045	54037	0.0	54037	3.44

Male

0	100000	11719	0.11719	0.12865	91094	0.85662	4810536	48.11
1	88281	6267	0.07099	0.01858	337218	0.93784	4719442	53.46
5	82014	2757	0.03362	0.00686	401688	0.97938	4382224	53.43
10	79257	1498	0.01890	0.00381	393405	0.97497	3980536	50.22
15	77759	2156	0.02773	0.00562	383558	0.97105	3587131	46.13
20	75603	2152	0.02846	0.00578	372454	0.97318	3203573	42.37
25	73452	1839	0.02504	0.00507	362465	0.97561	2831119	38.54
30	71612	1829	0.02553	0.00517	353624	0.97079	2468654	34.47
35	69784	2425	0.03475	0.00706	343295	0.95783	2115030	30.31
40	67359	3377	0.05014	0.01027	328818	0.94099	1771735	26.30
45	63981	4357	0.06810	0.01408	309415	0.92115	1442917	22.55
50	59625	5471	0.09176	0.01920	285017	0.89189	1133503	19.01
55	54154	6939	0.12813	0.02730	254204	0.84748	848485	15.67
60	47215	8554	0.18118	0.03971	215433	0.78502	594281	12.59
65	38661	9920	0.25658	0.05865	169119	0.69671	378848	9.80
70	28741	10116	0.35196	0.08585	117827	0.58012	209729	7.30
75	18625	10638	0.57118	0.15564	68354	0.34451	91902	4.93
80	7987	7987	1.00000	0.33917	23549	0.0	23549	2.95

Both Sexes

0	100000	10775	0.10775	0.11730	91859	0.86679	5072695	50.73
1	89225	6071	0.06804	0.01778	341537	0.93998	4980836	55.82
5	83154	2796	0.03363	0.00686	407383	0.97904	4639299	55.79
10	80358	1418	0.01765	0.00356	398846	0.97832	4231916	52.66
15	78940	1866	0.02364	0.00478	390199	0.97489	3833070	48.56
20	77074	1954	0.02535	0.00514	380402	0.97520	3442871	44.67
25	75120	1807	0.02405	0.00487	370968	0.97610	3062469	40.77
30	73313	1818	0.02479	0.00502	362103	0.97268	2691501	36.71
35	71495	2231	0.03121	0.00634	352210	0.96368	2329398	32.58
40	69264	2880	0.04158	0.00849	339418	0.95250	1977188	28.55
45	66383	3569	0.05376	0.01104	323296	0.93863	1637770	24.67
50	62815	4410	0.07020	0.01453	303454	0.91763	1314474	20.93
55	58405	5749	0.09843	0.02065	278458	0.88072	1011020	17.31
60	52656	7579	0.14394	0.03091	245245	0.82595	732562	13.91
65	45077	9505	0.21086	0.04692	202560	0.74597	487317	10.81
70	35572	10657	0.29959	0.07053	151103	0.63025	284757	8.01
75	24915	13168	0.52851	0.13827	95233	0.28747	133654	5.36
80	11747	11747	1.00000	0.30575	38421	0.0	38421	3.27

*Calculated from graduated census survival ratios.

P(0) = Proportion surviving from birth to 0–4.

P(1) = 5L5/5L0

P(75) = T(80)/T(75)

Table I.9 Abridged Life Table for Korea, 1965–1970*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	8088	0.08088	0.08610	93934	0.89870	5648625	56.49
1	91912	4849	0.05276	0.01364	355415	0.95288	5554691	60.43
5	87063	2451	0.02815	0.00572	428176	0.98117	5199276	59.72
10	84612	1293	0.01528	0.00308	420114	0.98313	4771100	56.39
15	83319	1468	0.01762	0.00355	413027	0.98124	4350986	52.22
20	81851	1609	0.01966	0.00397	405278	0.97968	3937959	48.11
25	80242	1660	0.02069	0.00418	397042	0.97889	3532681	44.03
30	78582	1715	0.02182	0.00441	388661	0.97675	3135639	39.90
35	76867	1960	0.02550	0.00516	379625	0.97168	2746978	35.74
40	74907	2324	0.03103	0.00630	368874	0.96579	2367353	31.60
45	72583	2751	0.03790	0.00772	356254	0.95731	1998479	27.53
50	69832	3340	0.04783	0.00979	341045	0.94365	1642225	23.52
55	66492	4599	0.06917	0.01429	321828	0.91272	1301180	19.57
60	61893	6736	0.10883	0.02293	293739	0.86355	979352	15.82
65	55157	9382	0.17010	0.03699	253658	0.78756	685613	12.43
70	45775	12333	0.26943	0.06174	199771	0.66933	431955	9.44
75	33442	13790	0.41236	0.10313	133713	0.42411	232184	6.94
80	19652	19652	1.00000	0.19957	98471	0.0	98471	5.01

Male

0	100000	9445	0.09445	0.10175	92822	0.88444	5075938	50.76
1	90555	5049	0.05576	0.01445	349398	0.95070	4983116	55.03
5	85506	2408	0.02816	0.00573	420418	0.98077	4633718	54.19
10	83098	1560	0.01877	0.00378	412334	0.97591	4213300	51.91
15	81538	2178	0.02671	0.00541	402400	0.97210	3800966	46.62
20	79360	2177	0.02743	0.00557	391173	0.97419	3398566	42.82
25	77183	1853	0.02401	0.00486	381077	0.97668	3007393	38.96
30	75330	1842	0.02445	0.00495	372191	0.97193	2626316	34.86
35	73488	2455	0.03341	0.00679	361744	0.95938	2254125	30.67
40	71033	3442	0.04846	0.00992	347050	0.94272	1892381	26.64
45	67591	4486	0.06637	0.01371	327171	0.92285	1545331	22.82
50	63105	5685	0.09009	0.01883	301930	0.89356	1218160	19.30
55	57420	7258	0.12640	0.02690	269793	0.84927	916230	15.96
60	50162	8994	0.17930	0.03925	229127	0.78698	646437	12.89
65	41168	10464	0.25418	0.05803	180319	0.69881	417310	10.14
70	30704	10956	0.35683	0.08695	126009	0.57910	236991	7.72
75	19748	11177	0.56598	0.15317	72972	0.34249	110982	5.62
80	8571	8571	1.00000	0.22549	38010	0.0	38010	4.43

Both Sexes

0	100000	8783	0.08783	0.09407	93364	0.89139	5355297	53.55
1	91217	4952	0.05429	0.01406	352333	0.95177	5261933	57.69
5	86265	2428	0.02815	0.00572	424202	0.98097	4909600	56.91
10	83837	1430	0.01706	0.00344	416129	0.97947	4485398	53.50
15	82407	1832	0.02223	0.00450	407584	0.97662	4069269	49.38
20	80575	1900	0.02358	0.00477	398054	0.97692	3661685	45.44
25	78675	1758	0.02235	0.00452	388865	0.97778	3263631	41.48
30	76917	1781	0.02316	0.00468	380225	0.97433	2874766	37.37
35	75136	2213	0.02945	0.00597	370466	0.96553	2494541	33.20
40	72923	2897	0.03973	0.00810	357696	0.95432	2124075	29.13
45	70026	3640	0.05198	0.01066	341358	0.94039	1766379	25.22
50	66386	4541	0.06840	0.01415	321011	0.91952	1425021	21.47
55	61845	5961	0.09639	0.02020	295176	0.88302	1104010	17.85
60	55884	7892	0.14122	0.03028	260645	0.82907	808834	14.47
65	47992	9936	0.20704	0.04598	216094	0.74963	548189	11.42
70	38056	11628	0.30555	0.07178	161990	0.63339	332095	8.73
75	26428	12451	0.47113	0.12135	102602	0.39683	170105	6.44
80	13977	13977	1.00000	0.20706	67503	0.0	67503	4.83

*Calculated from graduated census survival ratios.

P(0) = Proportion surviving from birth to 0–4.

P(1) = 5L5/5L0

P(75) = T(80)/T(75)

Table II.1 Abridged Life Table for Korea, 1925–1930*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	16262	0.16262	0.18351	88619	0.79686	3882983	38.83
1	83738	11982	0.14310	0.03868	309811	0.87278	3794364	45.31
5	71755	4432	0.06177	0.01275	347742	0.95217	3484553	48.56
10	67323	2224	0.03304	0.00672	331109	0.96617	3136811	46.59
15	65099	2261	0.03473	0.00707	319908	0.96272	2805702	43.10
20	62838	2512	0.03998	0.00816	307982	0.95685	2485794	39.56
25	60325	2807	0.04654	0.00953	294692	0.94974	2177812	36.10
30	57518	3125	0.05433	0.01117	279881	0.94190	1883120	32.74
35	54393	3389	0.06231	0.01286	263620	0.93509	1603239	29.48
40	51004	3462	0.06788	0.01405	246508	0.92945	1339619	26.27
45	47541	3500	0.07361	0.01527	229117	0.91874	1093111	22.99
50	44042	3954	0.08978	0.01878	210499	0.89576	863994	19.62
55	40088	4831	0.12051	0.02562	188557	0.85598	653495	16.30
60	35257	6041	0.17134	0.03743	161401	0.79389	464938	13.19
65	29216	7278	0.24911	0.05680	128134	0.70401	303537	10.39
70	21938	7906	0.36037	0.08764	90208	0.58969	175403	8.00
75	14032	6897	0.49152	0.12966	53195	0.37561	85195	6.07
80	7135	7135	1.00000	0.22297	32000	0.0	32000	4.48

Male

0	100000	18695	0.18695	0.21509	86916	0.77418	3602432	36.02
1	81305	11890	0.14624	0.03961	300174	0.86968	3515516	43.24
5	69415	4237	0.06104	0.01259	336644	0.95305	3215342	46.32
10	65178	2070	0.03176	0.00645	320839	0.96640	2878698	44.17
15	63108	2235	0.03542	0.00721	310059	0.95729	2557859	40.53
20	60872	3056	0.05020	0.01030	296816	0.94828	2247800	36.93
25	57816	3075	0.05318	0.01092	281465	0.94489	1950984	33.74
30	54742	3120	0.05699	0.01173	265953	0.93899	1669519	30.50
35	51622	3362	0.06513	0.01346	249728	0.92838	1403566	27.19
40	48260	3807	0.07888	0.01642	231842	0.91339	1153838	23.91
45	44453	4240	0.09539	0.02002	211762	0.89390	921996	20.74
50	40213	4758	0.11831	0.02513	189294	0.86558	710234	17.66
55	35455	5436	0.15333	0.03318	163849	0.82244	520940	14.69
60	30019	6218	0.20714	0.04614	134756	0.75802	357091	11.90
65	23800	6839	0.28736	0.06696	102148	0.66125	222334	9.34
70	16961	7015	0.41360	0.10386	67545	0.53358	120187	7.09
75	9946	5538	0.55876	0.15365	36041	0.31535	52641	5.29
80	4409	4409	1.00000	0.26558	16600	0.0	16600	3.77

Both Sexes

0	100000	17508	0.17508	0.19953	87747	0.78524	3739286	37.39
1	82492	11935	0.14468	0.03915	304875	0.87121	3651540	44.27
5	70556	4332	0.06140	0.01267	342058	0.95261	3346665	47.43
10	66224	2145	0.03240	0.00658	325849	0.96629	3004607	45.37
15	64079	2248	0.03508	0.00714	314863	0.95998	2678758	41.80
20	61831	2791	0.04514	0.00923	302263	0.95254	2363895	38.23
25	59040	2944	0.04987	0.01023	287917	0.94731	2061632	34.92
30	56096	3122	0.05566	0.01145	272747	0.94045	1773715	31.62
35	52973	3375	0.06371	0.01316	256504	0.93174	1500968	28.33
40	49598	3639	0.07336	0.01523	238996	0.92147	1244463	25.09
45	45960	3879	0.08440	0.01761	220228	0.90651	1005467	21.88
50	42080	4366	0.10374	0.02187	199638	0.88110	785239	18.66
55	37715	5141	0.13631	0.02923	175902	0.83998	585601	15.53
60	32574	6132	0.18824	0.04150	147754	0.77713	409699	12.58
65	26442	7053	0.26675	0.06143	114824	0.68453	261946	9.91
70	19389	7450	0.38422	0.09478	78600	0.56499	147121	7.59
75	11939	6201	0.51936	0.13963	44409	0.35190	68521	5.74
80	5739	5739	1.00000	0.23800	21142	0.0	24112	4.20

*Based on North Regional Model Life Tables on assumption of downward mortality level with increase of age.
P(0) = Proportion surviving from birth to 0–4.
P(1) = 5L5/5L0
P(75) = T(80)/T(75)

Table II.2 Abridged Life Table for Korea, 1930–1935*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	14762	0. 14762	0. 16463	89669	0. 81533	4142303	41. 42
1	85238	10940	0. 12835	0. 03440	317996	0. 88610	4052634	47. 55
5	74298	4122	0. 05548	0. 01141	361232	0. 95703	3734638	50. 27
10	70175	2093	0. 02983	0. 00606	345710	0. 96936	3373406	48. 07
15	68082	2150	0. 03158	0. 00642	335117	0. 96602	3027696	44. 47
20	65932	2410	0. 03655	0. 00744	323730	0. 96057	2692579	40. 84
25	63522	2700	0. 04251	0. 00868	310965	0. 95409	2368849	37. 29
30	60822	3015	0. 04957	0. 01016	296689	0. 94693	2057883	33. 83
35	57807	3290	0. 05692	0. 01171	280944	0. 94051	1761195	30. 47
40	54517	3393	0. 06223	0. 01284	264230	0. 93517	1480251	27. 15
45	51124	3457	0. 06761	0. 01399	247100	0. 92502	1216021	23. 79
50	47667	3951	0. 08289	0. 01729	228573	0. 90365	968920	20. 33
55	43716	4854	0. 11104	0. 02350	206550	0. 86672	740348	16. 94
60	38862	6154	0. 15835	0. 03437	179021	0. 80837	533798	13. 74
65	32708	7564	0. 23126	0. 05227	144715	0. 72316	354777	10. 85
70	25144	8455	0. 33625	0. 08079	104652	0. 61317	210062	8. 35
75	16689	7729	0. 46311	0. 12045	64170	0. 39124	105410	6. 32
80	8961	8961	1. 00000	0. 21727	41241	0. 0	41241	4. 60

Male

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	16905	0. 16905	0. 19173	88169	0. 79536	3852617	38. 53
1	83095	10858	0. 13066	0. 03508	309526	0. 88290	3764448	45. 30
5	72238	3980	0. 05509	0. 01133	351125	0. 95760	3454922	47. 83
10	68258	1967	0. 02882	0. 00585	336237	0. 96931	3103797	45. 47
15	66291	2157	0. 03254	0. 00662	325918	0. 96067	2767510	41. 75
20	64134	2965	0. 04623	0. 00947	313100	0. 95237	2441642	38. 07
25	61169	2996	0. 04898	0. 01005	298187	0. 94926	2128542	34. 80
30	58173	3053	0. 05248	0. 01079	283057	0. 94384	1830355	31. 46
35	55120	3302	0. 05991	0. 01236	267160	0. 93407	1547298	28. 07
40	51817	3764	0. 07263	0. 01508	249546	0. 92017	1280138	24 70
45	48054	4228	0. 08798	0. 01841	229625	0. 90172	1030592	21. 45
50	43826	4819	0. 10997	0. 02328	207058	0. 87492	800967	18. 28
55	39007	5566	0. 14268	0. 03072	181159	0. 83402	593909	15. 23
60	33441	6490	0. 19406	0. 04295	151090	0. 77235	412750	12. 34
65	26951	7296	0. 27070	0. 06252	116694	0. 67962	261660	9. 71
70	19656	7686	0. 39102	0. 09691	79308	0. 55628	144966	7. 38
75	11970	6350	0. 53048	0. 14393	44117	0. 32807	65658	5. 49
80	5620	5620	1. 00000	0. 26093	21540	0. 0	21540	3. 83

Both Sexes

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	15860	0. 15860	0. 17840	88901	0. 80512	3993927	39. 94
1	84140	10898	0. 12952	0. 03474	313658	0. 88448	3905026	46. 41
5	73243	4049	0. 05528	0. 01137	356055	0. 95732	3591369	49. 03
10	69193	2029	0. 02932	0. 00595	340858	0. 96933	3235314	46. 76
15	67165	2154	0. 03206	0. 00652	330406	0. 96332	2894456	43. 09
20	65011	2694	0. 04144	0. 00846	318285	0. 95644	2564050	39. 44
25	62317	2852	0. 04576	0. 00937	304420	0. 95167	2245765	36. 04
30	59465	3034	0. 05103	0. 01047	289707	0. 94538	1941345	32. 65
35	56431	3296	0. 05841	0. 01204	273884	0. 93729	1651638	29. 27
40	53134	3583	0. 06743	0. 01396	256709	0. 92770	1377754	25. 93
45	49552	3852	0. 07773	0. 01617	238150	0. 91351	1121045	22. 62
50	45700	4396	0. 09619	0. 02021	217553	0. 88964	882895	19. 32
55	41304	5219	0. 12635	0. 02696	193545	0. 85104	665343	16. 11
60	36085	6326	0. 17530	0. 03840	164715	0. 79145	471798	13. 07
65	29760	7427	0. 24956	0. 05697	130363	0. 70320	307083	10. 32
70	22333	8061	0. 36094	0. 08793	91671	0. 58796	176720	7. 91
75	14272	7023	0. 49205	0. 13029	53899	0. 36626	85049	5. 96
80	7250	7250	1. 00000	0. 23273	31150	0. 0	31150	4. 30

*Based on North Regional Model Life Tables on assumption of downward mortality level with increase of age.
P(0) =Proportion surviving from birth to 0–4.
P(1) =5L5/5L0
P(75) =T(80)/T(75)

Table II.3 Abridged Life Table for Korea, 1935–1940*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	13758	0. 13758	0. 15224	90372	0. 82779	4326847	43. 27
1	86242	10206	0. 11834	0. 03155	323523	0. 89498	4236475	49. 12
5	76036	3879	0. 05102	0. 01047	370428	0. 96040	3912952	51. 46
10	72156	1982	0. 02747	0. 00557	355759	0. 97166	3542524	49. 10
15	70174	2046	0. 02916	0. 00592	345677	0. 96849	3186766	45. 41
20	68128	2306	0. 03385	0. 00689	334784	0. 96344	2841089	41. 70
25	65822	2582	0. 03923	0. 00801	322545	0. 95757	2506305	38. 08
30	63239	2883	0. 04559	0. 00933	308859	0. 95110	2183760	34. 53
35	60356	3153	0. 05223	0. 01073	293756	0. 94512	1874901	31. 06
40	57204	3309	0. 05785	0. 01192	277635	0. 93953	1581145	27. 64
45	53894	3419	0. 06344	0. 01311	260846	0. 92928	1303511	24. 19
50	50475	3974	0. 07872	0. 01639	242399	0. 90835	1042665	20. 66
55	46502	4930	0. 10603	0. 2239	220183	0. 87227	800266	17. 21
60	41571	6341	0. 15253	0. 03301	192059	0. 81473	580083	13. 95
65	35230	7917	0. 22472	0. 05060	156476	0. 73016	388024	11. 01
70	27313	8998	0. 32945	0. 07876	114253	0. 62007	231547	8. 48
75	18315	8339	0. 45532	0 ·11771	70845	0. 39601	117294	6. 40
80	9976	9976	1. 00000	0. 21477	46450	0. 0	46450	4. 66

Male

0	100000	16806	0. 16806	0. 19047	88236	0. 79655	3854657	38. 55
1	83194	10774	0. 12951	0. 03475	310039	0. 88368	3766421	45. 27
5	72419	3957	0. 5464	0. 01124	351948	0. 95788	3456382	47. 73
10	68463	1955	0. 02856	0. 00580	337124	0. 96950	3104435	45. 34
15	66507	2146	0. 03227	0. 00657	326841	0. 96090	2767311	41. 61
20	64361	2950	0. 04583	0. 00939	314062	0. 95265	2440470	37. 92
25	61411	2980	0. 04852	0. 00996	299191	0. 94958	2126408	34. 63
30	58432	3039	0. 05200	0. 01070	284106	0. 94420	1827217	31. 27
35	55393	3288	0. 05936	0. 01226	268253	0. 93452	1543111	27. 86
40	52105	3784	0. 07261	0. 01509	250688	0. 92000	1274858	24. 47
45	48322	4284	0. 08855	0. 01857	230633	0. 90075	1024171	21. 19
50	44038	4919	0. 11170	0. 02368	207742	0. 87272	793538	18. 02
55	39119	5712	0. 14603	0. 03151	181301	0. 83008	585796	14. 97
60	33406	6664	0. 19949	0. 04428	150494	0. 76606	404495	12. 11
65	26742	7469	0. 27930	0. 06479	115288	0. 66977	254001	9. 50
70	19273	7815	0. 40550	0. 10121	77216	0. 54170	138713	7. 20
75	11458	6270	0. 54727	0. 14991	41828	0. 31984	61497	5. 37
80	5188	5188	1. 00000	0. 26374	19669	0. 0	19669	3. 79

Both Sexes

0	100000	15319	0. 15319	0. 17159	89278	0. 81179	4084994	40. 85
1	84681	10497	0. 12396	0. 3315	316617	0. 88930	3995716	47. 19
5	74183	3919	0. 05283	0. 01086	360962	0. 95914	3679099	49. 59
10	70264	1968	0. 02801	0. 00569	346214	0. 97058	3318137	47. 22
15	68296	2098	0. 03071	0. 00624	336029	0. 96471	2971923	43. 52
20	66199	2636	0. 03982	0. 00813	324170	0. 95809	2635894	39. 82
25	63563	2786	0. 04383	0. 00897	310583	0. 95363	2311723	36. 37
30	60777	2963	0. 04875	0. 01000	296181	0. 94771	2001140	32. 93
35	57814	3222	0. 05573	0. 01148	280693	0. 93993	1704960	29. 49
40	54592	3552	0. 06507	0. 01346	263832	0. 93003	1424267	20. 09
45	51040	3862	0. 07567	0. 01574	245371	0. 91554	1160434	22. 74
50	47178	4458	0. 09449	0. 01984	224648	0. 89147	915063	19. 40
55	42720	5331	0. 12479	0. 02662	200268	0. 85271	690415	16. 16
60	37389	6506	0. 17402	0. 03810	170770	0. 79276	490148	13 ·11
65	30883	7688	0. 24893	0. 05679	135380	0. 70382	319378	10. 34
70	23195	8392	0. 36181	0. 08808	95283	0. 58754	183998	7. 93
75	14803	7280	0. 49177	0. 13003	55982	0. 36897	88715	5. 99
80	7523	7523	1. 00000	0. 22984	32733	0. 0	32733	4. 35

*Based on North Regional Model Life Tables on assumption of downward mortality level with incrase of age.
P(0) =Proportion surviving from birth to 0–4.
P(1) =5L5/5L0
P(75) =T(80)/T(75)

Table II.4 Abridged Life Table for Korea, 1940–1945*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	12346	0. 12346	0. 13513	91361	0. 84548	4586392	45. 86
1	87654	9151	0. 10440	0. 02762	331379	0. 90741	4495031	51. 28
5	78503	3540	0. 04509	0. 00923	383599	0. 96492	4163652	53. 04
10	74963	1835	0. 02448	0. 00496	370142	0. 97460	3780053	50. 43
15	73128	1922	0. 02628	0. 00533	360740	0. 97149	3409912	46. 63
20	71206	2189	0. 03074	0. 00625	350456	0. 96679	3049171	42. 82
25	69017	2461	0. 03566	0. 00726	338817	0. 96145	2698716	39. 10
30	66557	2759	0. 04146	0. 00847	325756	0. 95553	2359899	35. 46
35	63797	3034	0. 04756	0. 00975	311269	0. 94982	2034143	31. 88
40	60763	3233	0. 05320	0. 01093	295650	0. 94426	1722874	28. 35
45	57531	3376	0. 05868	0. 01209	279170	0. 93424	1427227	24. 81
50	54155	3984	0. 07356	0. 01527	260812	0. 91429	1148054	21. 20
55	50171	4982	0. 09929	0. 02089	238458	0. 87995	887242	17. 68
60	45190	6498	0. 14379	0. 03097	209831	0. 82463	648785	14. 36
65	38692	8255	0. 21335	0. 04771	173033	0. 74264	438954	11. 34
70	30437	9588	0. 31502	0. 07462	128501	0. 63467	265921	8. 74
75	20849	9149	0. 43882	0. 11218	81556	0. 40652	137420	6. 59
80	11700	11700	1. 00000	0. 20944	55864	0. 0	55864	4. 77

Male

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	14964	0. 14964	0. 16715	89527	0. 81869	4086418	40. 86
1	85036	9617	0. 11309	0. 03007	319818	0. 89835	3996891	47. 00
5	75418	3654	0. 04845	0. 00994	367735	0. 96254	3677073	48. 76
10	71764	1831	0. 02551	0. 00517	353960	0. 97249	3309338	46. 11
15	69933	2091	0. 02991	0. 00608	344222	0. 96371	2955378	42. 26
20	67842	2911	0. 04291	0. 00878	331730	0. 95565	2611156	38. 49
25	64931	2974	0. 04580	0. 00938	317018	0. 95235	2279425	35. 11
30	61957	3069	0. 04954	0. 01017	301912	0. 94681	1962407	31. 67
35	58887	3357	0. 05701	0. 01174	285854	0. 93701	1660495	28. 20
40	55530	3890	0. 07006	0. 01452	267848	0. 92268	1374641	24. 75
45	51640	4441	0. 08599	0. 01797	247138	0. 90349	1106794	21. 43
50	47199	5140	0. 10891	0. 02302	223286	0. 87573	859656	18. 21
55	42059	8008	0. 14285	0. 03073	195539	0. 83342	636370	15. 13
60	36051	7073	0. 19620	0. 04340	162966	0. 76957	440831	12. 23
65	28978	7994	0. 27588	0. 06374	125414	0. 67351	277865	9. 59
70	20983	8425	0. 40151	0. 09974	84467	0. 54567	152452	7. 27
75	12558	6814	0. 54261	0. 14784	46091	0. 32203	67984	5. 41
80	5744	5744	1. 00000	0. 26237	21893	0. 0	21893	3. 81

Both Sexes

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	13687	0. 13687	0. 15137	90422	0. 83176	4330308	43. 30
1	86313	9390	0. 10879	0. 02885	325458	0. 90284	4239886	49. 12
5	76923	3599	0. 04678	0. 00958	375473	0. 96373	3914429	50. 89
10	73325	1833	0. 02500	0. 00507	361853	0. 97354	3538955	48. 26
15	71492	2009	0. 02810	0. 00570	352280	0. 96760	3177102	44. 44
20	69483	2559	0. 03683	0. 00751	340865	0. 96124	2824822	40. 65
25	66924	2724	0. 04070	0. 00831	327652	0. 95694	2483957	37. 12
30	64201	2918	0. 04545	0. 00931	313543	0. 95123	2156306	33. 59
35	61283	3200	0. 05221	0. 01073	298251	0. 94353	1842763	30. 07
40	58083	3569	0. 06146	0. 01268	281410	0. 93374	1544511	26. 59
45	54514	3921	0. 07193	0. 01492	262763	0. 91943	1263101	23. 17
50	50592	4576	0. 09045	0. 01894	241592	0. 89604	1000338	19. 77
55	46016	5507	0. 11968	0. 02544	216475	0. 85842	758747	16. 49
60	40509	6793	0. 16768	0. 03655	185827	0. 79990	542272	13. 39
65	33716	8122	0. 24088	0. 05464	148643	0. 71277	356445	10. 57
70	25595	8992	0. 35134	0. 08488	105947	0. 59833	207802	8. 12
75	16602	7953	0. 47903	0. 12546	63391	0. 37764	101855	6. 14
80	8649	8649	1. 00000	0. 22487	38464	0. 0	38464	4. 45

*Based on North Regional Model Life Tables on assumption of downward mortality level with increase of age. (Mortality levels for ages x−x+n are linearly interpolated from those for 1935–40 and for 1955–60 under assumed normal conditions)

P(0) = Proportion surviving from birth to 0–4.

P(1) = 5L5/5L0

P(75) = T(30)/T(75)

Table II.5 Abridged Life Table for Korea, 1945–1950*

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
Female								
0	100000	11024	0.11024	0.11946	92285	0.86216	4844642	48.45
1	88976	8131	0.09138	0.02400	338795	0.91897	4752357	53.41
5	80845	3203	0.03962	0.00809	396150	0.96913	4413562	54.59
10	77642	1684	0.02169	0.00439	383920	0.97735	4017413	51.74
15	75958	1792	0.02359	0.00478	375225	0.97431	3633492	47.84
20	74166	2063	0.02782	0.00564	365585	0.96994	3258267	43.93
25	72103	2330	0.03231	0.00657	354596	0.96509	2892682	40.12
30	69773	2620	0.03756	0.00766	342217	0.95969	2538087	36.38
35	67152	2898	0.04315	0.00882	328422	0.95424	2195870	32.70
40	64254	3137	0.04882	0.01001	313393	0.94871	1867448	29.06
45	61117	3314	0.05423	0.01115	297319	0.93892	1554055	25.43
50	57803	3972	0.06871	0.01423	279159	0.91990	1256735	21.74
55	53831	5000	0.09289	0.01947	256799	0.88725	977576	18.16
60	48831	6615	0.13547	0.02903	227844	0.83403	720778	14.76
65	42216	8549	0.20250	0.04499	190029	0.75455	492933	11.68
70	33667	10144	0.30132	0.07075	143386	0.64861	302904	9.00
75	23523	9952	0.42309	0.10701	93002	0.41698	159518	6.78
80	13571	13571	1.00000	0.20402	66516	0.0	66516	4.90
Male								
0	100000	13260	0.13260	0.14616	90721	0.83941	4311370	43.11
1	86740	8493	0.09791	0.02582	328984	0.91183	4220649	48.66
5	78247	3344	0.04273	0.00874	382700	0.96685	3891665	49.74
10	74904	1737	0.02320	0.00470	370013	0.97472	3508965	46.85
15	73166	2022	0.02764	0.00561	360659	0.96637	3138952	42.90
20	71144	2855	0.04013	0.00819	348530	0.95849	2778293	39.05
25	68289	2949	0.04318	0.00883	334063	0.95502	2429763	35.58
30	65340	3066	0.04692	0.00961	319037	0.94956	2095700	32.07
35	62275	3415	0.05484	0.01127	302944	0.93935	1776663	28.53
40	58860	3978	0.06758	0.01398	284571	0.92532	1473719	25.04
45	54882	4573	0.08332	0.01737	263319	0.90624	1189148	21.67
50	50309	5345	0.10624	0.02240	238630	0.87863	925829	18.40
55	44965	6285	0.13978	0.02998	209668	0.83666	687199	15.28
60	38680	7458	0.19282	0.04252	175421	0.77308	477531	12.35
65	31221	8504	0.27237	0.06271	135614	0.67726	302111	9.68
70	22718	9039	0.39790	0.09842	91846	0.54934	166496	7.33
75	13678	7365	0.53842	0.14597	50455	0.32412	74650	5.46
80	6314	6314	1.00000	0.26095	24196	0.0	24196	3.83
Both Sexes								
0	100000	12169	0.12169	0.13302	91484	0.85051	4571503	45.72
1	87831	8316	0.09468	0.02492	333770	0.91536	4480019	51.01
5	79515	3275	0.04119	0.00841	389261	0.96798	4146249	52.14
10	76239	1711	0.02245	0.00454	376797	0.97603	3756988	49.28
15	74528	1910	0.02563	0.00519	367764	0.97032	3380191	45.35
20	72618	2469	0.03400	0.00692	356850	0.96421	3012427	41.48
25	70149	2647	0.03773	0.00769	344079	0.96008	2655577	37.86
30	67502	2848	0.04220	0.00862	330344	0.95468	2311498	34.24
35	64654	3163	0.04892	0.01003	315372	0.94691	1981154	30.64
40	61491	3568	0.05802	0.01195	298631	0.93729	1665782	27.09
45	57924	3959	0.06834	0.01414	279905	0.92317	1367151	23.60
50	53965	4675	0.08663	0.01809	258400	0.90038	1087247	20.15
55	49290	5658	0.11480	0.02432	232658	0.86390	828846	16.82
60	43632	7047	0.16151	0.03506	200993	0.80678	596188	13.66
65	36585	8526	0.23304	0.05258	162158	0.72144	395195	10.80
70	28059	9578	0.34137	0.08187	116988	0.60869	233037	8.31
75	18480	8627	0.46681	0.12115	71209	0.38638	116049	6.28
80	9854	9854	1.00000	0.21975	44840	0.0	44840	4.55

*Based on North Regional Model Life Tables on assumption of downward mortality level with increase of age. (Mortality levels for ages x−x+n age linearly interpolated from those for 1935–40 and for 1955–60 under assumed normal conditions)

P(0) = Proportion surviving from birth to 0–4.

P(1) = 5L5/5L0

P(75) = T(80)/T(75)

Table II.6 Abridged Life Table for Korea, 1950–1955*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	9786	0. 09786	0. 10506	93151	0. 87791	5101791	51. 02
1	90214	7146	0. 07921	0. 02067	345804	0. 92979	5008640	55. 52
5	83067	2859	0. 03442	0. 00700	408136	0. 97308	4662836	56. 13
10	80208	1531	0. 01909	0. 00386	397149	0. 97994	4254700	53. 05
15	78677	1656	0. 02105	0. 00425	389182	0. 97696	3857551	49. 03
20	77021	1932	0. 02509	0. 00508	380215	0. 97289	3468369	45. 03
25	75089	2193	0. 02921	0. 00593	369908	0. 96851	3088154	41. 13
30	72896	2470	0. 03389	0. 00690	358259	0. 96362	2718246	37. 29
35	70426	2748	0. 03903	0. 00796	345226	0. 95840	2359986	33. 51
40	67677	3023	0. 04467	0. 00914	330864	0. 95292	2014761	29. 77
45	64654	3236	0. 05005	0. 01026	315287	0. 94333	1683896	26. 04
50	61418	3939	0. 06413	0. 01324	297420	0. 92521	1368609	22. 28
55	57480	4993	0. 08686	0. 01814	275176	0. 89417	1071189	18. 64
60	52487	6696	0. 12757	0. 02721	246054	0. 84299	796013	15. 17
65	45791	8800	0. 19218	0. 04243	207421	0. 76591	549959	12. 01
70	36991	10661	0. 28821	0. 06711	158866	0. 66196	342537	9. 26
75	26330	10745	0. 40808	0. 10217	105163	0. 42744	183671	6. 98
80	15585	15585	1. 00000	0. 19851	78509	0. 0	78509	5. 04

Male

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	11668	0. 11668	0. 12705	91835	0. 85892	4531717	45. 32
1	88332	7404	0, 08382	0. 02193	337625	0. 92432	4439882	50. 26
5	80928	3026	0. 03739	0. 00762	396958	0. 97087	4102257	50. 69
10	77902	1616	0. 02074	0. 00419	385395	0. 97710	3705299	47. 56
15	76286	1944	0. 02548	0. 00516	376570	0. 96889	3319904	43. 52
20	74343	2781	0. 03741	0. 00762	364854	0. 96123	2943334	39. 59
25	71561	2913	0. 04070	0. 00831	350709	0. 95754	2578480	36. 03
30	68648	3081	0. 04489	0. 00918	335818	0. 95169	2227771	32. 45
35	65567	3451	0. 05263	0. 01080	319595	0. 94168	1891953	28. 86
40	62116	4050	0. 06520	0. 01346	300956	0. 92781	1572358	25. 31
45	58066	4688	0. 08074	0. 01679	279230	0. 90891	1271402	21. 90
50	53378	5528	0. 10357	0. 02178	253795	0. 88151	992172	18. 59
55	47850	6548	0. 13684	0. 02927	223723	0. 83976	738378	15. 43
60	41302	7830	0. 18957	0. 04168	187873	0. 77653	514655	12. 46
65	33473	9001	0. 26891	0. 06170	145889	0. 68097	326782	9. 76
70	24471	9647	0. 39422	0. 09711	99346	0. 55305	180892	7. 39
75	14824	7919	0. 53419	0. 14413	54943	0. 32623	81546	5. 50
80	6906	6906	1. 00000	0. 25958	26603	0. 0	26603	3. 85

Both Sexes

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	10750	0. 10750	0. 11624	92477	0. 86818	4809802	48. 10
1	89250	7278	0. 08155	0. 02131	341615	0. 92702	4717325	52. 86
5	81972	2945	0. 03592	0. 00732	402411	0. 97196	4375710	53. 38
10	79027	1575	0. 01992	0. 00403	391129	0. 97851	3973299	50. 28
15	77452	1803	0. 02328	0. 00471	382722	0. 97289	3582171	46. 25
20	75649	2367	0. 03129	0. 00636	372348	0. 96704	3199449	42. 29
25	73282	2562	0. 03496	0. 00711	360074	0. 96304	2827101	38. 58
30	70720	2783	0. 03936	0. 00803	346765	0. 95770	2467027	34. 88
35	67937	3108	0. 04575	0. 00936	332098	0. 95016	2120262	31. 21
40	64829	3549	0. 05475	0. 01125	315545	0. 94065	1788164	27. 58
45	61280	3980	0. 06494	0. 01341	296819	0. 92674	1472619	24. 03
50	57300	4753	0. 08294	0. 01728	275075	0. 90456	1175800	20. 52
55	52547	5789	0. 11017	0. 02327	248822	0. 86911	900725	17. 14
60	46758	7277	0. 15562	0. 03365	216254	0. 81342	651903	13. 94
65	39482	8903	0. 22550	0. 05061	175905	0. 72983	435648	11. 03
70	30578	10142	0. 33166	0. 07900	128380	0. 61879	259744	8. 49
75	20437	9297	0. 45494	0. 11704	79441	0. 39526	131363	6. 43
80	11139	11139	1. 00000	0. 21454	51923	0. 0	51923	4. 66

*Based on North Regional Model Life Tables on assumption of downward mortality level with increase of age. (Mortality levels for ages x—x+n are linearly interpolated from those for 1935–40 and for 1955–60 under assumed normal conditions)

P(0) =Proportion surviving from birth to 0–4.

P(1) =5L5/5L0

P(75) =T(80)/T(75)

Table II.7 Abridged Life Table for Korea, 1955–1960*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	8625	0.08625	0.09179	93963	0.89282	5357118	53.57
1	91375	6195	0.06779	0.01758	352447	0.93981	5263155	57.60
5	85181	2519	0.02958	0.00600	419541	0.97678	4910708	57.65
10	82661	1379	0.01669	0.00337	409799	0.98237	4491167	54.33
15	81282	1515	0.01864	0.00376	402574	0.97945	4081369	50.21
20	79767	1794	0.02250	0.00455	394301	0.97568	3678794	46.12
25	77972	2046	0.02624	0.00532	384712	0.97174	3284493	42.12
30	75927	2312	0.03045	0.00618	373840	0.96732	2899781	38.19
35	73615	2586	0.03512	0.00715	361623	0.96234	2525942	34.31
40	71029	2894	0.04074	0.00831	348004	0.95690	2164319	30.47
45	68135	3137	0.04604	0.00942	333005	0.94750	1816315	26.66
50	64998	3887	0.05980	0.01232	315522	0.93026	1483310	22.82
55	61112	4957	0.08112	0.01689	293518	0.90077	1167787	19.11
60	56155	6743	0.12007	0.02550	264392	0.85152	874270	15.57
65	49412	9010	0.18235	0.04002	225135	0.77675	609878	12.34
70	40402	11143	0.27581	0.06372	174874	0.67461	384743	9.52
75	29253	11524	0.39388	0.09769	117972	0.43788	209869	7.17
80	17734	17734	1.00000	0.19298	91897	0.0	91897	5.18

Male

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	10182	0.10182	0.10963	92874	0.87329	4726207	47.26
1	89818	6342	0.07061	0.01845	343771	0.93590	4633333	51.59
5	83476	2706	0.03242	0.00662	408656	0.97464	4289562	51.39
10	80770	1489	0.01843	0.00374	398293	0.97934	3880906	48.05
15	79281	1860	0.02346	0.00477	390064	0.97128	3482613	43.93
20	77421	2704	0.03493	0.00714	378861	0.96380	3092550	39.94
25	74717	2863	0.03832	0.00784	365146	0.95997	2713688	36.32
30	71853	3068	0.04270	0.00875	350530	0.95402	2348542	32.69
35	68785	3478	0.05056	0.01040	334412	0.94391	1998012	29.05
40	65307	4106	0.06287	0.01301	315655	0.93032	1663600	25.47
45	61202	4789	0.07825	0.01631	293660	0.91148	1347945	22.02
50	56413	5694	0.10094	0.02127	267665	0.88434	1054285	18.69
55	50718	6791	0.13390	0.02869	236707	0.84287	786619	15.51
60	43927	8192	0.18650	0.04106	199513	0.77980	549912	12.52
65	35735	9484	0.26540	0.06096	155581	0.68470	350399	9.81
70	26250	10253	0.39059	0.09625	106526	0.55671	194818	7.42
75	15997	8478	0.52996	0.14295	59304	0.32832	88292	5.52
80	7520	7520	1.00000	0.25940	28988	0.0	28988	3.86

Both Sexes

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	9422	0.09422	0.10088	93405	0.88282	5033969	50.34
1	90578	6270	0.06923	0.01802	348003	0.93783	4940563	54.55
5	84307	2615	0.03102	0.00632	413966	0.97570	4592560	54.47
10	81692	1435	0.01757	0.00355	403905	0.98084	4178595	51.15
15	80257	1692	0.02108	0.00427	396166	0.97533	3774689	47.03
20	78565	2260	0.02877	0.00585	386393	0.96971	3378523	43.00
25	76305	2465	0.03230	0.00658	374691	0.96587	2992130	39.21
30	73840	2699	0.03656	0.00746	361900	0.96072	2617439	35.45
35	71141	3043	0.04277	0.00875	347686	0.95326	2255539	31.71
40	68098	3514	0.05161	0.01060	331435	0.94393	1907853	28.02
45	64584	3983	0.06167	0.01273	312853	0.93018	1576418	24.41
50	60601	4813	0.07941	0.01654	291010	0.90863	1263565	20.85
55	55788	5897	0.10569	0.02230	264420	0.87422	972555	17.43
60	49892	7485	0.15003	0.03238	231162	0.81981	708135	14.19
65	42406	9253	0.21820	0.04883	189510	0.73804	476974	11.25
70	33154	10687	0.32236	0.07641	139866	0.62862	287464	8.67
75	22466	9964	0.44351	0.11333	87922	0.40431	147598	6.57
80	12502	12502	1.00000	0.20950	59676	0.0	59676	4.77

*Based on North Regional Model Life Tables on assumption of downward mortality level with increase of age.
P(0) = Proportion surviving from birth to 0–4.
P(1) = 5L5/5L0
P(75) = T(80)/T(75)

Table II.8 Abridged Life Table for Korea, 1960–1965*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	7488	0. 07488	0. 07902	94759	0. 90751	5585497	55. 85
1	92512	5218	0. 05640	0. 01453	358996	0. 94962	5490738	59. 35
5	87295	2202	0. 02522	0. 00511	430895	0. 98012	5131742	58. 79
10	85093	1245	0. 01463	0. 00295	422329	0. 98439	4700847	55. 24
15	83847	1412	0. 01684	0. 00340	415736	0. 98134	4278518	51. 03
20	82435	1715	0. 02080	0. 00420	407978	0. 97757	3862782	48. 86
25	80720	1975	0. 02446	0. 00495	398827	0. 97368	3454804	42. 80
30	78745	2263	0. 02874	0. 00583	388330	0. 96920	3055976	38. 81
35	76482	2564	0. 03353	0. 00681	376370	0. 96396	2667646	34. 88
40	73918	2877	0. 03892	0. 00793	362805	0. 95878	2291276	31. 00
45	71041	3119	0. 04390	0. 00897	347851	0. 94980	1928471	27. 15
50	67923	3880	0. 05713	0. 01174	330388	0. 93342	1580620	23. 27
55	64042	4940	0. 07713	0. 01602	308391	0. 90543	1250232	19. 52
60	59102	6751	0. 11422	0. 02418	279227	0. 85824	941840	15. 94
65	52352	9107	0. 17396	0. 03800	239643	0. 78616	662614	12. 66
70	43244	11411	0. 26386	0. 06057	188398	0. 68679	422970	9. 78
75	31834	12104	0. 38023	0. 09355	129390	0. 44840	234572	7. 37
80	19730	19730	1. 00000	0. 18758	105182	0. 0	105182	5. 33

Male

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	9944	0. 09944	0. 10688	93039	0. 88022	4847591	48. 48
1	90056	6185	0. 06868	0. 01782	347071	0. 93774	4754552	52. 80
5	83871	2617	0. 03121	0. 00634	412709	0. 97560	4407481	52. 55
10	81253	1432	0. 01762	0. 00356	402639	0. 98017	3994772	49. 16
15	97821	1789	0. 02242	0. 00453	394654	0. 97253	3592133	45. 00
20	78032	2590	0. 03319	0. 00675	383813	0. 96563	3197479	40. 98
25	75442	2724	0. 03611	0. 00735	370622	0. 96233	2813666	37. 30
30	72718	2903	0. 03992	0. 00814	356660	0. 95706	2443044	33. 60
35	69815	3268	0. 04680	0. 00957	341345	0. 94804	2086384	29. 88
40	66547	3881	0. 05832	0. 01199	323609	0. 93522	1745039	26. 22
45	62666	4565	0. 07285	0. 01508	302646	0. 91717	1421430	22. 68
50	58101	5514	0. 09491	0. 01987	277577	0. 89115	1118784	19. 26
55	52587	6637	0. 12621	0. 02683	247363	0. 85131	841207	16. 00
60	45950	8130	0. 17693	0. 03861	210583	0. 79033	593844	12. 92
65	37820	9582	0. 25336	0. 05757	166430	0. 69812	383261	10. 13
70	28238	10561	0. 37399	0. 09089	116188	0. 57344	216831	7. 68
75	17677	9027	0. 51066	0. 13549	66627	0. 33799	100643	5. 69
80	8650	8650	1. 00000	0. 25430	34016	0. 0	34016	3. 93

Both Sexes

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	10000	8746	0. 08746	0. 09316	93878	0. 89353	5207545	52. 08
1	91254	5713	0. 06261	0. 01619	352888	0. 94363	5113667	56. 04
5	85541	2415	0. 02823	0. 00573	421580	0. 97785	4760779	55. 66
10	83126	1341	0. 01613	0. 00325	412244	0. 98228	4339199	52. 20
15	81785	1605	0. 01963	0. 00396	404938	0. 97694	3926955	48. 02
20	80180	2163	0. 02698	0. 00547	395601	0. 97164	3522017	43. 93
25	78017	2358	0. 03023	0. 00614	384381	0. 96807	3126416	40. 07
30	75658	2591	0. 03425	0. 00696	372109	0. 96324	2742035	36. 24
35	73067	2925	0. 04003	0. 00816	358430	0. 95619	2369926	32. 43
40	70143	3391	0. 04835	0. 00989	342729	0. 94739	2011496	28. 68
45	66752	3860	0. 05782	0. 01189	324697	0. 93422	1668767	25. 00
50	62892	4717	0. 07501	0. 01555	303339	0. 91361	1344070	21. 37
55	58175	5809	0. 09986	0. 02096	277133	0. 88069	1040731	17. 89
60	52366	7457	0. 14240	0. 03055	244068	0. 82823	763598	14. 58
65	44909	9350	0. 20821	0. 04626	202144	0. 74903	519531	11. 57
70	35558	10975	0. 30866	0. 07249	151412	0. 64224	317387	8. 93
75	24583	10528	0. 42827	0. 10827	97243	0. 41411	165974	6. 75
80	14055	14055	1. 00000	0. 20449	68731	0. 0	68731	4. 89

*Based on North Regional Model Life Tables on assumption of downward mortality level with increase of age.
P(0) = Proportion surviving from birth to 0–4.
P(1) = 5L5/5L0
P(75) = T(80)/T(75)

Table II.9 Abridged Life Table for Korea, 1965–1970*

Female

Age	l(X)	D(X)	Q(X)	M(X)	L(X)	P(X)	T(X)	E(X)
0	100000	8038	0.08038	0.08523	94310	0.89914	5581639	55.82
1	91962	5245	0.05703	0.01476	355260	0.95242	5487329	59.67
5	86717	2155	0.02485	0.00503	428179	0.98023	5132069	59.18
10	84562	1228	0.01452	0.00293	419714	0.98439	4703890	55.63
15	83334	1393	0.01672	0.00337	413163	0.98148	4284176	51.41
20	81941	1666	0.02033	0.00411	405511	0.97807	3871013	47.24
25	80275	1891	0.02356	0.00477	396618	0.97471	3465502	43.17
30	78384	2119	0.02703	0.00548	386588	0.97094	3068884	39.15
35	76265	2372	0.03110	0.00632	375353	0.96623	2682296	35.17
40	73893	2719	0.03680	0.00750	362678	0.96080	2306943	31.22
45	71174	2982	0.04190	0.00856	348472	0.95178	1944265	27.32
50	68192	3757	0.05509	0.01133	331668	0.93581	1595793	23.40
55	64435	4779	0.07417	0.01540	310378	0.90874	1264125	19.62
60	59656	6580	0.11030	0.02333	282053	0.86256	953747	15.99
65	53076	8951	0.16864	0.03679	243288	0.79191	671694	12.66
70	44125	11329	0.25677	0.05880	192662	0.69386	428406	9.71
75	32796	12219	0.37258	0.09140	133681	0.43294	235744	7.19
80	20577	20577	1.00000	0.20161	102063	0.0	102063	4.96

Male

0	100000	9997	0.09997	0.10717	93284	0.87792	4896039	48.96
1	90003	5832	0.06480	0.01687	345676	0.94440	4802753	53.36
5	84171	2566	0.03049	0.00619	414554	0.97611	4457079	52.95
10	81605	1335	0.01636	0.00330	404650	0.98008	4042525	49.54
15	80270	1827	0.02276	0.00461	396590	0.97223	3637875	45.32
20	78443	2636	0.03360	0.00684	385576	0.96531	3241285	41.32
25	75807	2767	0.03650	0.00744	372201	0.96203	2855709	37.67
30	73040	2940	0.04025	0.00821	358068	0.95689	2483508	34.00
35	70100	3297	0.04703	0.00962	342632	0.94806	2125440	30.32
40	66803	3848	0.05760	0.01185	324836	0.93627	1782808	26.69
45	62955	4473	0.07105	0.01471	304134	0.91939	1457972	23.16
50	58482	5366	0.09175	0.01919	279618	0.89514	1153838	19.73
55	53116	6407	0.12062	0.02560	250297	0.85783	874220	16.46
60	46709	7858	0.16823	0.03660	214712	0.80031	623923	13.36
65	38851	9321	0.23992	0.05424	171836	0.71349	409211	10.53
70	29530	10392	0.35191	0.08476	122603	0.59582	237375	8.04
75	19138	9281	0.48495	0.12704	73050	0.36352	114772	6.00
80	9857	9857	1.00000	0.23625	41722	0.0	41722	4.23

Both Sexes

0	100000	9041	0.09041	0.09640	93784	0.88827	5230478	52.30
1	90959	5546	0.06097	0.01583	350351	0.94836	5136694	56.47
5	85413	2366	0.02770	0.00562	421200	0.97816	4786343	56.04
10	83047	1282	0.01544	0.00311	411999	0.98222	4365143	52.56
15	81765	1616	0.01976	0.00399	404675	0.97683	3953144	48.35
20	80149	2163	0.02699	0.00547	395300	0.97170	3548469	44.27
25	77986	2339	0.02999	0.00609	384112	0.96842	3153169	40.43
30	75647	2540	0.03358	0.00683	371980	0.96401	2769057	36.60
35	73107	2846	0.03893	0.00794	358593	0.95734	2397077	32.79
40	70261	3297	0.04693	0.00960	343296	0.94893	2038484	29.01
45	66964	3745	0.05593	0.01150	325762	0.93629	1695188	25.31
50	63219	4581	0.07246	0.01502	305008	0.91671	1369426	21.66
55	58638	5614	0.09574	0.02008	279605	0.88540	1064418	18.15
60	53024	7234	0.13643	0.02922	247561	0.83491	784813	14.80
65	45790	9140	0.19961	0.04422	206691	0.75851	537252	11.73
70	36650	10850	0.29604	0.06921	156778	0.65459	330561	9.02
75	25800	10714	0.41527	0.10440	102626	0.40946	173783	6.74
80	15086	15086	1.00000	0.21201	71157	0.0	71157	4.72

*Based on North Regional Model Life Tables on assumption of downward mortality level with increase of age.
P(0) = Proportion surviving from birth to 0–4.
P(1) = 5L5/5L0
P(75) = T(80)/T(75)

Appendix: PROPORTIONAL RELATIONSHIP AMONG SINGLE YEAR OF AGE DISTRIBUTIONS OF A STATIONARY POPULATION FOR AGES x TO $x+n$

In a stationary population.

$$d_x = l_x - l_{x+1}$$

$${}_nd_x = \sum_{i=x}^{x+(n-1)} d_i$$

The total number of life table deaths from the exact age a to any exact age x will be

$$A_x = l_a - l_x = d_a + d_{a+1} + \cdots + d_{x-1}$$

and to a 'standard age s' $[a \le s \le a+n-1]$,

$$A_s = l_a - l_s = d_a + d_{a+1} + \cdots + d_{s-1}$$

It is obvious that in a given life table $A_x/{}_nd_x$ and $A_s/{}_nd_x$ will be constant; so will be $A_x/A_s = \delta_x$.

With reference to a fixed age a,

$$l_x = l_a - A_x$$

$$l_a = l_s + A_s$$

Then

$$l_x = l_s + A_s - A_x$$

and using $A_x/A_s = \delta_x$,

$$l_x = l_s + A_s - A_s\delta_x = l_s + A_s(1-\delta_x) \tag{1}$$

Let ${}_nK_a = \sum_{i=a}^{a+(n-1)} l_i$

For any age x such that $a \le x \le a+n-1$,

$$\begin{aligned} {}_nK_x &= \sum l_x \\ &= nl_s + A_s\left|(1-\delta_x) + (1-\delta_{x+1}) + \cdots + (1-\delta_{x+n-1})\right| \\ &= nl_s + A_s\left(n - \sum_{x}^{x+n-1} \delta_x\right) \end{aligned} \tag{2}$$

$$nl_s + nA_s = {}_nK_x + A_s\sum\delta_x$$

$$l_s + A_s = \frac{{}_nK_x}{n} + A_s\frac{\sum\delta_x}{n} \tag{3}$$

From (1) and (3)

$$\begin{aligned} l_x &= \frac{{}_nK_x}{n} + A_s\frac{\sum\delta_x}{n} - A_s\delta_x \\ &= \frac{{}_nK_x}{n} + A_s\left(\frac{\sum\delta_x}{n} - \delta_x\right) \end{aligned}$$

$$\frac{l_x}{{}_nK_x} = \frac{1}{n} + \frac{A_s}{{}_nK_x}\left(\frac{\sum\delta_x}{n} - \delta_x\right) \tag{4}$$

Writing $R_x = \frac{l_x}{{}_nK_x}$ and R_s for $\frac{l_s}{{}_nK_x}$, from (2)

$$\begin{aligned} \frac{A_s(n-\sum\delta_x)}{{}_nK_x} &= 1 - \frac{nl_s}{{}_nK_x} \\ &= 1 - nR_s \end{aligned}$$

$$\frac{A_s}{{}_nK_x} = \frac{1-nR_s}{n-\sum\delta_x} \tag{5}$$

from (4)

$$\begin{aligned} R_x &= \frac{1}{n} + \frac{1-nR_s}{n-\sum\delta_x}\left(\frac{\sum\delta_x}{n} - \delta_x\right) \\ &= \frac{1}{n} + \frac{\frac{\sum\delta_x}{n} - \delta_x}{n-\sum\delta_x}(1-nR_s) \end{aligned}$$

Writing

$$k_x = \frac{\sum\delta_x - n\delta_x}{n(n-\sum\delta_x)}$$

k_x will be constant and

$$R_x = \frac{1}{n} + k_x(1-nR_s) \tag{6}$$

Consequently from (6), the proportions of single years of age distributions in a life table (R_x) can be obtained within an age group x to $x+n$ if the proportion of any single year of age (R_s) and the pattern of death distribution in that age group (k_x or δ_x) are known.