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THE MODEL LIFE TABLES FOR JAPAN

MASAAKI YASUKAWA

I. THE OBJECT AND THE OUTLINE OF THE WORK

(a) The Object. The object of this work is to formulate the model life tables necessary for the estimation of the population of Japan in future and also for the survey of its behavior in the past. Furthermore, this work enables us to look into the characteristic ${}_nq_x$ pattern of Japan.

(b) The Outline of the Work. The basic procedure for our formalization is to seek the ${}_nq_x$ pattern for the model by making use of the existing model life tables as material, and by connecting the mortality rate, ${}_nq_x$, to the expectation of life at birth, $\mathring{e}_0$. We elucidate the basic principles of this work in the sequel.

II. THE SELECTION OF THE LIFE TABLES AS MATERIAL

The life tables were selected by the following procedure. First, the existing life tables were gathered and examined carefully to pick the ones, the ${}_nq_x$ curves of which do not cross each other, and they were plotted as in Fig. 1. If it happened that one of them intersected with another, deviating from the general behavior of other curves, that particular one was omitted from consideration. The resultant material life tables are shown below:

Males:

(1) The Life Tables by the Cabinet Bureau of Statistics: the 2nd (1899–1903), 3rd (1909–1913), 4th (1921–1925), 5th (1926–1930), 6th (1935–1936) Complete Life Tables, 5 sheets.

(2) The Life Tables by the Health and Welfare Statistics Division, Minister's Secretariat, Ministry of Health and Welfare: the 8th Complete Life Table, 1 sheet.

(3) The Abridged Life Tables by the Health and Welfare Statistics Division, Minister's Secretariat, Ministry of Health and Welfare: 1948–1953, 1955–1959, 1961, 1963–1966, 16 sheets.

(4) The Life Tables by the Institute of Population Problems, Ministry of Health and Welfare: the 1st (1947), the 6th (1958)-15th (1961) Abridged Life Tables, 11 sheets.

(5) The Life Tables by Mr. Mizushima and others (including the 3 revised life tables), 8 sheets.[1]

(6) The Revised Life Tables by Mr. Matsuura, 3 sheets.[2]

Females:

(1) The Life Tables by the Cabinet Bureau of Statistics: the 2nd—6th Complete Life Tables, 5 sheets.

(2) The Abridged Life Tables by the Health and Welfare Statistics Division, Minister's Secretariat, Ministry of Health and Welfare: 1948–1950, 1952–1959, 1961, 1964–1966, 15 sheets.

(3) The Life Tables by the Institute of Population Problems, Ministry of Health and Welfare: the 1st (1947)-15th (1961) Abridged Life Tables, 15 sheets.

(4) The Life Tables by Mr. Mizushima and others (including the 3 revised life tables), 9 sheets.[3]

(5) The Rivised Life Tables by Mr. Matsuura, 2 sheets.[4]

In total, 44 life tables for male and 46 tables for female were collected. We also added the best life table of the world, with the reference year placed around 1960, published in the 11th Complete Life Table by the Health and Welfare Statistics Division, Minister's Secretariat, Ministry of Health and Welfare. Thus, the selected material life tables amounted to 45 for male and 47 for female.

III. THE BASIC PRINCIPLES FOR FORMALIZATION

First, a series of ${}_nq_x$ value was obtained from the life tables of different $\mathring{e}_0$ levels. Taking age along the horizontal axis and the logarisms of $1000 \cdot {}_nq_x$ along the vertical axis, we obtained pattern curves as in Fig. 1. Every series of ${}_nq_x$ was high at the time of birth, low in childhood and high again in advanced age, presenting a "*U*" sharped curve in general. Further, we note that the curve shifts down as the value of $\mathring{e}_0$ rises from a low to a high level.

Now, Fig. 2 shows another chart measuring the value of $\mathring{e}_0$ on the horizontal axis and the value of ${}_nq_x$ of a particular age on the vertical axis. The ${}_nq_x$ value obtained from the life table of low $\mathring{e}_0$ value is plotted at a high position,

[1] Mizushima, H., Kusukawa A., Matsuura, K.: "Complete Life Tables for 1950, 1951, 1952 and Abridged Life Tables 1953, 1954, 1955, Japanese," *Igaku Kenkyu* (ACTA MEDICA), Vol. 26, No. 11, November 1956. Mizushima, H.: "Reformation of Early Life Tables for Japan", *Human Ecology and Race Hygiene*, Vol. 28, No. 1, January 1962.

[2] Matsuura, K.: "Reformation of the Japanese Pre-census Life Tables", *Kyushu J. Med. Sci.* 9, 1958.

[3] The same as in Footnote 1.

[4] The same as in Footnote 2.

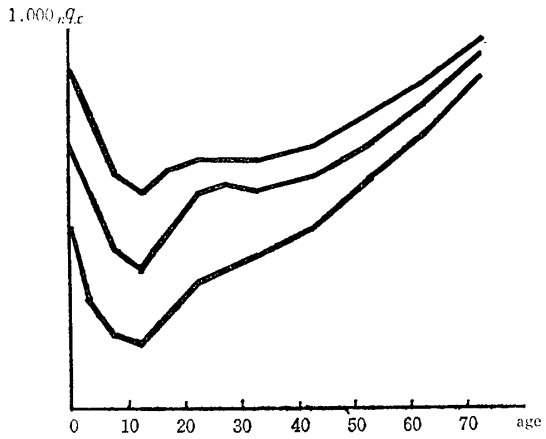

Fig. 1

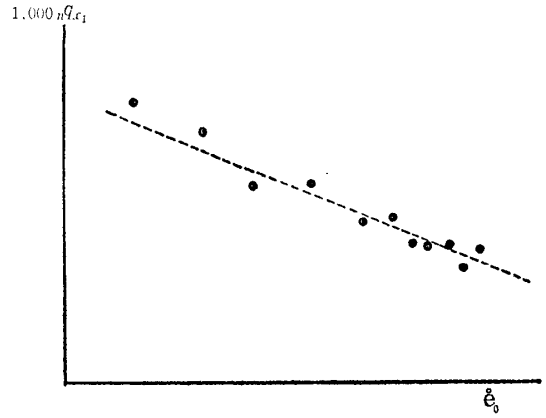

Fig. 2

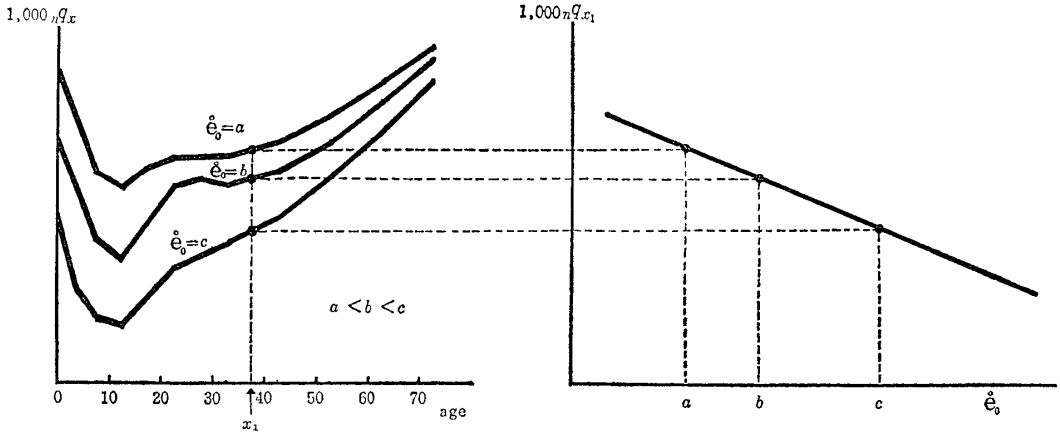

Fig. 3

and the $_nq_x$ value obtained from the life table of high $\mathring{e}_0$ value at a low position.

Rearranging Fig. 1 and Fig. 2 side by side with their vertical axis in common we obtained Fig. 3. Note that going over from the life tables of low $\mathring{e}_0$ value to those of high ones and taking the $_nq_x$ values of age x_1 in the

TABLE 1.

Level	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5	45.0	47.5	50.0
Males											
$\mathring{e}_0$	24.3	27.2	29.9	32.6	35.1	37.6	40.3	42.9	45.2	47.4	50.3
0	.3946	.3522	.3143	.2805	.2504	.2224	.1896	.1616	.1378	.1175	.1007
1	.0956	.0861	.0777	.0700	.0631	.0569	.0513	.0463	.0417	.0376	.0332
2～4	.1006	.0915	.0833	.0758	.0690	.0628	.0571	.0520	.0473	.0430	.0334
5～9	.0646	.0563	.0491	.0428	.0373	.0325	.0284	.0247	.0216	.0188	.0166
10～14	.0479	.0414	.0357	.0309	.0267	.0230	.0199	.0172	.0148	.0128	.0101
15～19	.0380	.0379	.0378	.0376	.0375	.0373	.0372	.0371	.0369	.0368	.0281
20～24	.0476	.0475	.0475	.0474	.0474	.0474	.0473	.0473	.0472	.0472	.0390
25～29	.0543	.0524	.0505	.0487	.0469	.0453	.0436	.0421	.0405	.0391	.0346
30～34	.0607	.0572	.0539	.0508	.0478	.0451	.0424	.0400	.0377	.0355	.0318
35～39	.0708	.0662	.0618	.0578	.0540	.0505	.0472	.0441	.0413	.0386	.0350
40～44	.0809	.0766	.0725	.0687	.0650	.0615	.0582	.0551	.0522	.0494	.0467
45～49	.1042	.0990	.0941	.0895	.0851	.0809	.0769	.0731	.0695	.0660	.0604
50～54	.1721	.1597	.1483	.1376	.1277	.1186	.1100	.1021	.0948	.0880	.0826
55～59	.2344	.2181	.2030	.1889	.1758	.1636	.1523	.1417	.1319	.1227	.1197
60～64	.2934	.2773	.2621	.2477	.2340	.2212	.2090	.1975	.1866	.1764	.1722
65～69	.3557	.3428	.3304	.3184	.3069	.2958	.2851	.2748	.2649	.2553	.2460
70～74	.4421	.4313	.4207	.4102	.4009	.3909	.3811	.3715	.3631	.3540	.3452
75～79	.5657	.5562	.5470	.5383	.5297	.5200	.5117	.5035	.4955	.4864	.4786
80～84	.6985	.6886	.6823	.6761	.6699	.6638	.6577	.6516	.6457	.6397	.6339
85～89	.7851	.7799	.7745	.7709	.7656	.7603	.7568	.7516	.7465	.7430	.7379
90～94	.8853	.8831	.8811	.8770	.8750	.8730	.8690	.8670	.8650	.8630	.8590
95≤	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Females											
$\mathring{e}_0$	25.1	27.6	30.1	32.6	35.0	37.7	40.2	42.7	45.2	47.7	50.0
0	.4046	.3635	.3244	.2872	.2527	.2160	.1847	.1579	.1349	.1153	.0986
1	.0780	.0735	.0692	.0651	.0613	.0572	.0544	.0476	.0417	.0365	.0319
2～4	.0867	.0820	.0775	.0733	.0693	.0652	.0612	.0576	.0506	.0442	.0386
5～9	.0671	.0606	.0544	.0486	.0431	.0374	.0324	.0280	.0243	.0210	.0182
10～14	.0391	.0368	.0347	.0326	.0307	.0287	.0268	.0251	.0224	.0185	.0153
15～19	.0466	.0464	.0463	.0462	.0461	.0459	.0458	.0457	.0455	.0454	.0453
20～24	.0592	.0583	.0575	.0567	.0560	.0552	.0545	.0537	.0529	.0522	.0515
25～29	.0653	.0632	.0611	.0592	.0574	.0554	.0536	.0502	.0468	.0436	.0406
30～34	.0729	.0694	.0661	.0630	.0602	.0571	.0542	.0514	.0474	.0436	.0401
35～39	.0740	.0709	.0679	.0652	.0626	.0598	.0572	.0547	.0509	.0464	.0422
40～44	.0813	.0773	.0736	.0700	.0667	.0631	.0598	.0566	.0531	.0489	.0449
45～49	.0902	.0853	.0806	.0762	.0721	.0677	.0636	.0597	.0561	.0527	.0495
50～54	.1055	.1008	.0963	.0920	.0881	.0839	.0798	.0760	.0723	.0689	.0656
55～59	.1455	.1387	.1323	.1262	.1206	.1146	.1089	.1034	.0983	.0934	.0887
60～64	.2021	.1930	.1844	.1762	.1685	.1604	.1527	.1454	.1384	.1317	.1251
65～69	.3015	.2887	.2766	.2650	.2543	.2430	.2321	.2217	.2117	.2022	.1931
70～74	.3984	.3851	.3723	.3602	.3490	.3371	.3256	.3146	.3038	.2935	.2835
75～79	.5815	.5632	.5459	.5293	.5140	.4977	.4719	.4666	.4518	.4375	.4236
80～84	.6724	.6531	.6438	.6349	.6266	.6179	.6042	.5932	.5825	.5720	.5616
85～89	.7689	.7590	.7496	.7406	.7323	.7234	.7147	.7060	.6975	.6891	.6807
90～94	.8751	.8698	.8649	.8601	.8557	.8511	.8454	.8403	.8352	.8301	.8251
95≤	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$_nq_x$ Values

52.5	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0	The best life table	
52.9	55.4	57.8	59.9	62.5	64.9	67.3	69.9	72.3		72.76	$\mathring{e}_0$
.0863	.0740	.0634	.0543	.0459	.0365	.0225	.0200	.0178		.0176	0
.0271	.0201	.0148	.0109	.0071	.0043	.0025	.0019	.0014		.0014	1
.0291	.0254	.0220	.0192	.0129	.0078	.0046	.0031	.0021		.0020	2～4
.0145	.0126	.0110	.0096	.0075	.0057	.0040	.0030	.0023		.0022	5～9
.0085	.0072	.0060	.0051	.0040	.0032	.0026	.0023	.0020		.0020	10～14
.0216	.0167	.0128	.0100	.0079	.0062	.0047	.0042	.0037		.0036	15～19
.0324	.0270	.0224	.0188	.0139	.0103	.0081	.0062	.0047		.0046	20～24
.0307	.0273	.0242	.0216	.0160	.0118	.0091	.0069	.0053		.0051	25～29
.0286	.0257	.0231	.0214	.0164	.0126	.0102	.0076	.0056		.0055	30～34
.0317	.0288	.0262	.0239	.0190	.0152	.0131	.0100	.0077		.0075	35～39
.0441	.0418	.0360	.0300	.0250	.0209	.0182	.0146	.0117		.0114	40～44
.0568	.0541	.0475	.0418	.0367	.0323	.0285	.0225	.0177		.0173	45～49
.0769	.0718	.0664	.0611	.0562	.0518	.0478	.0385	.0310		.0303	50～54
.1127	.1059	.0998	.0938	.0883	.0830	.0782	.0641	.0526		.0515	55～59
.1641	.1563	.1486	.1416	.1349	.1285	.1222	.1003	.0822		.0805	60～64
.2371	.2286	.2203	.2123	.2047	.1973	.1901	.1609	.1362		.1339	65～69
.3365	.3289	.3206	.3126	.3048	.2979	.2904	.2419	.2016		.1978	70～74
.4710	.4634	.4550	.4477	.4406	.4335	.4256	.3715	.3242		.3195	75～79
.6281	.6223	.6166	.6110	.6054	.5998	.5943	.5126	.4419		.4350	80～84
.7328	.7295	.7244	.7195	.7162	.7112	.7063	.6396	.5796		1.0000	85～89
.8570	.8531	.8511	.8492	.8453	.8433	.8414	.8011	.7622			90～94
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			95≤

52.1	55.6	57.7	60.0	62.6	64.9	67.5	69.5	71.8	74.8	76.15	$\mathring{e}_0$
.0842	.0721	.0608	.0554	.0504	.0458	.0371	.0314	.0224	.0156	.0132	0
.0279	.0244	.0214	.0170	.0118	.0081	.0056	.0039	.0025	.0014	.0011	1
.0338	.0295	.0258	.0225	.0197	.0165	.0102	.0063	.0034	.0022	.0018	2～4
.0158	.0137	.0118	.0102	.0089	.0077	.0056	.0039	.0025	.0018	.0016	5～9
.0127	.0105	.0087	.0072	.0055	.0041	.0031	.0023	.0017	.0013	.0011	10～14
.0451	.0214	.0192	.0141	.0103	.0075	.0055	.0041	.0028	.0019	.0017	15～19
.0508	.0359	.0324	.0251	.0181	.0131	.0094	.0068	.0045	.0025	.0019	20～24
.0378	.0352	.0328	.0275	.0205	.0153	.0115	.0086	.0060	.0036	.0028	25～29
.0368	.0339	.0311	.0267	.0209	.0164	.0128	.0100	.0074	.0045	.0036	30～34
.0384	.0349	.0318	.0289	.0232	.0186	.0149	.0119	.0088	.0069	.0061	35～39
.0413	.0379	.0349	.0311	.0263	.0223	.0189	.0160	.0130	.0106	.0097	40～44
.0465	.0436	.0410	.0385	.0342	.0300	.0263	.0231	.0196	.0150	.0133	45～49
.0624	.0594	.0566	.0520	.0468	.0421	.0379	.0341	.0299	.0241	.0218	50～54
.0843	.0801	.0761	.0712	.0659	.0611	.0566	.0524	.0477	.0378	.0339	55～59
.1194	.1136	.1082	.1029	.0980	.0933	.0888	.0843	.0791	.0630	.0568	60～64
.1845	.1762	.1683	.1607	.1536	.1467	.1401	.1338	.1264	.1067	.0986	65～69
.2738	.2645	.2555	.2468	.2384	.2303	.2224	.2149	.2058	.1740	.1613	70～74
.4102	.3969	.3843	.3724	.3606	.3491	.3380	.3273	.3145	.2698	.2516	75～79
.5515	.5415	.5317	.5221	.5126	.5033	.4942	.4853	.4745	.4020	.3730	80～84
.6725	.6643	.6563	.6484	.6405	.6328	.6251	.6176	.6083	.5450	1.0000	85～89
.8201	.8164	.8101	.8052	.8003	.7955	.7906	.7858	.7801	.7377		90～94
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		95≤

TABLE 2.

Level	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5	45.0	47.5	50.0
Males											
$\mathring{e}_0$	24.3	27.2	29.9	32.6	35.1	37.6	40.3	42.9	45.2	47.4	50.3
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	60,540	64,780	68,570	71,950	74,960	77,760	81,040	83,840	86,220	88,250	89,930
2～4	54,752	59,202	63,242	66,913	70,230	73,335	76,883	79,958	82,625	84,932	86,944
5～9	49,244	53,785	57,974	61,841	65,384	68,730	72,493	75,800	78,717	81,280	84,040
10～14	46,063	50,757	55,127	59,194	62,945	66,496	70,434	73,928	77,017	79,752	82,645
15～19	43,857	48,656	53,159	57,365	61,264	64,967	69,032	72,656	75,877	78,731	81,810
20～24	42,190	46,812	51,150	55,208	58,967	62,544	66,464	69,960	73,077	75,834	79,511
25～29	40,182	44,588	48,720	52,591	56,172	59,579	63,320	66,651	69,628	72,255	76,410
30～34	38,000	42,252	46,260	50,030	53,538	56,880	60,559	63,845	66,808	69,430	73,766
35～39	35,693	39,835	43,767	47,488	50,979	54,315	57,991	61,291	64,289	66,965	71,420
40～44	33,166	37,198	41,062	44,743	48,226	51,572	55,254	58,588	61,634	64,380	68,970
45～49	30,483	34,349	38,084	41,669	45,091	48,400	52,038	55,360	58,417	61,200	65,749
50～54	27,307	30,948	34,500	37,940	41,254	44,484	48,036	51,313	54,357	57,161	61,778
55～59	22,607	26,006	29,384	32,719	35,986	39,208	42,752	46,074	49,204	52,131	56,675
60～64	17,308	20,334	23,419	26,538	29,660	32,794	36,241	39,545	42,714	45,735	49,891
65～69	12,230	14,695	17,281	19,965	22,720	25,540	28,667	31,735	34,744	37,668	41,300
70～74	7,880	9,658	11,571	13,608	15,747	17,985	20,494	23,014	25,540	28,052	31,141
75～79	4,396	5,493	6,703	8,026	9,434	10,955	12,684	14,464	16,266	18,123	20,391
80～84	1,909	2,438	3,037	3,706	4,437	5,258	6,194	7,181	8,206	9,310	10,632
85～89	576	759	965	1,200	1,465	1,768	2,120	2,502	2,907	3,357	3,893
90～94	124	167	217	275	343	424	516	621	737	867	1,020
95≤	14	20	26	34	43	54	68	83	99	119	144
Females											
$\mathring{e}_0$	25.1	27.6	30.1	32.6	35.0	37.7	40.2	42.7	45.2	47.7	50.0
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
1	59,540	63,650	67,560	71,280	74,730	78,400	81,530	84,210	86,510	88,470	90,140
2～4	54,896	58,972	62,885	66,640	70,149	73,916	77,095	80,202	82,903	85,241	87,265
5～9	50,137	54,136	58,011	61,755	65,288	69,097	72,377	75,582	78,708	81,473	83,897
10～14	46,773	50,855	54,855	58,754	62,474	66,513	70,032	73,466	76,795	79,762	82,370
15～19	44,944	48,984	52,952	56,839	60,556	64,604	68,155	71,622	75,075	78,286	81,110
20～24	42,850	46,711	50,500	54,213	57,764	61,639	65,034	68,349	71,659	74,732	77,436
25～29	40,313	43,988	47,596	51,139	54,529	58,237	61,490	64,679	67,867	70,831	73,448
30～34	37,681	41,208	44,688	48,112	51,399	55,011	58,194	61,432	64,692	67,743	70,406
35～39	34,934	38,348	41,734	45,081	48,305	51,870	55,040	58,274	61,626	64,789	67,640
40～44	32,349	35,629	38,900	42,142	45,281	48,768	51,892	55,086	58,489	61,783	64,786
45～49	29,719	32,875	36,037	39,192	42,261	45,691	48,789	51,968	55,383	58,762	61,877
50～54	27,038	30,071	33,132	36,206	39,214	42,598	45,686	48,866	52,276	55,665	58,814
55～59	24,185	27,040	29,941	32,875	35,759	39,024	42,040	45,152	48,496	51,830	54,956
60～64	20,666	23,290	25,980	28,726	31,446	34,552	37,462	40,483	43,729	46,989	50,081
65～69	16,489	18,795	21,189	23,664	26,147	29,010	31,742	34,597	37,677	40,801	43,816
70～74	11,518	13,369	15,328	17,393	19,498	21,961	24,375	26,927	29,701	32,551	35,355
75～79	6,929	8,221	9,621	11,128	12,693	14,558	16,438	18,456	20,678	22,997	25,332
80～84	2,900	3,591	4,369	5,238	6,169	7,312	8,517	9,844	11,336	12,936	14,601
85～89	950	1,246	1,556	1,912	2,304	2,794	3,371	4,005	4,733	5,537	6,401
90～94	220	300	390	496	617	773	962	1,177	1,432	1,721	2,044
95≤	27	39	53	69	89	115	149	188	236	292	357

l_x Values

52.5	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0	
52.9	55.4	57.8	59.9	62.5	64.9	67.3	6.99	72.3		$\mathring{e}_0$
100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000		0
91,370	92,600	93,660	94,570	95,410	96,350	97,750	98,000	98,220		1
88,894	90,739	92,274	93,539	94,733	95,936	97,506	97,814	98,082		2～4
86,307	88,434	90,244	91,743	93,511	95,188	97,057	97,511	97,876		5～9
85,056	87,320	89,251	90,862	92,810	94,645	96,669	97,218	97,651		10～14
84,333	86,691	88,715	90,399	92,439	94,342	96,418	96,994	97,456		15～19
82,511	85,243	87,579	89,495	91,709	93,757	95,965	96,587	97,095		20～24
79,838	82,941	85,617	87,812	90,434	92,791	95,188	95,988	96,639		25～29
77,387	80,677	83,545	85,915	88,987	91,696	94,322	95,326	96,127		30～34
75,174	78,604	81,615	84,076	87,528	90,541	93,360	94,602	95,589		35～39
72,791	76,340	79,477	82,067	85,865	89,165	92,146	93,656	94,853		40～44
69,581	73,149	76,616	79,605	83,718	87,301	90,469	92,289	93,743		45～49
65,629	69,192	72,977	76,278	80,646	84,481	87,891	90,212	92,084		50～54
60,582	64,224	68,131	71,617	76,114	80,105	83,690	86,739	89,229		55～59
53,754	57,423	61,332	64,899	69,393	73,456	77,145	81,179	84,536		60～64
44,933	48,448	52,218	55,709	60,032	64,017	67,718	73,037	77,587		65～69
34,279	37,373	40,714	43,882	47,743	51,386	54,845	61,285	67,020		70～74
22,744	25,081	27,661	30,164	33,191	36,078	38,918	46,460	53,509		75～79
12,032	13,458	15,075	16,660	18,567	20,438	22,354	29,200	36,161		80～84
4,475	5,083	5,780	6,481	7,327	8,179	9,069	14,232	20,181		85～89
1,196	1,375	1,593	1,818	2,079	2,362	2,664	5,129	8,484		90～94
171	202	237	274	322	370	423	1,020	2,017		95≤
52.1	55.6	57.7	60.0	62·6	64.9	67.5	69.5	71.8	74.8	$\mathring{e}$
100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	0
91,580	92,790	93,920	94,460	94,960	95,420	96,290	96,860	97,760	98,440	1
89,025	90,526	91,910	92,854	93,839	94,647	95,751	96,482	97,516	98,298	2～4
86,016	87,855	89,539	90,765	91,990	93,085	94,774	95,874	97,184	98,085	5～9
84,657	86,651	88,482	89,839	91,171	92,368	94,243	95,500	96,941	97,905	10～14
83,582	85,741	87,712	89,192	90,670	91,987	93,951	95,280	96,776	97,780	15～19
79,812	83,906	86,028	87,934	89,736	91,299	93,434	94,889	96,505	97,590	20～24
75,758	80,894	83,241	85,727	88,112	90,103	92,556	94,244	96,071	97,350	25～29
72,894	78,047	80,511	83,370	86,306	88,724	91,492	93,434	95,495	97,001	30～34
70,212	75,401	78,007	81,144	84,502	87,269	90,321	92,500	94,788	96,564	35～39
67,516	72,770	75,526	78,799	82,542	85,646	88,975	91,399	93,954	95,902	40～44
64,728	70,012	72,890	76,348	80,371	83,736	87,293	89,937	92,733	94,884	45～49
61,718	66,959	69,902	73,409	77,622	81,224	84,997	87,859	90,915	93,457	50～54
57,867	62,982	65,946	69,592	73,989	77,804	81,776	84,863	88,197	91,207	55～59
52,989	57,937	60,928	64,637	69,117	73,050	77,147	80,416	83,990	87,763	60～64
46,662	51,355	54,336	57,986	62,340	66,234	70,296	73,637	77,346	82,231	65～69
38,053	42,306	45,191	48,668	52,765	56,517	60,448	63,784	67,569	73,453	70～74
27,634	31,116	33,645	36,657	40,186	43,501	47,004	50,077	53,663	60,671	75～79
16,299	18,766	20,715	23,006	25,695	28,315	31,117	33,687	36,786	44,301	80～84
7,310	8,604	9,701	10,995	12,524	14,064	15,739	17,339	19,331	26,490	85～89
2,394	2,888	3,334	3,866	4,502	5,164	5,901	6,630	7,572	12,052	90～94
431	530	633	756	899	1,056	1,236	1,420	1,665	3,161	95≤

TABLE 3.

Level	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5	45.0	47.5	50.0
Males											
$\mathring{e}_0$	24.3	27.2	29.9	32.6	35.1	37.6	40.3	42.9	45.2	47.4	50.3
0	39,460	35,220	31,430	28,050	25,040	22,240	18,960	16,160	13,780	11,750	10,070
1	5,788	5,578	5,328	5,037	4,730	4,425	4,157	3,882	3,595	3,318	2,986
2～4	5,508	5,417	5,268	5,072	4,846	4,605	4,390	4,158	3,908	3,652	2,904
5～9	3,181	3,028	2,847	2,647	2,439	2,234	2,059	1,872	1,700	1,528	1,395
10～14	2,206	2,101	1,968	1,829	1,681	1,529	1,402	1,272	1,140	1,021	835
15～19	1,667	1,844	2,009	2,157	2,297	2,423	2,568	2,696	2,800	2,897	2,299
20～24	2,008	2,224	2,430	2,617	2,795	2,965	2,144	3,309	3,449	3,579	3,101
25～29	2,182	2,336	2,460	2,561	2,634	2,699	2,761	2,806	2,820	2,825	2,644
30～34	2,307	2,417	2,493	2,542	2,559	2,565	2,568	2,554	2,519	2,465	2,346
35～39	2,527	2,637	2,705	2,745	2,753	2,743	2,737	2,703	2,655	2,585	2,450
40～44	2,683	2,849	2,978	3,074	3,135	3,172	3,216	3,228	3,217	3,180	3,221
45～49	3,176	3,401	3,584	3,729	3,837	3,916	4,002	4,047	4,060	4,039	3,971
50～54	4,700	4,942	5,116	5,221	5,268	5,276	5,284	5,239	5,153	5,030	5,103
55～59	5,299	5,672	5,965	6,181	6,326	6,414	6,511	6,529	6,490	6,396	6,784
60～64	5,078	5,639	6,138	6,573	6,940	7,254	7,574	7,810	7,970	8,067	8,591
65～69	4,350	5,037	5,710	6,357	6,973	7,555	8,173	8,721	9,204	9,616	10,159
70～74	3,484	4,165	4,868	5,582	6,313	7,030	7,810	8,550	9,274	9,929	10,750
75～79	2,487	3,055	3,666	4,320	4,997	5,697	6,490	7,283	8,060	8,813	9,759
80～84	1,333	1,679	2,072	2,506	2,972	3,490	4,074	4,679	5,299	5,953	6,739
85～89	452	592	748	925	1,122	1,344	1,604	1,881	2,170	2,490	2,837
90～94	110	147	191	241	300	370	448	538	638	748	876
95≤	14	20	26	34	43	54	68	83	99	119	144
Females											
$\mathring{e}_0$	25.1	27.6	30.1	32.6	35.0	37.7	40.2	42.7	45.2	47.7	50.0
0	40,460	36,350	32,440	28,720	25,270	21,600	18,470	15,790	13,490	11,530	9,86
1	4,644	4,678	4,675	4,640	4,581	4,484	4,435	4,008	3,607	3,229	2,87
2～4	4,759	4,836	4,874	4,885	4,861	4,819	4,718	4,620	4,195	3,768	3,36
5～9	3,364	3,281	3,156	3,001	2,814	2,584	2,345	2,116	1,913	1,711	1,52
10～14	1,829	1,871	1,903	1,915	1,918	1,909	1,877	1,844	1,720	1,476	1,26
15～19	2,094	2,273	2,452	2,626	2,792	2,965	3,121	3,273	3,416	3,554	3,67
20～24	2,537	2,732	2,904	3,074	3,235	3,402	3,544	3,670	3,791	3,901	3,98
25～29	2,632	2,780	2,908	3,027	3,130	3,226	3,296	3,247	3,176	3,088	2,98
30～34	2,747	2,860	2,954	3,031	3,094	3,141	3,154	3,158	3,066	2,954	2,82
35～39	2,585	2,719	2,834	2,939	3,024	3,102	3,148	3,188	3,137	3,006	2,85
40～44	2,630	2,754	2,863	2,950	3,020	3,077	3,103	3,118	3,106	3,021	2,90
45～49	2,681	2,804	2,905	2,986	3,047	3,093	3,103	3,102	3,107	3,097	3,06
50～54	2,853	3,031	3,191	3,331	3,455	3,574	3,646	3,714	3,780	3,835	3,85
55～59	3,519	3,750	3,961	4,149	4,313	4,472	4,578	4,669	4,767	4,841	4,87
60～64	4,177	4,495	4,791	5,062	5,299	5,542	5,720	5,886	6,052	6,188	6,26
65～69	4,971	5,426	5,861	6,271	6,649	7,049	7,367	7,670	7,976	8,250	8,46
70～74	4,589	5,148	5,707	6,265	6,805	7,403	7,937	8,471	9,023	9,554	10,02
75～79	4,029	4,630	5,252	5,890	6,524	7,246	7,921	8,612	9,342	10,061	10,73
80～84	1,950	2,345	2,813	3,326	3,865	4,518	5,146	5,839	6,603	7,399	8,20
85～89	730	946	1,166	1,416	1,687	2,021	2,409	2,828	3,301	3,816	4,35
90～94	193	261	337	427	528	658	813	989	1,196	1,429	1,68
95≤	27	39	53	69	89	115	149	188	236	292	35

${}_nd_x$ Values

52.2	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0	
52.9	55.4	57.8	59.9	62.5	64.9	67.3	69.9	72.3		$\mathring{e}_0$
8,630	7,400	6,340	5,430	4,590	3,650	2,250	2,000	1,780		0
2,476	1,861	1,386	1,031	677	414	244	186	138		1
2,587	2,305	2,030	1,796	1,222	748	449	303	206		2～4
1,251	1,114	993	881	701	543	388	293	225		5～9
723	629	536	463	371	303	251	224	195		10～14
1,822	1,448	1,136	904	730	585	453	407	361		15～19
2,673	2,302	1,962	1,683	1,275	966	777	599	456		20～24
2,451	2,264	2,072	1,897	1,447	1,095	866	662	512		25～29
2,213	2,073	1,930	1,839	1,459	1,155	962	724	538		30～34
2,383	2,264	2,138	2,009	1,663	1,376	1,214	946	736		35～39
3,210	3,191	2,861	2,462	2,147	1,864	1,677	1,367	1,110		40～44
3,952	3,957	3,639	3,327	3,072	2,820	2,578	2,077	1,659		45～49
5,047	4,968	4,846	4,661	4,532	4,376	4,201	3,473	2,855		50～54
6,828	6,801	6,799	6,718	6,721	6,649	6,545	5,560	4,693		55～59
8,821	8,975	9,114	9,190	9,361	9,439	9,427	8,142	6,949		60～64
10,654	11,075	11,504	11,827	12,289	12,631	12,873	11,752	10,567		65～69
11,535	12,292	13,053	13,718	14,552	15,308	15,927	14,825	13,511		70～74
10,712	11,623	12,586	13,504	14,624	15,640	16,564	17,260	17‘348		75～79
7,557	8,375	9,295	10,179	11,240	12,259	13,285	14,968	15,980		80～84
3,279	3,708	4,187	4,663	5,248	5,817	6,405	9,103	11,697		85～89
1,025	1,173	1,356	1,544	1,757	1,992	2,241	4,109	6,467		90～94
171	202	237	274	322	370	423	1,020	2,017		95≤
52.1	55.6	57.7	60.0	62.6	64.9	67.5	69.5	71.8	74.8	$\mathring{e}_0$
8,420	7,210	6,080	5,540	5,040	4,580	3,710	3,140	2,240	1,560	0
2,555	2,264	2,010	1,606	1,121	773	539	378	244	142	1
3,009	2,671	2,371	2,089	1,849	1,562	977	608	332	213	2～4
1,359	1,104	1,057	926	819	717	531	374	243	180	5～9
1,075	910	770	647	501	379	292	220	165	125	10～14
3,700	1,835	1,684	1,258	934	690	517	391	271	190	15～19
4,054	3,012	2,787	2,207	1,624	1,196	878	645	434	240	20～24
2,864	2,847	2,730	2,357	1,806	1,379	1,064	810	576	349	25～29
2,682	2,646	2,504	2,226	1,804	1,455	1,171	934	707	437	30～34
2,696	2,631	2,481	2,345	1,960	1,623	1,346	1,101	834	662	35～39
2,788	2,758	2,636	2,451	2,171	1,910	1,682	1,462	1,221	1,018	40～44
3,010	3,053	2,988	2,939	2,749	2,512	2,296	2,078	1,818	1,427	45～49
3,851	3,977	3,956	3,817	3,633	3,420	3,221	2,996	2,718	2,250	50～54
4,878	5,045	5,018	4,955	4,876	4,754	4,629	4,447	4,207	3,444	55～59
6,327	6,582	6,592	6,651	6,773	6,816	6,851	6,779	6,644	5,532	60～64
8,609	9,049	9,145	9,318	9,575	9,717	9,848	9,853	9,777	8,778	65～69
10,419	11,190	11,546	12,011	12,579	13,016	13,444	13,707	13,906	12,782	70～74
11,335	12,350	12,930	13,651	14,491	15,186	15,887	16,390	16,877	16,370	75～79
8,989	10,162	11,014	12,011	13,171	14,251	15,378	16,348	17,455	17,811	80～84
4,916	5,716	6,367	7,129	8,022	8,900	9,838	10,709	11,759	14,438	85～89
1,963	2,358	2,701	3,113	3,603	4,108	4,665	5,210	5,907	8,891	90～94
431	530	633	753	899	1,056	1,236	1,420	1,665	3,161	95≤

TABLE 4.

Level	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5	45.0	47.5	50.0
Males											
$\mathring{e}_0$	24.3	27.2	29.9	32.6	35.1	37.6	40.3	42.9	45.2	47.4	50.3
0	72,378	75,346	77,999	80,365	82,472	84,432	86,728	88,688	90,354	91,775	92,951
1	57,067	61,433	65,373	68,928	72,122	75,105	78,546	81,511	84,063	86,259	88,138
2~4	155,994	169,481	181,824	193,131	203,421	213,098	224,064	233,637	242,013	249,318	256,476
5~9	238,268	261,355	282,753	302,588	320,823	338,065	357,318	374,320	389,335	402,580	416,713
10~14	224,800	248,533	270,715	291,398	310,523	328,658	348,665	366,460	382,235	396,208	411,138
15~19	215,118	238,670	260,773	281,433	300,578	318,778	338,740	356,540	372,385	386,413	403,303
20~24	205,930	228,500	249,675	269,498	287,848	305,308	324,460	341,528	356,763	370,223	389,803
25~29	195,455	217,100	237,450	256,553	274,275	291,148	309,698	326,240	341,090	354,213	375,440
30~34	184,233	205,218	225,068	243,795	261,293	277,988	296,375	312,840	327,743	340,988	362,965
35~39	172,148	192,583	212,073	230,578	248,013	264,718	283,113	299,698	314,808	328,363	350,975
40~44	159,123	178,868	197,865	216,030	233,293	249,930	268,230	284,870	300,128	313,950	336,798
45~49	144,475	163,243	181,460	199,023	215,863	232,210	250,185	266,683	281,935	295,903	318,818
50~54	124,785	142,385	159,710	176,648	193,100	209,230	226,970	243,468	258,903	273,230	296,133
55~59	99,788	115,850	132,008	148,143	164,115	180,005	197,483	214,048	229,795	244,665	266,415
60~64	73,845	87,573	101,750	116,258	130,950	145,835	162,270	178,200	193,645	208,508	227,978
65~69	50,275	60,883	72,130	83,933	96,168	108,813	122,903	136,873	150,710	164,300	181,103
70~74	30,690	37,878	45,685	54,085	62,953	72,350	82,945	93,695	104,515	115,438	128,830
75~79	15,763	19,828	24,350	29,330	34,678	40,533	47,195	54,113	61,180	68,583	77,558
80~84	6,213	7,993	10,005	12,265	14,755	17,565	20,785	24,208	27,783	31,668	36,313
85~89	1,750	2,315	2,955	3,688	4,520	5,480	6,590	7,808	9,110	10,560	12,283
90~94	345	468	608	773	965	1,195	1,460	1,760	2,090	2,465	2,910
Females											
$\mathring{e}_0$	25.1	27.6	30.1	32.6	35.0	37.7	40.2	42,7	45.2	47.7	50.0
0	71,678	74,555	77,292	79,896	82,311	84,880	87,071	88,947	90,557	91,929	93,098
1	56,754	60,843	64,755	68,496	71,981	75,710	78,869	81,805	84,346	86,533	88,415
2~4	157,550	169,662	181,344	192,593	203,156	214,520	224,208	233,676	242,417	250,071	256,743
5~9	242,275	262,478	282,165	301,273	319,405	339,025	356,023	372,620	388,758	403,088	415,668
10~14	229,293	249,598	269,518	288,983	307,575	327,793	345,468	362,720	379,675	395,120	408,700
15~19	219,485	239,238	258,630	277,630	295,800	315,608	332,973	349,928	366,835	382,545	396,365
20~24	207,908	226,748	245,240	263,380	280,733	299,690	316,310	332,570	348,818	363,908	377,210
25~29	194,985	212,990	230,710	248,128	264,820	283,120	299,210	315,278	331,400	346,435	359,635
30~34	181,538	198,890	216,055	232,983	249,260	267,203	283,085	299,265	315,795	331,330	345,115
35~39	168,208	184,943	201,585	218,058	233,965	251,595	267,330	283,400	300,288	316,430	331,065
40~44	155,170	171,260	187,343	203,335	218,855	236,148	251,703	267,635	284,680	301,363	316,658
45~49	141,893	157,365	172,923	188,495	203,688	220,723	236,188	252,085	269,148	286,068	301,728
50~54	128,058	142,778	157,683	172,703	187,433	204,055	219,315	235,045	251,930	268,738	284,425
55~59	112,128	125,825	139,803	154,003	168,013	183,940	198,755	214,088	230,563	247,048	262,593
60~64	92,888	105,213	117,923	130,975	143,983	158,905	173,010	187,700	203,515	219,475	234,743
65~69	70,018	80,410	91,293	102,643	114,113	127,428	140,293	153,810	168,445	183,380	197,928
70~74	46,118	53,975	62,373	62,373	80,478	91,298	102,033	113,458	125,948	138,870	151,718
75~79	24,573	29,530	34,975	40,915	47,155	54,675	62,388	70,750	80,035	89,833	99,833
80~84	9,625	12,093	14,813	17,875	21,183	25,265	29,720	34,623	40,173	46,183	52,505
85~89	2,925	3,863	4,865	6,020	7,303	8,918	10,833	12,955	15,413	18,145	21,113
90~94	618	848	1,108	1,413	1,765	2,220	2,778	3,413	4,170	5,033	6,003

$L_0 = .3 \cdot l_0 + .7 \cdot l_1$, $L_1 = .4 \cdot l_1 + .6 \cdot l_2$, ${}_nL_x = \frac{n}{2}(l_x + l_{x+n})$

$_nL_x$ Values

52.5	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0	
52.9	55.4	57.8	59.9	62.5	64.9	67.3	69.9	72.3		$\mathring{e}_0$
93,959	94,820	95,562	96,199	96,787	97,445	98,425	98,600	98,754		0
89,884	91,483	92,828	93,951	95,004	96,102	97,604	97,888	98,137		1
262,802	268,760	273,777	277,923	282,366	286,686	291,845	292,988	293,937		2～4
428,408	439,385	448,738	456,513	465,803	474,583	484,315	486,823	488,818		5～9
423,473	435,028	444,915	453,153	463,123	472,468	482,718	485,530	487,768		10～14
417,110	429,835	440,735	449,735	460,370	470,248	480,958	483,953	486,378		15～19
405,873	420,460	432,990	443,268	455,358	466,370	477,883	481,438	484,345		20～24
393,063	409,045	422,905	434,318	448,553	461,218	473,775	478,285	481,915		25～29
381,403	398,203	412,900	424,978	441,288	455,593	469,205	474,820	479,290		30～34
369,913	387,360	402,730	415,358	433,483	449,265	463,765	470,645	476,105		35～39
355,930	373,723	390,233	404,180	423,958	441,165	456,538	464,863	471,490		40～44
338,025	355,853	373,983	389,708	410,910	429,455	445,900	456,253	464,568		45～49
315,528	333,540	352,770	369,738	391,900	411,465	428,953	442,378	453,283		50～54
285,840	304,118	323,658	341,290	363,768	383,903	402,088	419,795	434,413		55～59
246,718	264,678	283,875	301,520	323,563	343,683	362,158	385,540	405,308		60～64
198,030	214,553	232,330	248,978	269,438	288,508	306,408	335,805	361,518		65～69
142,558	156,135	170,938	185,115	202,335	218,660	234,408	269,363	301,323		70～74
86,940	96,348	106,840	117,060	129,395	141,290	153,180	189,150	224,175		75～79
41,268	46,353	52,138	57,853	64,735	71,543	78,558	108,580	140,855		80～84
14,178	16,145	18,433	20,748	23,515	26,353	29,333	48,403	71,663		85～89
3,418	3,943	4,575	5,230	6,003	6,830	7,718	15,373	26,253		90～94
52.1	55.6	57.7	60.0	62.6	64.9	67.5	69.5	71.8	74.8	$\mathring{e}_0$
94,106	94,953	95,744	96,122	96,472	96,794	97,403	97,802	98,432	98,908	0
90,047	91,432	92,714	93,496	94,287	94,956	95,967	96,633	97,614	98,355	1
262,562	267,572	272,174	275,429	278,744	281,598	285,788	288,534	292,050	294,575	2～4
426,683	436,265	445,053	451,510	457,903	463,633	472,543	478,435	485,313	489,975	5～9
420,598	430,980	440,485	447,578	454,603	460,893	470,485	476,950	484,293	489,213	10～14
408,485	424,118	434,350	442,815	451,015	458,220	468,463	475,423	483,203	488,425	15～19
388,925	412,000	423,173	434,153	444,620	453,505	464,975	472,833	481,440	487,350	20～24
371,630	397,353	409,380	422,743	436,045	447,068	460,120	469,195	478,915	485,878	25～29
357,765	383,620	396,295	411,285	427,020	439,983	454,533	464,835	475,708	483,913	30～34
344,320	370,428	383,833	399,858	417,610	432,288	448,240	459,748	471,855	481,165	35～39
330,610	356,955	371,040	387,868	407,283	423,455	440,670	453,340	466,718	476,965	40～44
316,115	342,428	356,980	374,393	394,983	412,400	430,725	444,490	459,120	470,853	45～49
298,963	324,853	339,620	357,503	379,028	397,570	416,933	431,805	447,780	461,600	50～54
277,140	302,298	317,185	335,573	357,755	377,135	397,308	413,198	430,468	447,425	55～59
249,128	273,230	288,160	306,558	328,633	348,210	368,608	385,133	403,340	424,985	60～64
211,788	234,153	248,818	266,635	287,763	306,878	326,860	343,553	362,288	389,210	65～69
164,218	183,555	197,090	213,313	232,378	250,045	268,630	284,653	303,080	335,310	70～74
109,833	124,705	135,900	149,158	164,703	179,540	195,303	209,410	226,123	262,430	75～79
59,023	68,425	76,040	85,003	95,548	105,948	117,140	127,565	140,293	176,978	80～84
24,260	28,730	32,588	37,153	42,565	48,070	54,100	59,923	67,258	96,355	85～89
7,063	8,545	9,918	11,548	13,503	15,550	17,843	20,125	23,093	38,033	90～94

TABLE 5.

Males

Level 25.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.3964	100,000	39,460	72,378	2,428,443	24.28
1	.0956	60,540	5,788	57,067	2,356,065	38.92
2～4	.1006	54,752	5,508	155,994	2,298,998	41.99
5～9	.0646	49,244	3,181	238,268	2,143,004	43.52
10～14	.0479	46,063	2,206	224,800	1,904,736	41.35
15～19	.0380	43,857	1,667	215,118	1,679,936	38.30
20～24	.0476	42,190	2,008	205,930	1,464,818	34.72
25～29	.0543	40,182	2,182	195,455	1,258,888	31.33
30～34	.0607	38,000	2,307	184,233	1,063,433	27.99
35～39	.0708	35,693	2,527	172,148	879,200	24.63
40～44	.0809	33,166	2,683	159,123	707,052	21.32
45～49	.1042	30,483	3,176	144,475	547,929	17.97
50～54	.1721	27,307	4,700	124,785	403,454	14.77
55～59	.2344	22,607	5,299	99,788	278,669	12.33
60～64	.2934	17,308	5,078	73,845	178,881	10.34
65～69	.3557	12,230	4,350	50,275	105,036	8.59
70～74	.4421	7,880	3,484	30,690	54,761	6.95
75～79	.5657	4,396	2,487	15,763	24,071	5.48
80～84	.6985	1,909	1,333	6,213	8,308	4.35
85～89	.7851	576	452	1,750	2,095	3.64
90～94	.8853	124	110	345	345	2.78
95≤	1.0000	14	14			

Females

Level 25.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.4046	100,000	40,460	71,678	2,513,688	25.14
1	.0780	59,540	4,644	56,754	2,442,010	41.01
2～4	.0867	54,896	4,759	157,550	2,385,256	43.45
5～9	.0671	50,137	3,364	242,275	2,227,706	44.43
10～14	.0391	46,773	1,829	229,293	1,985,431	42.45
15～29	.0466	44,944	2,094	219,485	1,756,138	39.07
20～24	.0592	42,850	2,537	207,908	1,536,653	35.86
25～29	.0653	40,313	2,632	194,985	1,328,745	32.96
30～34	.0729	37,681	2,747	181,538	1,133,760	30.09
35～39	.0740	34,934	2,585	168,208	952,222	27.26
40～44	.0813	32,349	2,630	155,170	784,014	24.24
45～49	.0902	29,719	2,681	141,893	628,844	21.16
50～54	.1055	27,038	2.853	128,058	486,951	18.01
55～59	.1455	24,185	3,519	112,128	358,893	14.84
60～64	.2021	20,666	4,177	92,888	246,765	11.94
65～69	.3015	16,489	4,971	70,018	153,877	9.33
70～74	.3984	11,518	4,589	46,118	83,859	7.28
75～79	.5815	6,929	4,029	24,573	37,741	5.45
80～84	.6724	2,900	1,950	9,625	13,168	4.54
85～89	.7689	950	730	2,925	3,543	3.73
90～94	.8751	220	193	618	618	2.81
95≤	1.0000	27	27			

Model Life—tables

Level 27.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.3522	100,000	35,220	75,346	2,715,503	27.16
1	.0861	64,780	5,578	61,433	2,640,157	40.76
2～4	.0915	59,202	5,417	169,481	2,578,724	43.56
5～9	.0563	53,785	3,028	261,355	2,409,243	44.79
10～14	.0414	50,757	2,101	248,533	2,147,888	42.32
15～19	.0379	48,656	1,844	238,670	1,899,355	39.04
20～24	.0475	46,812	2,224	228,500	1,660,685	35.48
25～29	.0524	44,588	2,336	217,100	1,432,185	32.12
30～34	.0572	42,252	2,417	205,218	1,215,085	28.76
35～39	.0662	39,835	2,637	192,583	1,009,867	25.35
40～44	.0766	37,198	2,849	178,868	817,284	21.97
45～49	.0990	34.349	3,401	163,243	638,416	18.59
50～54	.1597	30,948	4,942	142,385	475,173	15.35
55～59	.2181	26,006	5,672	115,850	332,788	12.80
60～64	.2773	20,334	5,639	87,573	216,938	10.67
65～69	.3428	14,695	5,037	60,883	129,365	8.80
70～74	.4313	9,658	4,165	37,878	68,482	7.09
75～79	.5562	5,493	3,055	19,828	30,604	5.57
80～84	.6886	2,438	1,679	7,993	10,776	4.42
85～89	.7799	759	592	2,315	2,783	3.67
90～94	.8831	167	147	468	468	2.80
95≦	1.0000	20	20			

Level 27.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.3635	100,000	36,350	74,555	2,763,107	27.63
1	.0735	63,650	4,678	60,843	2,688,552	42.24
2～4	.0820	58,972	4,836	169,662	2,627,709	44.56
5～9	.0606	54,136	3,281	262,478	2,458,047	45.41
10～14	.0368	50,855	1,871	249,598	2,195,569	43.17
15～19	.0464	48,984	2,273	239,238	1,945,971	39.73
20～24	.0583	46,711	2,723	226,748	1,706,733	36.54
25～29	.0632	43,988	2,780	212,990	1,479,985	33.65
30～34	.0694	41,208	2,860	198,890	1,266,995	30.75
35～39	.0709	38,348	2,719	184,943	1,068,105	27.85
40～44	.0773	35,629	2,754	171,260	883,162	24.79
45～49	.0853	32,875	2,804	157,365	711,902	21.65
50～54	.1008	30,071	3,031	142,778	544,537	18.11
55～59	.1387	27,040	3,750	125,825	411,759	15.23
60～64	.1930	23,290	4,495	105,213	285,934	12.28
65～69	.2887	18,795	5,426	80,410	180,721	9.62
70～74	.3851	13,369	5,148	53,975	100,311	7.50
75～79	.5632	8,221	4,630	29,530	46,336	5.64
80～84	.6531	3,591	2,345	12,093	16,806	4.68
85～89	.7590	1,246	946	3,865	4,713	3.78
90～94	.8698	300	261	848	848	2.83
95≦	1.0000	39	39			

Males

Level 30.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.3143	100,000	31,430	77,999	2,992,229	29.92
1	.0777	68,570	5,328	65,373	2,914,230	42.50
2～4	.0833	63,242	5,268	181,824	2,848,857	45.05
5～9	.0491	57,974	2,847	282,753	2,667,033	46.00
10～14	.0357	55,127	1,968	270,715	2,384,280	43.25
15～19	.0378	53,159	2,009	260,773	2,113,565	39.76
20～24	.0745	51,150	2,430	249,675	1,852,792	36.22
25～29	.0505	48,720	2,460	237,450	1,603,117	32.90
30～34	.0539	46,260	2,493	225,068	1,365,667	29.52
35～39	.0618	43,767	2,705	212,073	1,140,599	26.06
40～44	.0725	41,062	2,978	197,865	928,526	22.61
45～49	.0941	38,084	3,584	181,460	730,661	19.19
50～54	.1483	34,500	5,116	159,710	549,201	15.92
55～59	.2030	29,384	5,965	132,008	389,491	13.26
60～64	.2621	23,419	6,138	101,750	257,483	10.99
65～69	.3304	17,281	5,710	72,130	55,733	9.01
70～74	.4207	11,571	4,868	45,685	83,603	7.23
75～79	.5470	6,703	3,666	24,350	37,918	5.66
80～84	.6823	3,037	2,072	10,005	13,568	4.47
85～89	.7745	965	748	2,955	3,563	3.69
90～94	.8811	217	191	608	608	2.80
95≤	1.0000	26	26			

Females

Level 30.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.3244	100,000	32,440	77,292	3,012,396	30.12
1	.0692	67,560	4,675	64,755	2,935,104	43.44
2～4	.0775	62,885	4,874	181,344	2,870,349	45.64
5～9	.0544	58,011	3,156	282,165	2,689,005	46.35
10～14	.0347	54,855	1,903	269,518	2,406,840	43.88
15～19	.0463	52,952	2,452	258,630	2,137,322	40.36
20～24	.0575	50,500	2,904	245,240	1,878,692	37.20
25～29	.0611	47,596	2,908	230,710	1,633,452	34.32
30～34	.0661	44,688	2,954	216,055	1,402,742	31.39
35～39	.0679	41,734	2,834	201,585	1,186,687	28.43
40～44	.0736	38,900	2,863	187,343	985,102	25.32
45～49	.0806	36,037	2,905	172,923	797,759	22.14
50～54	.0963	33,132	3,191	157,683	624,836	18.86
55～59	.1323	29,941	3,961	139,803	467,153	15.60
60～64	.1844	25,980	4,791	117,923	327,350	12.60
65～69	.2766	21,189	5,861	91,293	209,427	9.88
70～74	.3723	15,328	5,707	62,373	118,134	7.71
75～79	.5459	9,621	5,252	34,975	55,761	5.80
80～84	.6438	4,369	2,813	14,813	20,786	4.76
85～89	.7496	1,556	1,166	4,865	5,973	3.84
90～94	.8649	390	337	1,108	1,108	2.84
95≤	1.0000	53	53			

Level 32.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.2805	100,000	28,050	80,365	3,258,443	32.58
1	.0700	71,950	5,037	68,928	3,178,078	44.17
2～4	.0758	66,913	5,072	193,131	3,109,150	46.47
5～9	.0428	61,841	2,647	302,588	2,916,019	47.15
10～14	.0309	59,194	1,829	291,398	2,613,431	44.15
15～19	.0376	57,365	2,157	281,433	2,322,033	40.48
20～24	.0474	55,208	2,617	269,498	2,040,600	36.96
25～29	.0487	52,591	2,561	256,553	1,771,102	33.68
30～34	.0508	50,030	2,542	243,795	1,514,549	30.27
35～39	.0578	47,488	2,745	230,578	1,270,754	26.76
40～44	.0687	44,743	3,074	216,030	1,040,176	23.25
45～49	.0895	41,669	3,729	199,023	824,146	19.78
50～54	.1376	37,940	5,221	176,648	625,123	16.48
55～59	.1889	32,719	6,181	148,143	448,475	13.71
60～64	.2477	26,538	6,573	116,258	300,332	11.32
65～69	.3184	19,965	6,357	83,933	184,074	9.22
70～74	.4102	13,608	5,582	54,085	100,141	7.36
75～79	.5383	8,026	4,320	29,330	46,056	5.74
80～84	.6761	3,706	2,506	12,265	16,726	4.51
85～89	.7709	1,200	925	3,688	4,461	3.72
90～94	.8770	275	241	773	773	2.81
95≦	1.0000	34	34			

Level 32.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.2872	100,000	28,720	79,896	3,261,100	32.61
1	.0651	71,280	4,640	68,496	3,181,204	44.63
2～4	.0733	66,640	4,885	192,593	3.112,708	46.71
5～9	.0468	61,755	3,001	301,273	2,920,115	47.29
10～14	.0326	58,754	1,915	288,983	2,618,842	44.57
15～19	.0462	56,839	2,626	277,630	2,329,859	40.99
20～24	.0567	54,213	3.074	263,380	2,052,229	37.85
25～29	.0592	51,139	3,027	248,128	1,788,849	34.98
30～34	.0630	48,112	3,031	232,983	1,540,721	32.02
35～39	.0652	45,081	2,939	218,058	1,307,738	29.01
40～44	.0700	42,142	2,950	203,335	1,089,680	25.86
45～49	.0762	39,192	2,986	188,495	886,345	22.62
50～54	.0920	36,206	3,331	172,703	697,850	19.27
55～59	.1262	32,875	4,149	154,003	525,147	15.97
60～64	.1762	28,726	5,062	130,975	371,144	12.92
65～69	.2650	23,664	6,271	102,643	240,169	10.15
70～74	.3602	17,393	6,265	71,303	137,526	7.91
75～79	.5293	11,128	5,890	40,915	66,223	5.95
80～84	.6349	5,238	3,326	17,875	25,308	4.83
85～89	.7406	1,912	1,416	6,020	7,433	3.89
90～94	.8601	496	427	1,413	1,413	2.85
95≦	1.0000	69	69			

Males

Level 35.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.2504	100,000	25,040	82,472	3,512,728	35.13
1	.0631	74,960	4,730	72,122	3,430,256	45.76
2~4	.0690	70,230	4,846	203,421	3,358,134	47.82
5~9	.0373	65,384	2,439	320,823	3,154,713	48.25
10~14	.0267	62,945	1,681	310,523	2,833,890	45.02
15~19	.0375	61,264	2,297	300,578	2,523,367	41.19
20~24	.0474	58,967	2,795	287,848	2,222,789	37.70
25~29	.0469	56,172	2,634	274,275	1,934,941	34.45
30~34	.0478	53,538	2,559	261,293	1,660,666	31.02
35~39	.0540	50,979	2,753	248,013	1,399,373	27.45
40~44	.0650	48,226	3,135	233,293	1,151,360	23.87
45~49	.0851	45,091	3,837	215,863	918,067	20.36
50~54	.1277	41,254	5,268	193,100	702,204	17.02
55~59	.1758	35,986	6,326	164,115	509,104	14.15
60~64	.2340	29,660	6,940	130,950	344,989	11.63
65~69	.3069	22,720	6,973	96,168	214,039	9.42
70~74	.4009	15,747	6,313	62,953	117,871	7.49
75~79	.5297	9,434	4,997	34,678	54,918	5.82
80~84	.6699	4,437	2,972	14,755	20,240	4.56
85~89	.7650	1,465	1,122	4,520	5,485	3.74
90~94	.8750	343	300	965	965	2.81
95≤	1.0000	43	43			

Females

Level 35.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.2527	100,000	25,270	82,311	3,502,975	35.03
1	.0613	74,730	4,581	71,981	3,420,664	45.77
2~4	.0693	70,149	4,861	203,156	3,348,683	47.74
5~9	.0431	65,288	2,814	319,405	3,145,527	48.18
10~14	.0307	62,474	1,918	307,575	2,826,122	45.24
15~19	.0461	60,556	2,792	295,800	2,518,547	41.59
20~24	.0560	57,764	3,235	280,733	2,222,747	38.48
25~29	.0574	54,529	3,130	264,820	1,942,014	35.61
30~34	.0602	51,399	3,094	249,260	1,677,194	32.63
35~39	.0626	48,305	3,024	233,965	1,427,934	29.56
40~44	.0667	45,281	3,020	218,855	1,193,969	26.37
45~49	.0721	42,261	3,047	203,688	975,114	23.07
50~54	.0881	39.214	3,455	187,433	771,426	19.67
55~59	.1206	35,759	4,313	168,013	583,993	16.33
60~64	.1685	31,446	5,299	143,983	415,980	13.23
65~69	.2543	26,147	6,649	114,113	271,997	10.40
70~74	.3490	19,498	6,805	80,478	157,884	8.10
75~79	.5140	12,693	6,524	47,155	77,406	6.10
80~84	.6266	6,169	3,865	21,183	30,251	4.90
85~89	.7323	2,304	1,687	7,303	9,068	3.94
90~94	.8557	617	528	1,765	1,765	2.86
95≤	1.0000	89	89			

Level 37.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.2224	100,000	22,240	84,432	3,760,444	37.60
1	.0569	77,760	4,425	75,105	3,676,012	47.27
2～4	.0628	73,335	4,605	213,098	3,600,907	49.10
5～9	.0325	68,730	2,234	338,065	3,387,809	49.29
10～14	.0230	66,496	1,529	328,658	3,049,744	45.86
15～19	.0373	64,967	2,423	318,778	2,721,086	41.88
20～24	.0474	62,544	2,965	305,308	2,402,308	38.41
25～29	.0453	59,579	2,699	291,148	2,097,000	35.20
30～34	.0451	56,880	2,565	277,988	1,805,852	31.75
35～39	.0505	54,315	2,743	264,718	1,527,864	28.13
40～44	.0615	51,572	3,172	249,930	1,263,146	24.49
45～49	.0809	48,400	3,916	232,210	1,013,216	20.93
50～54	.1186	44,484	5,276	209,230	781,006	17.56
55～59	.1636	39,208	6,414	180,005	517,776	14.58
60～64	.2212	32,794	7,254	145,835	391,771	11.95
65～69	.2958	25,540	7,555	108,813	245,936	9.63
70～74	.3909	17,985	7,030	72,350	137,123	7.62
75～79	.5200	10,955	5,697	40,533	64,773	5.91
80～84	.6638	5,258	3,490	17,565	24,240	4.61
85～89	.7603	1,768	1,344	5,480	6,675	3.78
90～94	.8730	424	370	1,195	1,195	2.82
95≤	1.0000	54	54			

Level 37.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.2160	100,000	21,600	84,880	3,772,719	37.73
1	.0572	78,400	4,484	75,710	3,687,839	47.04
2～4	.0652	73,916	4,819	214,520	3,612,129	48.87
5～9	.0374	69,097	2,584	339,025	3,397,609	49.17
10～14	.0287	66,513	1,909	327,793	3,058,584	45.98
15～19	.0459	64,604	2,965	315,608	2,730,791	42.27
20～24	.0552	61,639	3,402	299,690	2,415,183	39.18
25～29	.0554	58,237	3,226	283,120	2,115,493	36.33
30～34	.0571	55,011	3,141	267,203	1,832,373	33.31
35～39	.0598	51,870	3,102	251,595	1,565,170	30.17
40～44	.0631	48,768	3,077	236,148	1,313,575	26.94
45～49	.0677	45,691	3,093	220,723	1,077,427	23.58
50～54	.0839	42,598	3,574	204,055	856,704	20.11
55～59	.1146	39,024	4,472	183,940	652,649	16.72
60～64	.1604	34,552	5,542	158,905	468,709	13.57
65～69	.2430	29,010	7,049	127,428	309,804	10.68
70～74	.3371	21,961	7,403	91,298	182,376	8.30
75～79	.4977	14,558	7.246	54,675	91,078	6.26
80～84	.6179	7,312	4,518	25,265	36,403	4.98
85～89	.7234	2,794	2,021	8,918	11,138	3.99
90～94	.8511	773	658	2,220	2,220	2.87
95≤	1.0000	115	115			

Males

Level 40.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.1896	100,000	18,960	86,728	4,034,723	40.34
1	.0513	81,040	4,157	78,546	3,947,995	48.72
2～4	.0571	76,883	4,390	224,064	3,869,449	50.33
5～9	.0284	72,493	2,059	357,318	3,645,385	50.29
10～14	.0199	70,434	1,402	348,665	3,288,067	46.68
15～19	.0372	69,032	2,568	338,740	2,939,402	42.58
20～24	.0473	66,464	3,144	324,460	2,600,662	39.13
25～29	.0436	63,320	2,761	309,698	2,276,202	35.95
30～34	.0424	60,559	2,568	296,375	1,966,504	32,47
35～39	.0472	57,991	2,737	283,113	1,670,129	28.80
40～44	.0582	55,254	3,216	268,230	1,837,016	25.10
45～49	.0769	52,038	4,002	250,185	1,118,786	21.50
50～54	.1100	48,036	5,284	226,970	868,601	18.08
55～59	.1523	42,752	6,511	197,483	641,631	15.01
60～64	.2090	36,241	7,574	162,270	444,148	12.26
65～69	.2851	28,667	8,173	122,903	281,878	9.83
70～74	.3811	20,494	7,810	82,945	158,975	7.76
75～79	.5117	12,684	6,490	47,195	76,030	5.99
80～84	.6577	6,194	4,074	20,785	28,835	4.66
85～89	.7568	2,120	1,604	6,590	8,050	3.80
90～94	.8690	516	448	1,460	1,460	2.83
95≤	1.0000	68	68			

Females

Level 40.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.1847	100,000	18,470	87,071	4,017,563	40.18
1	.0544	81,530	4,435	78,869	3,930,492	48.21
2～4	.0612	77,095	4,718	224,208	3,851,623	49.96
5～9	.0324	72,377	2,345	356,023	3,627,415	50.12
10～14	.0268	70,032	1,877	345,468	3,271,392	46.71
15～19	.0458	68,155	3,121	332,973	2,925,924	42.93
20～24	.0545	65,034	3,544	316,310	2,592,951	39.87
25～29	.0536	61,490	3,296	299,210	2,276,641	37.02
30～34	.0542	58,194	3,154	283,085	1,977,431	33.98
35～39	.0572	55,040	3,148	267,330	1,694,346	30.78
40～44	.0598	51,892	3,103	251,703	1,427,016	27.50
45～49	.0636	48,789	3,103	236,188	1,175,313	24.09
50～54	.0798	45,686	3,646	219,315	939,125	20.56
55～59	.1089	42,040	4,578	198,755	719,810	17.12
60～64	.1527	37,462	5,720	173,010	521,055	13.91
65～69	.2321	31,742	7,367	140,293	348,045	10.96
70～74	.3256	24,375	7,937	102,033	207,752	8.52
75～79	.4819	16,438	7,921	62,388	105,719	6.43
80～84	.6042	8,517	5,146	29.720	43,331	5.09
85～89	.7147	3,371	2,409	10,833	13,611	4.04
90～94	.8454	962	813	2,778	2,778	2.89
95≤	1.0000	149	149			

Level 42.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.1616	100,000	16,160	88,688	4,287,188	42.87
1	.0463	83,840	3,882	81,511	4,198,500	50.08
2～4	.0520	79,958	4,158	233,637	4,116,989	51.49
5～9	.0247	75,800	1,872	374,320	3,883,352	51.23
10～14	.0172	73,928	1,272	366,460	3,509,032	47.47
15～19	.0371	72,656	2,696	356,540	3,142,572	43.25
20～24	.0473	69,960	3,309	341,528	2,786,032	39.82
25～29	.0421	66,651	2,806	326,240	2,444,504	36.68
30～34	.0400	63,845	2,554	312,840	2,118,264	33.18
35～39	.0441	61,291	2,703	299,698	1,805,424	29.46
40～44	.0551	58,588	3,228	284,870	1,505,726	25.70
45～49	.0731	55,360	4,047	266,683	1,220,856	22.05
50～54	.1021	51,313	5,239	243,468	954,173	18.60
55～59	.1417	46,074	6,529	214,048	710,705	15.43
60～64	.1975	39,545	7,810	178,200	496,657	12.56
65～69	.2748	31,735	8,721	136,873	318,457	10.03
70～74	.3715	23,014	8,550	93,965	181,584	7.89
75～79	.5035	14,464	7,283	54,113	87,889	6.08
80～84	.6516	7,181	4,679	24,208	33,776	4.70
85～89	.7516	2,502	1,881	7,808	9,568	3.82
90～94	.8670	621	538	1,760	1,760	2.83
95≦	1.0000	83	83			

Level 42.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.1579	100,000	15,790	88,947	4,265,771	42.66
1	.0476	84,210	4,008	81,805	4,176,824	49.60
2～4	.0576	80,202	4,620	233,676	4,095,019	51.06
5～9	.0280	75,582	2,116	372,620	3,861,343	51.09
10～14	.0251	73,466	1,844	362,720	3,488,723	47.49
15～19	.0457	71,622	3,273	349,928	3,126,003	43.65
20～24	.0537	68,349	3,670	332,570	2,776,075	40.62
25～29	.0502	64,679	3,247	315,278	2,443,505	37.78
30～34	.0514	61,432	3,158	299,265	2,128,227	34.64
35～39	.0547	58,274	3,188	28,3400	1,828,962	31.39
40～44	.0566	55,086	3,118	267,635	1,545,562	28.06
45～49	.0597	51,968	3,102	252,085	1,277,927	24.59
50～54	.0760	48,866	3,714	235,045	1,025,842	20.99
55～59	.1034	45,152	4,669	214,088	790,797	17.51
60～64	.1454	40,483	5,886	187,700	576,709	14.25
65～69	.2217	34,597	7,670	153,810	389,009	11.24
70～74	.3146	26,927	8,471	113,458	235,199	8.73
75～79	.4666	18,456	8,612	70,750	121,741	6.60
80～84	.5932	9,844	5,839	34,623	50,991	5.18
85～89	.7060	4,005	2,828	12,955	16,368	4.09
90～94	.8403	1,177	989	3,413	3,413	2.90
95≦	1.0000	188	188			

Males

Level 45.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.1378	100,000	13,780	90,354	4,520,583	45.21
1	.0417	86,220	3,595	84,063	4,430,229	51.38
2～4	.0473	82,625	3,908	242,013	4,346,166	52.60
5～9	.0216	78,717	1,700	389,335	4,104,153	52.14
10～14	.0148	77,017	1,140	382,235	3,714,818	48.23
15～19	.0369	75,877	2,800	372,385	3,332,583	43.92
20～24	.0472	73,077	3,449	356,763	2,960,198	40.51
25～29	.0405	69,628	2,820	341,090	2,603,435	37.39
30～34	.0377	66,808	2,519	327,743	2,262,345	33.86
35～39	.0413	64,289	2,655	314,808	1,934,602	30.09
40～44	.0522	61,634	3,217	300,128	1,619,794	26.28
45～49	.0695	58,417	4,060	281,935	1,319,666	22.59
50～54	.0948	54,357	5,153	258,903	1,037,731	19.09
55～59	.1319	49,204	6,490	229,795	778,828	15.83
60～64	.1866	42,714	7,970	193,645	549,033	12.85
65～69	.2649	34,744	9,204	150,710	355,388	10.23
70～74	.3631	25,540	9,274	104,515	204,678	8.01
75～79	.4955	16,266	8,060	61,180	100,163	6.16
80～84	.6457	8,206	5,299	27,783	38,983	4.75
85～89	.7465	2,907	2,170	9,110	11,200	3.85
90～94	.8650	737	638	2,090	2,090	2.84
95≦	1.0000	99	99			

Females

Level 45.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.1349	100,000	13,490	90,557	4,522,969	45.23
1	.0417	86,510	3,607	84,346	4,432,352	51.24
2～4	.0506	82,903	4,195	242,417	4,348,006	52.45
5～9	.0243	78,708	1,913	388,758	4,105,589	52.16
10～14	.0224	76,795	1,720	379,675	3,716,831	48.40
15～19	.0455	75,075	3,416	366,835	3,337,156	44.45
20～24	.0529	71,659	3,791	348,818	2,970,321	41.45
25～29	.0468	67,868	3,176	331,400	2,621,503	38.63
30～34	.0474	64,692	3,066	315,795	2,290,103	35.40
35～39	.0509	61,626	3,137	300,288	1,974,308	32.04
40～44	.0531	58,489	3,106	284,680	1,674,020	28.62
45～49	.0561	55,383	3,107	269,148	1,389,340	25.09
50～54	.0723	52,276	3,780	251,930	1,120.192	21.43
55～59	.0983	48,496	4,767	230,563	868,262	17.90
60～64	.1384	43,729	6,052	203,515	637,699	14.58
65～69	.2117	37,677	7,976	168,445	434,184	11.52
70～74	.3038	29,701	9,023	125,948	265,739	8.95
75～79	.4518	20,678	9,342	80,035	139,791	6.76
80～84	.5825	11,336	6,603	40,173	59,756	5.27
85～89	.6975	4,733	3,301	15,413	19,583	4.14
90～94	.8352	1,432	1,196	4,170	4,170	2.91
95≦	1.0000	236	236			

Level 47.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.1175	100,000	11,750	91,775	4,735,610	47.36
1	.0376	88,250	3,318	86,259	4,643,835	52.62
2～4	.0430	84,932	3,652	249,318	4,557,576	53.66
5～9	.0188	81,280	1,528	402,580	4,308,258	53.01
10～14	.0128	79,752	1,021	396,208	3,905,678	48.97
15～19	.0368	78,731	2,897	386,413	3,509,470	44.58
20～24	.0472	75,834	3,579	370,223	3,123,057	41.18
25～29	.0391	72,255	2,825	354,213	2,752,834	38.10
30～34	.0355	69,430	2,465	340,988	2,398,621	34.55
35～39	.0386	66,965	2,585	328,363	2,057,633	30.73
40～44	.0494	64,380	3,180	313,950	1,729,270	26.86
45～49	.0660	61,200	4,039	295,903	1,415,320	23.13
50～54	.0880	57,161	5,030	273,230	1,119,417	19.58
55～59	.1227	52,131	6,396	244,665	846,187	16.23
60～64	.1764	45,735	8,067	208,508	601,522	13.15
65～69	.2553	37,668	9,616	164,300	393,014	10.43
70～74	.3540	28,052	9,929	115,438	228,714	8.15
75～79	.4864	18,123	8,813	68,583	113,276	6.25
80～84	.6397	9,310	5,953	31,668	44,693	4.80
85～89	.7430	3,357	2,490	10,560	13,025	3.88
90～94	.8630	867	748	2,465	2,465	2.84
95≤	1.0000	119	119			

Level 47.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.1153	100,000	11,530	91,929	4,771,525	47.72
1	.0365	88,470	3,229	86,533	4,679,596	52.90
2～4	.0442	85,241	3,768	250,071	4,593,063	53.88
5～9	.0210	81,473	1,711	403,088	4,342,992	53.31
10～14	.0185	79,762	1,476	395,120	3,939,904	49.40
15～19	.0454	78,286	3,554	382,545	3,544,784	45.28
20～24	.0522	74,732	3,901	363,908	3,162,239	42.31
25～29	.0436	70,831	3,088	346,435	2,798,331	39.51
30～34	.0436	67,743	2,954	331,330	2,451,896	36.19
35～39	.0464	64,789	3,006	316,430	2,120,566	32.73
40～44	.0489	61,783	3,021	301,363	1,804,136	29.20
45～49	.0527	58,762	3,097	286,068	1,502,773	25.57
50～54	.0689	55,665	3,835	268,738	1,216,705	21.86
55～59	.0934	51,830	4,841	247,048	947,967	18.29
60～64	.1317	46,989	6,188	219,475	700,919	14.92
65～69	.2022	40,801	8,250	183,380	481,444	11.80
70～74	.2935	32,551	9,554	138,870	298,064	9.16
75～79	.4375	22,997	10,061	89,833	159,194	6.92
80～84	.5720	12,936	7,399	46,183	69,361	5.36
85～89	.6891	5,537	3,816	18,145	23,178	4.19
90～94	.8301	1,721	1,429	5,033	5,033	2.92
95≤	1.0000	292	292			

Males

Level 50.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.1007	100,000	10,070	92,951	5,033,041	50.33
1	.0332	89,930	2,986	88,138	4,940,090	54.93
2~4	.0334	86,944	2,904	256,476	4,851,952	55.81
5~9	.0166	84,040	1,395	416,713	4,595,476	54.68
10~14	.0101	82,645	835	411,138	4,178,763	50.56
15~19	.0281	81,810	2,299	403,303	3,767,625	46.05
20~24	.0390	79,511	3,101	389,803	3,364,322	42.31
25~29	.0346	76,410	2,644	375,440	2,974,519	38.93
30~34	.0318	73,766	2,346	362,965	2,599,079	35.23
35~39	.0350	71,420	2,450	350,975	2,236,114	31.31
40~44	.0467	68,970	3,221	336,798	1,885,139	27.33
45~49	.0604	65,749	3,971	318,818	1,548,341	23.55
50~54	.0826	61,778	5,103	296,133	1,229,523	19.90
55~59	.1197	56,675	6,784	266,415	933,390	16.47
60~64	.1722	49,891	8,591	227,978	666,975	13.37
65~69	.2460	41,300	10,159	181,103	438,997	10.67
70~74	.3452	31,141	10,750	128,830	257,894	8.28
75~79	.4786	20,391	9,759	77,558	129,064	6.33
80~84	.6339	10,632	6,739	36,313	51,506	4.84
85~89	.7379	3,893	2,873	12,283	15,193	3.90
90~94	.8590	1,020	876	2,910	2,910	2.85
95≤	1.0000	144	144			

Females

Level 50.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0986	100,000	9,860	93,098	5,001,261	50.01
1	.0319	90,140	2,875	88,415	4,908,163	54.45
2~4	.0386	87,265	3,368	256,743	4,819,748	55.23
5~9	.0182	83,897	1,527	415,668	4,563,005	54.39
10~14	.0513	82,370	1,260	408,700	4,147,337	50.35
15~19	.0453	81,110	3,674	396,365	3,738,637	46.09
20~24	.0515	77,436	3,988	377,210	3,342,272	43.16
25~29	.0406	73,448	2,982	359,635	2,965.062	40.37
30~34	.0401	70,406	2,826	345,115	2,605,427	37.01
35~39	.0422	67,640	2,854	331,065	2,260,312	33.42
40~44	.0449	64,786	2,909	316,658	1,929,247	29.78
45~49	.0495	61,877	3,063	301,728	1,612,589	26.06
50~54	.0656	58,814	3,858	284,425	1,310,861	22.29
55~59	.0887	54,956	4,875	262,593	1,026,436	18.68
60~64	.1251	50,081	6,265	234,743	763,843	15.25
65~69	.1931	43,816	8,461	197,928	529,100	12.08
70~74	.2835	35,355	10,023	151,718	331,172	9.37
75~79	.4236	25,332	10,731	99,833	179,454	7.08
80~84	.5616	14,601	8,200	52,505	79,621	5.45
85~89	.6807	6,401	4,357	21,113	27,116	4.24
90~94	.8251	2,044	1,687	6,003	6,003	2.94
95≤	1.0000	357	357			

Level 52.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0863	100,000	8,630	93,959	5,294,321	52.94
1	.0271	91,370	2,476	89,884	5,200,326	56.92
2～4	.0291	88,894	2,587	262,802	5,110,478	57.49
5～9	.0145	86,307	1,251	428,408	4,847,676	56.17
10～14	.0085	85,056	723	423,473	4,419,268	51.96
15～19	.0216	84,333	1,822	417,110	3,995,795	47.38
20～24	.0324	82,511	2,673	405,873	3,578,685	43.37
25～29	.0307	79,838	2,451	393,063	3,172,812	39.74
30～34	.0286	77,387	2,213	381,403	2,779,749	35.92
35～39	.0317	75,174	2,383	369,913	2,398,346	31.90
40～44	.0441	72,791	3,210	355,930	2,028,433	27.87
45～49	.0568	69,581	3,952	338,025	1,672,503	24.04
50～54	.0769	65,629	5,047	315,528	1,334,478	20.33
55～59	.1127	60,582	6,828	285,840	1,018,950	16.82
60～64	.1641	53,754	8,821	246,718	733,110	13.64
65～69	.2371	44,933	10,654	198,030	486,392	10.82
70～74	.3365	34,279	11,535	142,558	288,362	8.41
75～79	.4710	22,744	10,712	86,940	145,804	6.41
80～84	.6281	12,032	7,557	41,268	58,864	4.89
85～89	.7328	4,475	3,279	14,178	17,596	3.93
90～94	.8570	1,196	1,025	3,418	3,418	2.86
95≤	1.0000	171	171			

Level 52.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0842	100,000	8,420	94,106	5,213,262	52.13
1	.0279	91,580	2,555	90,047	5,119,156	55.90
2～4	.0338	89,025	3,009	262,562	5,029,109	56.49
5～9	.0158	86,016	1,359	426,683	4,766,547	55.41
10～14	.0127	84,657	1,075	420,598	4,339,864	51.26
15～19	.0451	83,582	3,770	408,485	3,919,266	46.89
20～24	.0508	79,812	4,054	388,925	3,510,781	43.99
25～29	.0378	75,758	2,864	371,630	3,121,856	41.21
30～34	.0368	72,894	2,682	357,765	2,750,226	37.73
35～39	.0384	70,212	2,696	344,320	2,392,461	34.07
40～44	.0413	67,516	2,788	330,610	2,048,141	30.34
45～49	.0465	64,728	3,010	316,115	1,717,531	26.53
50～54	.0624	61,718	3,851	298,963	1,401,416	22.71
55～59	.0843	57,867	4,878	277,140	1,102,453	19.05
60～64	.1194	52,989	6,327	249,128	825,313	15.58
65～69	.1845	46,662	8,609	211,788	576,185	12.35
70～74	.2738	38,053	10,419	164,218	364,397	9.58
75～79	.4102	27,634	11,335	109,833	200,179	7.24
80～84	.5515	16,299	8,989	59,023	90,346	5.54
85～89	.6725	7,310	4,916	24,260	31,323	4.28
90～94	.8201	2,394	1,963	7,063	7,063	2.95
95≤	1.0000	431	431			

Males

Level 55.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0740	100,000	7,400	94,820	5,539,768	55.40
1	.0201	92,600	1,861	91,483	5,444,948	58.80
2～4	.0254	90,739	2,305	268,760	5,353,465	59.00
5～9	.0126	88,434	1,114	439,385	5,084,705	57.50
10～14	.0072	87,320	629	435,028	4,645,320	53.20
15～19	.0167	86,691	1,448	429,835	4,210,292	48.57
20～24	.0270	85,243	2,302	420,460	3,780,457	44.35
25～29	.0273	82,941	2,264	409,045	3,359,997	40.51
30～34	.0257	80,677	2,073	398,203	2,950,952	36.58
35～39	.0288	78,604	2,264	387,360	2,552,749	32.48
40～44	.0418	76,340	3,191	373,723	2,165,389	28.37
45～49	.0541	73,149	3,957	355,853	1,791,666	24.49
50～54	.0718	69,192	4,968	333,540	1,435,813	20.75
55～59	.1059	64,224	6,801	304,118	1,102,273	17.16
60～64	.1563	57,423	8,975	264,678	798,155	13.90
65～69	.2286	48,448	11,075	214,553	533,477	11.01
70～74	.3289	37,373	12,292	156,135	318,924	8.53
75～79	.4634	25,081	11,623	96,348	162,789	6.49
80～84	.6223	13,458	8,375	46,353	66,441	4.94
85～89	.7295	5,083	3,708	16,145	20,088	3.95
90～94	.8531	1,375	1,173	3,943	3,943	2.87
95≦	1.0000	202	202			

Females

Level 55.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0721	100,000	7,210	94,953	5,556,598	55.57
1	.0244	92,790	2,264	91,432	5,461,645	58.86
2～4	.0295	90,526	2,671	267,572	5,370,213	59.32
5～9	.0137	87,855	1,204	436,265	5,102,641	58.08
10～14	.0105	86,651	910	430,980	4,666,376	53.85
15～19	.0214	85,741	1,835	424,118	4,235,396	49.40
20～24	.0359	83,906	3,012	412,000	3,811,278	45.42
25～29	.0352	80,894	2,847	397,353	3,399,278	42.02
30～34	.0339	78,047	2,646	383,620	3,001,925	38.46
35～39	.0349	75,401	2,631	370,428	2,618,305	34.73
40～44	.0379	72,770	2,758	356,955	2,247,877	30.89
45～49	.0436	70,012	3,053	342,428	1,890,922	27.01
50～54	.0594	66,959	3,977	324,853	1,548,494	23.13
55～59	.0801	62,982	5,045	302,298	1,223,641	19.43
60～64	.1136	57,937	6,582	273,230	921,343	15.90
65～69	.1762	51,355	9,049	234,153	648,113	12.62
70～74	.2645	42,306	11,190	183,555	413,960	9.78
75～79	.3969	31,116	12,350	124,705	230,405	7.40
80～84	.5415	18,766	10,162	68,425	105,700	5.63
85～89	.6643	8,604	5,716	28,730	37,275	4.33
90～94	.8164	2,888	2,358	8,545	8,545	2.96
95≦	1.0000	530	530			

Level 57.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0634	100,000	6,340	95,562	5,777,853	57.78
1	.0148	93,660	1,386	92,828	5,682,291	60.67
2～4	.0220	92,274	2,030	273,777	5,589,463	60.57
5～9	.0110	90,244	993	448,738	5,315,686	58.90
10～14	.0060	89,251	536	444,915	4,866,948	54.53
15～19	.0128	88,715	1,136	440,735	4,422,033	49.85
20～24	.0224	87,579	1,962	432,990	3,981,298	45.46
25～29	.0242	85,617	2,072	422,905	3,548,308	41.44
30～34	.0231	83,545	1,930	412,900	3,125,403	37.41
35～39	.0262	81,615	2,138	402,730	2,712,503	33.24
40～44	.0360	79,477	2,861	390,233	2,309,773	29.06
45～49	.0475	76,616	3,639	373,983	1,919,540	25.05
50～54	.0664	72,977	4,846	352,770	1,545,557	21.18
55～59	.0998	68,131	6,799	323,658	1,192,787	17.51
60～64	.1486	61,332	9,114	283,875	869,129	14.17
65～69	.2203	52,218	11,504	232,330	585,254	11.21
70～74	.3206	40,714	13,053	170,938	352,924	8.67
75～79	.4550	27,661	12,586	106,840	181,986	6.58
80～84	.6166	15,075	9,295	52,138	75,146	4.98
85～89	.7244	5,780	4,187	18,433	23,008	3.98
90～94	.8511	1,593	1,356	4,575	4,575	2.87
95≤	1.0000	237	237			

Level 57.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0608	100,000	6,080	95,744	5,766,540	57.67
1	.0214	93,920	2,010	92,714	5,670,796	60.38
2～4	.0258	91,910	2,371	272,174	5,578,082	60.69
5～9	.0118	89,539	1,057	445,053	5,305,908	59.26
10～14	.0087	88,483	770	440,485	4,860,855	54.94
15～19	.0192	87,712	1,684	434,350	4,420,370	50.40
20～24	.0324	86,028	2,787	423,173	3,986,020	46.33
25～29	.0328	83,241	2,730	409,380	3,562,847	42.80
30～34	.0311	80,511	2,504	396,295	3,153,467	39.17
35～39	.0318	78,007	2,481	383,833	2,757,172	35.35
40～44	.0349	75,526	2,636	371,040	2,373,339	31.42
45～49	.0410	72,890	2,988	356,980	2,002,299	27.47
50～54	.0566	69,902	3,956	339,620	1,645,319	23.54
55～59	.0761	65,946	5,018	317,185	1,305,699	19.80
60～64	.1082	60,928	6,592	288,160	988,514	16.22
65～69	.1683	54,336	9,145	248,818	700,354	12.89
70～74	.2555	45,191	11,546	197,090	451,536	9.99
75～79	.3843	33,645	12,930	135,900	254,446	7.56
80～84	.5317	20,715	11,014	76,040	118,546	5.72
85～89	.6563	9,701	6,367	32,588	42,506	4.38
90～94	.8101	3,334	2,701	9,918	9,918	2.97
95≤	1.0000	633	633			

Males

Level 60.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0543	100,000	5,430	96,199	5,986,816	59.87
1	.0109	94,570	1,031	93,951	5,890,617	62.29
2～4	.0192	93,539	1,796	277,923	5,796,666	61.97
5～9	.0096	91,743	881	456,513	5,518,743	60.15
10～14	.0051	90,862	463	453,153	5,062,230	55.71
15～19	.0100	90,399	904	449,735	4,609,077	50.99
20～24	.0188	89,495	1,683	443,268	4,159,342	46.48
25～29	.0216	87,812	1,897	434,318	3,716,074	42.32
30～34	.0214	85,915	1,839	424,978	3,281,756	38.20
35～39	.0239	84,076	2,009	415,358	2,856,778	33.98
40～44	.0300	82,067	2,462	404,180	2,441,420	29.75
45～49	.0418	79,605	3,327	389,708	2,037,240	25.59
50～54	.0611	76,278	4,661	369,738	1,647,532	21.60
55～59	.0938	71,617	6,718	341,290	1,277,794	17.84
60～64	.1416	64,899	9,190	301,520	936,504	14.43
65～69	.2123	55,709	11,827	248,978	634,984	11.40
70～74	.3126	43,882	13,718	185,115	386,006	8.80
75～79	.4477	30,164	13,504	117.060	200,891	66.6
80～84	.6110	16,660	10,179	57,853	83,831	5.03
85～89	.7195	6,481	4,663	20,748	25,978	4.01
90～94	.8492	1,818	1,544	5,230	5,230	2.88
95≤	1.0000	274	274			

Females

Level 60.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0554	100,000	5,540	96,122	5,999,694	60.00
1	.0170	94,460	1,601	93,496	5,903,572	62.50
2～4	.0225	92,854	2,089	275,429	5,810,076	62.57
5～9	.0102	90,765	926	451,510	5,534,647	60.98
10～14	.0072	89,839	647	447,578	5,083,137	56.58
15～19	.0141	89,192	1,258	442,815	4,635,559	51.97
20～24	.0251	87,934	2,207	434,153	4,192,744	47.68
25～29	.0275	85,727	2,357	422,743	3,758,591	43.84
30～34	.0267	83,370	2,226	411,285	3,335,848	40.01
35～39	.0289	81,144	2,345	399,858	2,924,563	36.04
40～44	.0311	78,799	2,451	387,868	2,524,705	32.04
45～49	.0385	76,348	2,939	374,393	2,136,837	27.99
50～54	.0520	73,409	3,817	357,503	1,762,444	24.01
55～59	.0712	69,592	4,955	335,573	1,404,941	20.19
60～64	.1029	64,637	6,651	306,558	1,069,368	16.54
65～69	.1607	57,986	9,318	266,635	762,810	13.16
70～74	.2468	48,668	12,011	213,313	496,175	10.20
75～79	.3724	36,657	13,651	149,158	282,862	7.72
80～84	.5221	23,006	12,011	85,003	133,704	5.81
85～89	.6484	10,995	7,129	37,153	48,701	4.43
90～94	.8052	3,866	3,113	11,548	11,548	2.99
95≤	1.0000	753	753			

Level 62.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0459	100,000	4,590	96,787	6,251,655	62.52
1	.0071	95,410	677	95,004	6,154,868	64.51
2～4	.0129	94,733	1,222	282,366	6,059,864	63.97
5～9	.0075	93,511	701	465,803	5,777,498	61.78
10～14	.0040	92,810	371	463,123	5,311,695	57.23
15～19	.0079	92,439	730	460,370	4,848,572	52.45
20～24	.0139	91,709	1,275	455,358	4,388,202	47.85
25～29	.0160	90,434	1,447	448,553	3,932,844	43.49
30～34	.0164	88,987	1,459	441,288	3,484,291	39.16
35～39	.0190	87,528	1,663	433,483	3,043,003	34.77
40～44	.0250	85,865	2,147	423,958	2,609,520	30.39
45～49	.0367	83,718	3,072	410,910	2,185,562	26.11
50～54	.0562	80,646	4,532	391,900	1,774,652	22.01
55～59	.0883	76,114	6,721	363,768	1,382,752	18.17
60～64	.1349	69,393	9,361	323,563	1,018,984	14.68
65～69	.2047	60,032	12,289	269,438	695,421	11.58
70～74	.3048	47,743	14,552	202,335	425,983	8.92
75～79	.4406	33,191	14,624	129,395	223,648	6.74
80～84	.6054	18,567	11,240	64,735	94,253	5.08
85～89	.7162	7,327	5,248	23,515	29,518	4.03
90～94	.8453	2,079	1,757	6,003	6,003	2.89
95≦	1.0000	322	322			

Level 62.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0504	100,000	5,040	96,472	6,262,461	62.62
1	.0118	94,960	1,121	94,287	6,165,989	64.93
2～4	.0197	93,839	1,849	278,744	6,071,702	64.70
5～9	.0089	91,990	819	457,903	5,792,958	62.97
10～14	.0055	91,171	501	454,603	5,335,055	58.52
15～19	.0103	90,670	934	451,015	4,880,452	53.83
20～24	.0181	89,736	1,624	444,620	4,429,437	49.36
25～29	.0205	88,112	1,806	436,045	3,984,817	45.22
30～34	.0209	86,306	1,804	427,020	3,548,772	41.12
35～39	.0232	84,502	1,960	417,610	3,121,752	36.94
40～44	.0263	82,542	2,171	407,283	2,704,142	32.76
45～49	.0342	80,371	2,749	394,983	2,296,859	28.58
50～54	.0468	77,622	3,633	379,028	1,901,876	24.50
55～59	.0659	73,989	4,876	357,755	1,522,848	20.58
60～64	.0980	69,113	6,773	328,633	1,165,093	16.86
65～69	.1536	62,340	9,575	287,763	836,460	13.42
70～74	.2384	52,765	12,579	232,378	548,697	10.40
75～79	.3606	40,186	14,491	164,703	316,319	7.87
80～84	.5126	25,695	13,171	95,548	151,616	5.90
85～89	.6405	12,524	8,022	42,565	56,068	4.48
90～94	.8003	4,502	3,603	13,503	13,503	3.00
95≦	1.0000	899	899			

Males

Level 65.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0365	100,000	3,650	97,445	6,492,833	64.93
1	.0043	96,350	414	96,102	6,395,388	66.38
2～4	.0078	95,936	748	286,686	6,299,286	65.66
5～9	.0057	95,188	543	474,583	6,012,600	63.17
10～14	.0032	94,645	303	472,468	5,538,017	58.51
15～19	.0062	94,342	585	470,248	5,065,549	53.69
20～24	.0103	93,757	966	466,370	4,595,301	49.01
25～29	.0118	92,791	1,095	461,218	4,128,931	44.50
30～34	.0126	91,696	1,155	455,593	3,667,713	40.00
35～39	.0152	90,541	1,376	449,265	3,212,120	35.48
40～44	.0209	89,165	1,864	441,165	2,762,855	30.99
45～49	.0323	87,301	2,820	429,455	2,321,690	26.59
50～54	.0518	84,481	4,376	411,465	1,892,235	22.40
55～59	.0830	80,105	6,649	383,903	1,480,770	18.49
60～64	.1285	73,456	9,439	343,683	1,096,867	14.93
65～69	.1973	64,017	12,631	288,508	753,184	11.77
70～74	.2979	51,386	15,308	218,660	464,676	9.04
75～79	.4335	36,078	15,640	141,290	246,016	6.82
80～84	.5998	20,438	12,259	71,543	104,726	5.12
85～89	.7112	8,179	5,817	26,353	33,183	4.06
90～94	.8433	2,362	1,992	6,830	6,830	2.89
95≤	1.0000	370	370			

Females

Level 65.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0458	100,000	4,580	96,794	6,493,739	64.94
1	.0081	95,420	773	94,956	6,396,945	67.04
2～4	.0165	94,647	1,562	281,598	6,301,989	66.58
5～9	.0077	93,085	717	463,633	6,020,391	64.68
10～14	.0041	92,368	379	460,893	5,556,758	60.16
15～19	.0075	91,989	690	458,220	5,095,865	55.40
20～24	.0131	91,299	1,196	453,505	4,637,645	50.80
25～29	.0153	90,103	1,379	447,068	4,184,140	46.44
30～34	.0164	88,724	1,455	439,983	3,737,072	42.12
35～39	.0186	87,269	1,623	432,288	3,297,089	37.78
40～44	.0223	85,646	1,910	423,455	2,864,801	33.45
45～49	.0300	83,736	2,512	412,400	2,441,346	29.16
50～54	.0421	81,224	3,420	397,570	2,028,946	24.98
55～59	.0611	77,804	4,754	377,135	1,631,376	20.97
60～64	.0933	73,050	6,816	348,210	1,254,241	17.17
65～69	.1467	66,234	9,717	306,878	906,031	13.68
70～74	.2303	56,517	13,016	250,045	599,153	10.60
75～79	.3491	43,501	15,186	179,540	349,108	8.03
80～84	.5033	28,315	14,251	105,948	169,568	5.99
85～89	.6328	14,064	8,900	48,070	63,620	4.52
90～94	.7955	5,164	4,108	15,550	15,550	3.01
95≤	1.0000	1,056	1,056			

Level 67.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0225	100,000	2,250	98,425	6,725,735	67.26
1	.0025	97,750	244	97,604	6,627,310	67.80
2～4	.0046	97,506	449	291,845	6,529,706	66.97
5～9	.0040	97,057	388	484,315	6,237,861	64.27
10～14	.0026	96,669	251	482,718	5,753,546	59.52
15～19	.0047	96,418	453	480,958	5,270,828	54.67
20～24	.0081	95,965	777	477,883	4,789,870	49.91
25～29	.0091	95,188	866	473,775	4,311,987	45.30
30～34	.0102	94,322	962	469,205	3,838,212	40.69
35～39	.0131	93,360	1,214	463,765	3,369,007	36.09
40～44	.0182	92,146	1,677	456,538	2,905,242	31.53
45～49	.0285	90,469	2,578	445,900	2,448,704	27.07
50～54	.0478	87,891	4,201	428,953	2,002,804	22.79
55～59	.0782	83,690	6,545	402,088	1,573,851	18.81
60～64	.1222	77,145	9,427	362,158	1,171,763	15.19
65～69	.1901	67,718	12,873	306,408	809,605	11.96
70～74	.2904	54,845	15,927	234,408	503,197	9.17
75～79	.4256	38,918	16,564	153,180	268,789	6.91
80～84	.5943	22,354	13,285	78,558	115,609	5.17
85～89	.7063	9,069	6,405	29,333	37,051	4.09
90～94	.8414	2,664	2,241	7,718	7,718	2.90
95≦	1.0000	423	423			

Level 67.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0371	100,000	3,710	97,403	6,752,637	67.53
1	.0056	96,290	539	95,967	6,655,234	69.12
2～4	.0102	95,751	977	285,788	6,559,267	68.50
5～9	.0056	94,774	531	472,543	6,273,479	66.19
10～14	.0031	94,243	292	470,485	5,800,936	61.55
15～19	.0055	93,951	517	468,463	5,330,451	56.74
20～24	.0094	93,434	878	464,975	4,861,988	52.04
25～29	.0115	92,556	1,064	460,120	4,397,013	47.51
30～34	.0128	91,492	1,171	454,533	3,936,893	43.03
35～39	.0149	90,321	1,346	448,240	3,482,360	38.56
40～44	.0189	88,975	1,682	440,670	3,034,120	34.10
45～49	.0263	87,293	2,296	430,725	2,593,450	29.71
50～54	.0379	84,997	3,221	416,933	2,162,725	25.44
55～59	.0566	81,776	4,629	397,308	1,745,792	21.35
60～64	.0888	77,147	6,851	368,608	1,348,484	17.48
65～69	.1401	70,296	9,848	326,860	979,876	13.94
70～74	.2224	60,448	13,444	268,630	653,016	10.80
75～69	.3380	47,004	15,887	195,303	384,386	8.18
80～84	.4942	31,117	15,378	117,140	189,083	6.08
85～89	.6251	15,739	9,838	54,100	71,943	4.57
90～94	.7906	5,901	4,665	17,843	17,843	3.02
95≦	1.0000	1,236	1,236			

Males

Level 70.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0200	100,000	2,000	98,600	6,986,473	69.87
1	.0019	98,000	186	97,888	6,887,873	70.28
2~4	.0031	97,814	303	292,988	6,789,985	69.42
5~9	.0030	97,511	293	486,823	6,496,997	66.63
10~14	.0023	97,218	224	485,530	6,010,174	61.82
15~19	.0042	96,994	407	483,953	5,524,644	56.96
20~24	.0062	96,587	599	481,438	5,040,691	52.19
25~29	.0069	95,988	662	478,285	4,559,253	47.50
30~34	.0076	95,326	724	474,820	4,080,968	42.81
35~39	.0100	94,602	946	470,645	3,606,148	38.12
40~44	.0146	93,656	1,367	464,863	3,135,503	33.48
45~49	.0225	92,289	2,077	456,253	2,670,640	28.94
50~54	.0385	90,212	3,473	442,378	2,214,387	24.55
55~59	.0641	86,739	5,560	419‘795	1,772,009	20.43
60~64	.1003	81,179	8,142	385,540	1,352,214	16.66
65~69	.1609	73,037	11,752	335,805	966,674	13.24
70~74	.2419	61,285	14,825	269,363	630,869	10.29
75~79	.3715	46,460	17,260	189,150	361,506	7.78
80~84	.5126	29,200	14,968	108,580	172,356	5.90
85~89	.6396	14,232	9,103	48,403	63,776	4.51
90~94	.8011	5,129	4,109	15,373	15,373	3.00
95≤	1.0000	1,020	1,020			

Females

Level 70.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0314	100,000	3,140	97,802	6,953,583	69.54
1	.0039	96,860	378	96,633	6,855,781	70.78
2~4	.0063	96,482	608	288,534	6,759,148	70.06
5~9	.0039	95,874	374	478.435	6,470,614	67.49
10~14	.0023	95,500	220	476,950	5,992,179	62.75
15~19	.0041	95,280	391	475,423	5,515,229	57.88
20~24	.0068	94,889	645	472,833	5,039,806	53.11
25~29	.0086	94,244	810	469,195	4,566,973	48.46
30~34	.0100	93,434	934	464,835	4,097,778	43.86
35~39	.0119	92,500	1,101	459,748	3,632,943	39.28
40~44	.0160	91,399	1,462	453,340	3,173,195	34.72
45~49	.0231	89,937	2,078	444,490	2,719,855	30.24
50~54	.0341	87,859	2,996	431,805	2,275,365	25.90
55~59	.0524	84,863	4,447	413,198	1,843,560	21.72
60~64	.0843	80,416	6,779	385,133	1,430,362	17.79
65~69	.1338	73,637	9,853	343,553	1,045,229	14.19
70~74	.2149	63,784	13,707	284,653	701,676	11.00
75~79	.3273	50,077	16,390	209,410	417,023	8.33
80~84	.4853	33,687	16,348	127,565	207,613	6.16
85~89	.6176	17,339	10,709	59,923	80,048	4.62
90~94	.7858	6,630	5,210	20,125	20,125	3.04
95≤	1.0000	1,420	1,420			

Level 72.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\dot{e}_x$
0	.0178	100,000	1,780	98,754	7,230,286	72.30
1	.0014	98,220	138	98,137	7,131,532	72.61
2～4	.0021	98,082	206	293,937	7,033,395	71.71
5～9	.0023	97,876	225	488,818	6,739,458	68.86
10～14	.0020	97,651	195	487,768	6,250,640	64.01
15～19	.0037	97,456	361	486,378	5,762,872	59.13
20～24	.0047	97,095	456	484,335	5,276,494	54.34
25～29	.0053	96,639	512	481,915	4,792,159	49.59
30～34	.0056	96,127	538	479,290	4,310,244	44.84
35～39	.0077	95,589	736	476,105	3,830,954	40.08
40～44	.0117	94,853	1,110	471,490	3,354,849	35.37
45～49	.0177	93,743	1,659	464,568	2,883,359	30.76
50～54	.0310	92,084	2,855	453,283	2,418,791	26.27
55～59	.0526	89,229	4,693	434,413	1,965,508	22.03
60～64	.0822	84,536	6,949	405,308	1,531,095	18.11
65～69	.1362	77,587	10,567	361,518	1,125,787	14.51
70～74	.2016	67,020	13,511	301,323	764,269	11.40
75～79	.3242	53,509	17,348	224,175	462,946	8.65
80～84	.4419	36,161	15,980	140,855	238,771	6.60
85～89	.5796	20,181	11,697	71,663	97,916	4.85
90～94	.7622	8,484	6,467	26,253	26,253	3.09
95≦	1.0000	2,017	2,017			

Level 72.5

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\dot{e}_x$
0	.0224	100,000	2,240	98,432	7,178,384	71.78
1	.0025	97,760	244	97,614	7,079,952	72.42
2～4	.0034	97,516	332	292,050	6,982,338	71.60
5～9	.0025	97,184	243	485,313	6,690,288	68.84
10～14	.0017	96,941	105	484,293	6,204,975	64.01
15～19	.0028	96,776	271	483,203	5,720,682	59.11
20～24	.0045	96,505	434	481,440	5,237,479	54.27
25～29	.0060	96,071	576	478,915	4,756,039	49.51
30～34	.0074	95,495	707	475,708	4,277,134	44.79
35～39	.0088	94,788	834	471,855	3,801,416	40.10
40～44	.0130	93,954	1,221	466,718	3,329,561	35.44
45～49	.0196	92,733	1,818	459,120	2,862,843	30.87
50～54	.0299	90,915	2,718	447,780	2,403,723	26.44
55～59	.0477	88,197	4,207	430,468	1,955,943	22.18
60～64	.0791	83,990	6,644	403,340	1,525,475	18.16
65～69	.1264	77,346	9,777	362,288	1,122,135	14.51
70～74	.2058	67,569	13,906	303,080	759,847	11.25
75～79	.3145	53,663	16,877	226,123	456,767	8.51
80～84	.4745	36,786	17,455	140,293	230,644	6,27
85～89	.6083	19,331	11,759	67,258	90,351	4.67
90～94	.7801	7,572	5,907	23,093	23.093	3.05
95≦	1.0000	1,665	1,665			

left figure accordingly corresponds to going down the curve to the lower right in the right figure.

IV. THE METHODS FOR FORMALIZATION

On the basis of the existing life tables, the chart like Fig. 2 was constructed for each age, and each ${}_nq_x$ value was correlated to $\mathring{e}_0$ value. In other words, the relation ${}_nq_x = f(\mathring{e}_0)$ was ascertained. In actual practice, a straight line was obtained by the method of least squares. We computed accordingly the value of ${}_nq_x$ for each $\mathring{e}_0$ value (with the $\mathring{e}_0$ levels notched by the interval of 2.5 years in the model life tables). In case that there are spatial gaps in the set of plotted points, the entire set was divided into separate groups, each being furnished with a straight line.

The results obtained from this method were summarised as the values of the life table functions (${}_nq_x$, l_x, ${}_nd_x$, ${}_nL_x$) presented in the Table 1—4, and the Japanese life tables for male and female based on the $\mathring{e}_0$ level as shown in Tables 5 and 6.

Females

Level 75.0

x	${}_nq_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	$\mathring{e}_x$
0	.0156	100,000	1,560	98,908	7,477,961	74.78
1	.0014	98,440	142	98,355	7,379,053	74.96
2~4	.0022	98,298	213	294,575	7,280,698	74.07
5~9	.0018	98,085	180	489,975	6,986,123	71.23
10~14	.0013	97,905	125	489,213	6,496,148	66.35
15~19	.0019	97,780	190	488,425	6,006,935	61.43
20~24	.0025	97,590	240	487,350	5,518,510	56.55
25~29	.0036	97,350	349	485,878	5,031,160	51.68
30~34	.0045	97,001	437	483,913	4,545,282	46.86
35~39	.0069	96,564	662	481,165	4,061,369	42.06
40~44	.0106	95,902	1,018	476,965	3,580.204	37.33
45~49	.0150	94,884	1,427	470,853	3,103,239	32.71
50~54	.0241	93,457	2,250	461,660	2,632,386	28.17
55~59	.0378	91,207	3,444	447,425	2,170,726	23.80
60~64	.0630	87,763	5,532	424,985	1,723,301	19.64
65~69	.1067	82,231	8,778	389,210	1,298,316	15.79
70~74	.1740	73,453	12,782	335,310	909,106	12.38
75~79	.2698	60,671	16,370	262,430	573,796	9.46
80~84	.4020	44,331	17,811	176,978	311,366	7.03
85~89	.5450	26,490	14,438	96,355	134,388	5.07
90~94	.7377	12,052	8,891	38,033	38,033	3.16
95≤	1.0000	3,161	3,161			

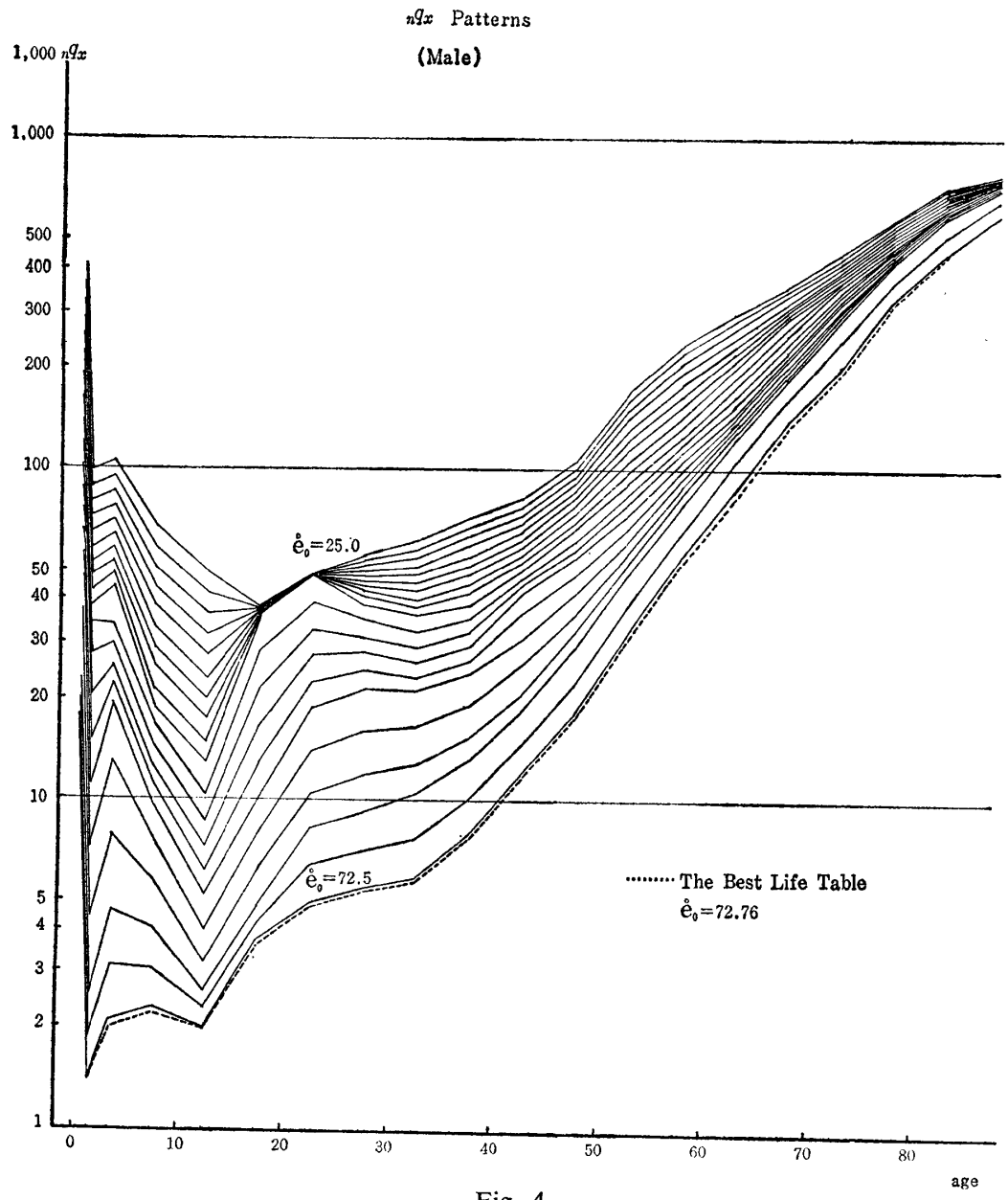

Fig. 4

V. THE CHARACTERISTICS OF THE WORK

It is important to examine the reliability of the life tables thus formalized. These model life tables were checked by the following method. The validity of the series of ${}_nq_x$ values was to be judged by the size of difference between the level of $\mathring{e}_0$ given at the beginning of the work and that of $\mathring{e}_0$ which came out as a result of the computation of a series of ${}_nq_x$ values. In the case that the difference was found large, the estimation of function ${}_nq_x = f(\mathring{e}_0)$ had to be reworked so as to make it as small as possible.

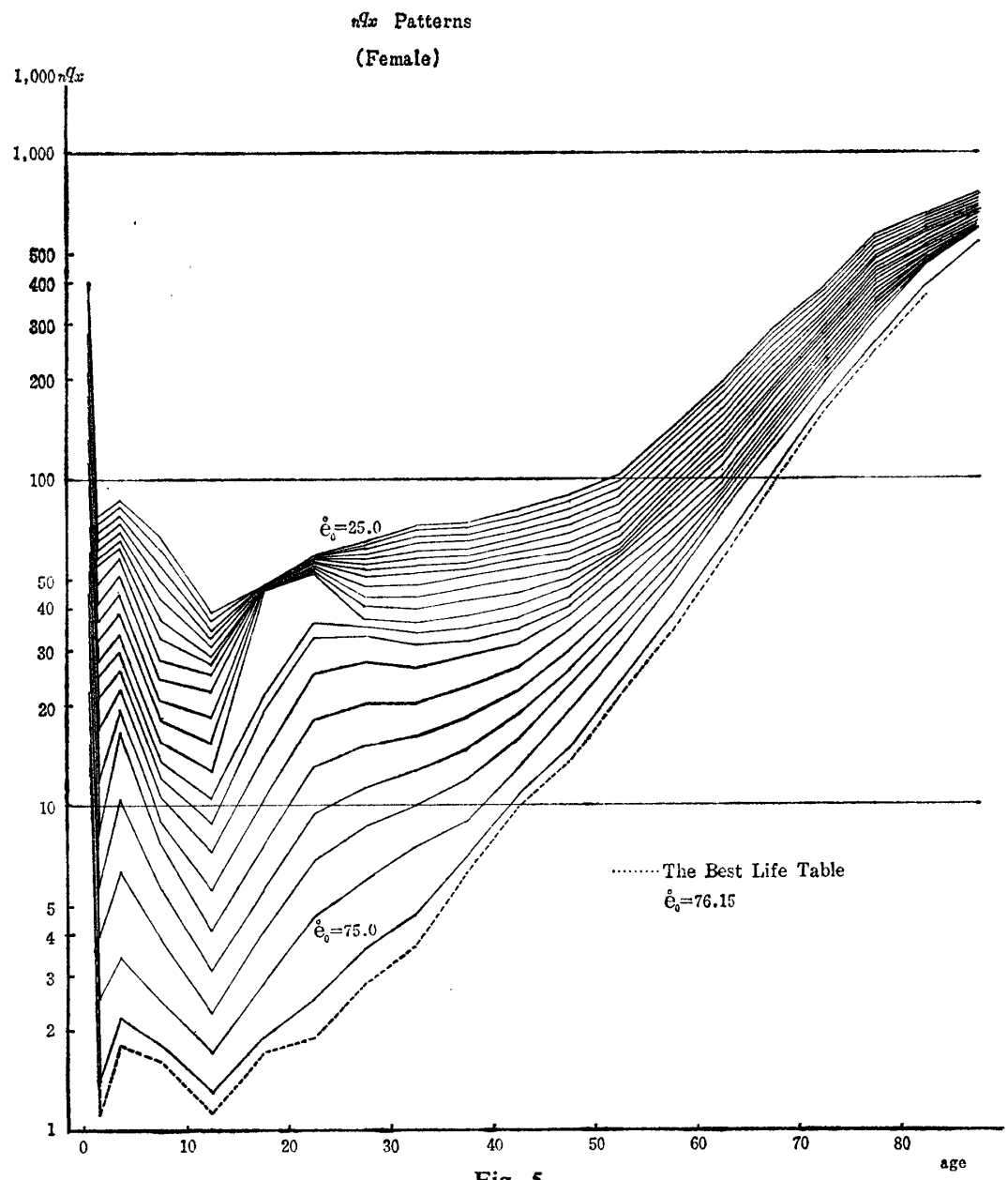

Fig. 5

There are at present the model life tables by the United Nations[5] and Coale-Demeny.[6] We presented their tables with very limited explanation, and omitted the comparative study of these accomplishments.

Keio University

[5] 1. United Nations: "Age and Sex Patterns of Mortality. Model Life Tables for Underdeveloped Countries", *Population Studies*, No. 22, New York, 1955.
2. United Nations: "Methods for Population Projections by Sex and Age", *Population Studies*, No. 25, New York, 1956.

[6] Coale, Ansley J. and Demeny, Paul: *Regional Model Life Tables and Stable Populations*, Princeton, 1966.