

# Construction of Model Life Tables for India: Using SRS Based Abridged Life Tables

## Extended Abstract

Office of the Registrar General of India (ORGI) over the years produced for India and its major states and also Himachal Pradesh about 3060 life tables, referring to urban, rural and total areas, of males, females and both sexes combined, using the Greville's life table method and the age-specific death rates (ASDRs) of the Sample Registration System, which is a dual record system for collecting fertility and mortality indicators. ORGI assumed that the reported ASDRs are of good quality and can be used for constructing the life tables.

In the present paper an attempt has been made to construct regression based model life tables for India of males, females and both sexes combined, using 1020 male, 1020 female and 1020 both sexes combined life tables respectively of the Sample Registration System (SRS). Several methods were existing for constructing model life table using a set of observed life tables as an input (See for instance Coale and Demeny, 1966; United Nations, 1955, 1981). The procedure followed here is similar to the one earlier used by Gabriel and Ronen (1958). For instance in case of males, using the life expectancy at age  $x$ ,  $LE(X)$  value of 1020 male life tables as input about 15 regression models have been developed. In each of the regression line life expectancy at birth ( $LE(0)$ ) is taken as a dependent variables and  $LE(1)$ ,  $LE(5)$ , ---  $LE(70+)$  have been taken as dependent variables, each time. Thus various regression models developed are presented here in Table 1A. Model life tables for Males further developed based on the regression models given in Table 1A are shown here in Table 2A in terms of Life Expectancy at age  $x$   $LE(X)$ . Table 2A to Tale 2C were presented here for the life expectancies corresponding to 55 to 74 only, as Life Expectancy at Birth (LEB) for India is observed to vary between 55 and about 75 over from 1970 to 2006. One may extend the tables further below 55 and above 74, however, it is cautioned that the model tables may not produced acceptable results due to the fact that the models were developed using simple regression equations that uses data referring to 1970s to 2006, where the LEB is observed to vary among the major states between 55 to about 75 years as already explained.

Once  $LE(X)$  is available, by considering assumed value of  ${}_n a_x$  (the average number of years survived in an age group before leaving that age group) corresponding to different age groups of 0- 1, 1- 4, 4-9, --- 65-69, one may easily compute the full model life tables.

The basic aim in constructing the model life tables for India is to use them further to estimate life tables for the districts in India given the only information on life expectancy at birth or the infant mortality rate for the unit of study under consideration. Regression models were also developed to convert given infant mortality rate of males, female and both sexes combined into corresponding life expectancy at birth values (See Table 3).

Estimated life tables for Kasaragod District of Kerala for the census years of 1991 and 2001 were given in Table 4A and Table 4B respectively. Given IMR values have been at first converted into Life expectancy at birth using the regression models given in Table 2 and further the estimated life tables were developed using the regression models given in Table 1A, Table 1B and Table 1C , for males, females and both sexes combined respectively.

A comparison of the models life table values presented here with that of the United Nations (1981) South Asian Pattern is quite encouraging. For instance see the graphs presented for Females here as Figures A.

Finally, it is to state, model life tables presented here may provide acceptable life tables for districts or any other unit/sub-unit in India, only when the input information on life expectancy at birth or the infant mortality that we may use in obtaining the LEB is of acceptable quality. Thus the entire resulted life table values depends on the input taken for granted.

#### References:

Coale,A.J. and P.Demeny (1966) Regional Model Life tables and Stable Popualtions, Princeton University Press, Princeton, New Jersey.

Gabriel, K.R. and Ronen,I. (1958) Estimates of mortality from infant mortality rates, Population Studies, 12(2):

United Nations (1955) Age and Sex Patterns of Mortality: Model Life Tables for Under-Developed Countries. Department of Social Affairs. Population Studies, No. 22. Department of Social Affairs, New York, Sales No. 1955.XIII.9

United Nations (1981) Model Life Tables for Developing Countries, United Nations Publication, New York, Sales No. E.1981.XIII.7.



**Table 1A: Regression Models: MALES**

Dependent LE(X)	Independent LE(X)	A	C	R <sup>2</sup>
LE(1) (t statistic:)	LE(0)	21.57761901101 (81.358)	.7056008407932 (164.040)	.964
LE(5) (t statistic:)	LE(0)	31.02211814836 (83.933)	.5168883342727 (86.228)	.880
LE(10) (t statistic:)	LE(0)	29.9523088359 (78.096)	.4616162825221 (74.212)	.844
LE(15) (t statistic:)	LE(0)	26.57493611547 (68.353)	.4401479935302 (69.803)	.827
LE(20) (t statistic:)	LE(0)	22.93708454447 (58.341)	.4242239247937 (66.531)	.813
LE(25) (t statistic:)	LE(0)	19.25949885046 (47.825)	.4105491671412 (62.859)	.795
LE(30) (t statistic:)	LE(0)	15.32879597293 (36.961)	.4018226762383 (59.739)	.778
LE(35) (t statistic:)	LE(0)	11.44438025639 (27.076)	.393254378776 (57.366)	.764
LE(40) (t statistic:)	LE(0)	7.710177326002 (17.880)	.3836684559006 (54.859)	.747
LE(45) (t statistic:)	LE(0)	4.329509113797 (9.828)	.3705040524823 (81.858)	.725
LE(50) (t statistic:)	LE(0)	1.537978474749 (3.464)	.3512976634403 (48.780)	.700
LE(55) (t statistic:)	LE(0)	-.7188631346352 (-1.599)	.3282203446081 (45.024)	.666
LE(60) (t statistic:)	LE(0)	-2.569722890357 (-5.581)	.3041029675301 (40.721)	.620
LE(65) (t statistic:)	LE(0)	-3.774780024349 (-7.731)	.2770240510058 (34.984)	.546
LE(70) (t statistic:)	LE(0)	-4.367297483208 (-8.665)	.2456658268237 (30.053)	.470

**Table 1B: Regression Models: FEMALES**

Dependent LE(X)	Independent LE(X)	A	C	R <sup>2</sup>
LE(1) (t statistic:)	LE(0)	17.3817765829 (69.996)	.7799139858384 (198.730)	.975
LE(5) (t statistic:)	LE(0)	29.33356355265 (73.908)	.5684844307547 (90.633)	.890
LE(10) (t statistic:)	LE(0)	28.54259541243 (70.403)	.5120326515141 (79.916)	.863
LE(15) (t statistic:)	LE(0)	25.11153949163 (61.363)	.4926091044375 (76.168)	.851
LE(20) (t statistic:)	LE(0)	22.27450005183 (54.568)	.4663110445407 (72.284)	.837
LE(25) (t statistic:)	LE(0)	19.7418237573 (48.290)	.4362409970257 (67.521)	.817
LE(30) (t statistic:)	LE(0)	17.05645932114 (41.484)	.4085074796064 (62.868)	.795
LE(35) (t statistic:)	LE(0)	14.25619690328 (34.555)	.382429866077 (58.655)	.772
LE(40) (t statistic:)	LE(0)	11.31117193345 (27.416)	.3586940907965 (55.013)	.748
LE(45) (t statistic:)	LE(0)	8.347324841176 (20.353)	.3358988165789 (51.825)	.725
LE(50) (t statistic:)	LE(0)	5.513413144693 (13.03)	.3130291266315 (48.868)	.701
LE(55) (t statistic:)	LE(0)	3.123502166978 (7.628)	.2870038868596 (44.348)	.659
LE(60) (t statistic:)	LE(0)	1.079875053499 (2.552)	.2600241635731 (38.888)	.598
LE(65) (t statistic:)	LE(0)	0.05257719593178 (0.115)	.2238479699256 (30.894)	.484
LE(70) (t statistic:)	LE(0)	-.4861833075847 (-1.000)	.1862227470564 (24.246)	.366

**Table 1C: Regression Models: BOTH SEXES**

Dependent LE(X)	Independent LE(X)	A	C	R <sup>2</sup>
LE(1) (t statistic:)	LE(0)	19.27147043625 (81.868)	.7466656642558 (198.237)	.975
LE(5) (t statistic:)	LE(0)	30.07045102211 (85.588)	.5443578080648 (96.831)	.902
LE(10) (t statistic:)	LE(0)	29.16649237138 (81.113)	.487997648538 (84.818)	.876
LE(15) (t statistic:)	LE(0)	25.74776004798 (70.902)	.4677969799784 (80.507)	.864
LE(20) (t statistic:)	LE(0)	22.53582162304 (61.972)	.4461661642326 (76.679)	.852
LE(25) (t statistic:)	LE(0)	19.4584981614 (52.748)	.423745149191 (71.790)	.835
LE(30) (t statistic:)	LE(0)	16..22323076532 (43.094)	.4042624268095 (67.113)	.816
LE(35) (t statistic:)	LE(0)	12.92027722802 (33.877)	.3862252407814 (63.289)	.797
LE(40) (t statistic:)	LE(0)	9.5984899780557 (24.891)	.369232512045 (59.841)	.779
LE(45) (t statistic:)	LE(0)	6.427578911433 (16.531)	.3513200738541 (46.468)	.758
LE(50) (t statistic:)	LE(0)	3.630619084143 (9.306)	.3302484762889 (52.905)	.733
LE(55) (t statistic:)	LE(0)	1.229821863939 (3.143)	.3072753000939 (49.081)	.703
LE(60) (t statistic:)	LE(0)	-.7693943023235 (-1.911)	.2829038563869 (43.910)	.654
LE(65) (t statistic:)	LE(0)	-1.885118818945 (-4.399)	.2514655047442 (36.673)	.569
LE(70) (t statistic:)	LE(0)	-2.517897044297 (-5.651)	.2183023000124 (30.619)	.479

**Table 2A: Model Life Tables: MALES**

MALES										
Age	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)
0	55.000	56.000	57.000	58.000	59.000	60.000	61.000	62.000	63.000	64.000
1	60.386	61.091	61.797	62.502	63.208	63.914	64.619	65.325	66.030	66.736
5	59.451	59.968	60.485	61.002	61.519	62.035	62.552	63.069	63.586	64.103
10	55.341	55.803	56.264	56.726	57.188	57.649	58.111	58.573	59.034	59.496
15	50.783	51.223	51.663	52.104	52.544	52.984	53.424	53.864	54.304	54.744
20	46.269	46.694	47.118	47.542	47.966	48.391	48.815	49.239	49.663	50.087
25	41.840	42.250	42.661	43.071	43.482	43.892	44.303	44.714	45.124	45.535
30	37.429	37.831	38.233	38.635	39.036	39.438	39.840	40.242	40.644	41.045
35	33.073	33.467	33.860	34.253	34.646	35.040	35.433	35.826	36.219	36.613
40	28.812	29.196	29.579	29.963	30.347	30.730	31.114	31.498	31.881	32.265
45	24.707	25.078	25.448	25.819	26.189	26.560	26.930	27.301	27.671	28.042
50	20.859	21.211	21.562	21.913	22.265	22.616	22.967	23.318	23.670	24.021
55	17.333	17.661	17.990	18.318	18.646	18.974	19.303	19.631	19.959	20.287
60	14.156	14.460	14.764	15.068	15.372	15.676	15.981	16.285	16.589	16.893
65	11.462	11.739	12.016	12.293	12.570	12.847	13.124	13.401	13.678	13.955
70	9.144	9.390	9.636	9.881	10.127	10.373	10.618	10.864	11.110	11.355

MALES										
Age	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)
0	65.000	66.000	67.000	68.000	69.000	70.000	71.000	72.000	73.000	74.000
1	67.442	68.147	68.853	69.558	70.264	70.970	71.675	72.381	73.086	73.792
5	64.620	65.137	65.654	66.171	66.687	67.204	67.721	68.238	68.755	69.272
10	59.957	60.419	60.881	61.342	61.804	62.265	62.727	63.189	63.650	64.112
15	55.185	55.625	56.065	56.505	56.945	57.385	57.825	58.266	58.706	59.146
20	50.512	50.936	51.360	51.784	52.209	52.633	53.057	53.481	53.905	54.330
25	45.945	46.356	46.766	47.177	47.587	47.998	48.408	48.819	49.230	49.640
30	41.447	41.849	42.251	42.653	43.055	43.456	43.858	44.260	44.662	45.064
35	37.006	37.399	37.792	38.186	38.579	38.972	39.365	39.759	40.152	40.545
40	32.649	33.032	33.416	33.800	34.183	34.567	34.951	35.334	35.718	36.102
45	28.412	28.783	29.153	29.524	29.894	30.265	30.635	31.006	31.376	31.747
50	24.372	24.724	25.075	25.426	25.778	26.129	26.480	26.831	27.183	27.534
55	20.615	20.944	21.272	21.600	21.928	22.257	22.585	22.913	23.241	23.569
60	17.197	17.501	17.805	18.109	18.413	18.717	19.022	19.326	19.630	19.934
65	14.232	14.509	14.786	15.063	15.340	15.617	15.894	16.171	16.448	16.725
70	11.601	11.847	12.092	12.338	12.584	12.829	13.075	13.321	13.566	13.812

Source: Table 1A

**Table 2B: Model Life Tables: FEMALES**

FEMALES										
Age	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)
0	55.000	56.000	57.000	58.000	59.000	60.000	61.000	62.000	63.000	64.000
1	60.277	61.057	61.837	62.617	63.397	64.177	64.957	65.736	66.516	67.296
5	60.600	61.169	61.737	62.306	62.874	63.443	64.011	64.580	65.148	65.717
10	56.704	57.216	57.728	58.240	58.753	59.265	59.777	60.289	60.801	61.313
15	52.205	52.698	53.190	53.683	54.175	54.668	55.161	55.653	56.146	56.639
20	47.922	48.388	48.854	49.321	49.787	50.253	50.719	51.186	51.652	52.118
25	43.735	44.171	44.608	45.044	45.480	45.916	46.353	46.789	47.225	47.661
30	39.524	39.933	40.341	40.750	41.158	41.567	41.975	42.384	42.792	43.201
35	35.290	35.672	36.055	36.437	36.820	37.202	37.584	37.967	38.349	38.732
40	31.039	31.398	31.757	32.115	32.474	32.833	33.192	33.550	33.909	34.268
45	26.822	27.158	27.494	27.829	28.165	28.501	28.837	29.173	29.509	29.845
50	22.730	23.043	23.356	23.669	23.982	24.295	24.608	24.921	25.234	25.547
55	18.909	19.196	19.483	19.770	20.057	20.344	20.631	20.918	21.205	21.492
60	15.381	15.641	15.901	16.161	16.421	16.681	16.941	17.201	17.461	17.721
65	12.364	12.588	12.812	13.036	13.260	13.483	13.707	13.931	14.155	14.379
70	9.756	9.942	10.129	10.315	10.501	10.687	10.873	11.060	11.246	11.432

FEMALES										
Age	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)
0	65.000	66.000	67.000	68.000	69.000	70.000	71.000	72.000	73.000	74.000
1	68.076	68.856	69.636	70.416	71.196	71.976	72.756	73.536	74.315	75.095
5	66.285	66.854	67.422	67.991	68.559	69.127	69.696	70.264	70.833	71.401
10	61.825	62.337	62.849	63.361	63.873	64.385	64.897	65.409	65.921	66.433
15	57.131	57.624	58.116	58.609	59.102	59.594	60.087	60.579	61.072	61.565
20	52.585	53.051	53.517	53.984	54.450	54.916	55.383	55.849	56.315	56.782
25	48.097	48.534	48.970	49.406	49.842	50.279	50.715	51.151	51.587	52.024
30	43.609	44.018	44.426	44.835	45.243	45.652	46.060	46.469	46.878	47.286
35	39.114	39.497	39.879	40.261	40.644	41.026	41.409	41.791	42.174	42.556
40	34.626	34.985	35.344	35.702	36.061	36.420	36.778	37.137	37.496	37.855
45	30.181	30.517	30.853	31.188	31.524	31.860	32.196	32.532	32.868	33.204
50	25.860	26.173	26.486	26.799	27.112	27.425	27.738	28.052	28.365	28.678
55	21.779	22.066	22.353	22.640	22.927	23.214	23.501	23.788	24.075	24.362
60	17.981	18.241	18.501	18.762	19.022	19.282	19.542	19.802	20.062	20.322
65	14.603	14.827	15.050	15.274	15.498	15.722	15.946	16.170	16.393	16.617
70	11.618	11.805	11.991	12.177	12.363	12.549	12.736	12.922	13.108	13.294

Source: Table 1B



**Table 2C: Model Life Tables: Both Sexes Combined**

BOTH SEXES COMBINED										
Age	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)
0	55.000	56.000	57.000	58.000	59.000	60.000	61.000	62.000	63.000	64.000
1	60.338	61.085	61.831	62.578	63.325	64.071	64.818	65.565	66.311	67.058
5	60.010	60.554	61.099	61.643	62.188	62.732	63.276	63.821	64.365	64.909
10	56.006	56.494	56.982	57.470	57.958	58.446	58.934	59.422	59.910	60.398
15	51.477	51.944	52.412	52.880	53.348	53.816	54.283	54.751	55.219	55.687
20	47.075	47.521	47.967	48.413	48.860	49.306	49.752	50.198	50.644	51.090
25	42.764	43.188	43.612	44.036	44.459	44.883	45.307	45.731	46.154	46.578
30	38.458	38.862	39.266	39.670	40.075	40.479	40.883	41.288	41.692	42.096
35	34.163	34.549	34.935	35.321	35.708	36.094	36.480	36.866	37.252	37.639
40	29.906	30.276	30.645	31.014	31.383	31.752	32.122	32.491	32.860	33.229
45	25.750	26.102	26.453	26.804	27.155	27.507	27.858	28.209	28.561	28.912
50	21.794	22.125	22.455	22.785	23.115	23.446	23.776	24.106	24.436	24.767
55	18.130	18.437	18.745	19.052	19.359	19.666	19.974	20.281	20.588	20.895
60	14.790	15.073	15.356	15.639	15.922	16.205	16.488	16.771	17.054	17.336
65	11.945	12.197	12.448	12.700	12.951	13.203	13.454	13.706	13.957	14.209
70	9.489	9.707	9.925	10.144	10.362	10.580	10.799	11.017	11.235	11.453

BOTH SEXES COMBINED										
Age	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)	e(x)
0	65.000	66.000	67.000	68.000	69.000	70.000	71.000	72.000	73.000	74.000
1	67.805	68.551	69.298	70.045	70.791	71.538	72.285	73.031	73.778	74.525
5	65.454	65.998	66.542	67.087	67.631	68.175	68.720	69.264	69.809	70.353
10	60.886	61.374	61.862	62.350	62.838	63.326	63.814	64.302	64.790	65.278
15	56.155	56.622	57.090	57.558	58.026	58.494	58.961	59.429	59.897	60.365
20	51.537	51.983	52.429	52.875	53.321	53.767	54.214	54.660	55.106	55.552
25	47.002	47.426	47.849	48.273	48.697	49.121	49.544	49.968	50.392	50.816
30	42.500	42.905	43.309	43.713	44.117	44.522	44.926	45.330	45.734	46.139
35	38.025	38.411	38.797	39.184	39.570	39.956	40.342	40.728	41.115	41.501
40	33.599	33.968	34.337	34.706	35.076	35.445	35.814	36.183	36.552	36.922
45	29.263	29.615	29.966	30.317	30.669	31.020	31.371	31.723	32.074	32.425
50	25.097	25.427	25.757	26.088	26.418	26.748	27.078	27.409	27.739	28.069
55	21.203	21.510	21.817	22.125	22.432	22.739	23.046	23.354	23.661	23.968
60	17.619	17.902	18.185	18.468	18.751	19.034	19.317	19.600	19.883	20.165
65	14.460	14.712	14.963	15.215	15.466	15.717	15.969	16.220	16.472	16.723
70	11.672	11.890	12.108	12.327	12.545	12.763	12.982	13.200	13.418	13.636

Source: Table 1C

Table 3: Regression models for estimating life expectancy at birth [LE(0)] for male, female and both sexes combined

	<b>Regression of expectation of life at birth on infant mortality</b>
<b>Both Sexes</b>	<b>LEB(Total)= 75.234-187.465*IMR (Total)</b> (t): (482.909) (-89.951) R=.942, R2 = .888, Adj R2 = .888, SEE= 1.869; F= 8091.191, N=1020
<b>Males</b>	<b>LEB(Males)= 72.894-164.417*IMR (Males)</b> (t): (532.827) (-89.987) R=.943, R2 = .888, Adj R2 = .888, SEE= 1.625; F= 8097.635, N=1020
<b>Females</b>	<b>LEB(Females)= 76.947-202.303*IMR (Females)</b> (t): (393.017) (-77.360) R=.924, R2 = .855, Adj R2 = .854, SEE= 2.401; F= 5984.531, N=1020

Table 4A: Life Tables for Kasaragod Disgtrict, Kerala-1991

x to x+n	Total				Male				Female			
	q(x,n)	l(x)	L(x,n)	e(x)	q(x,n)	l(x)	L(x,n)	e(x)	q(x,n)	l(x)	L(x,n)	e(x)
<b>Total</b>												
0-1	.03905	100000	97267	<b>69.0</b>	.03824	100000	97323	<b>67.6</b>	.03718	100000	97398	<b>71.1</b>
1-5	.01206	96095	382064	<b>70.8</b>	.01012	96176	382756	<b>69.3</b>	.01281	96282	382663	<b>72.8</b>
5-10	.00317	94937	473930	<b>67.6</b>	.00304	95203	475288	<b>66.0</b>	.00290	95049	474557	<b>69.8</b>
10-15	.00310	94636	472445	<b>62.8</b>	.00291	94913	473873	<b>61.2</b>	.00300	94774	473158	<b>64.9</b>
15-20	.00529	94342	470464	<b>58.0</b>	.00528	94636	471932	<b>56.3</b>	.00506	94489	471252	<b>60.1</b>
20-25	.00734	93843	467494	<b>53.3</b>	.00804	94137	468792	<b>51.6</b>	.00618	94011	468603	<b>55.4</b>
25-30	.00902	93154	463672	<b>48.7</b>	.01065	93380	464412	<b>47.0</b>	.00705	93430	465502	<b>50.8</b>
30-35	.01076	92314	459090	<b>44.1</b>	.01323	92385	458868	<b>42.5</b>	.00786	92771	462031	<b>46.1</b>
35-40	.01346	91321	453535	<b>39.6</b>	.01709	91162	451916	<b>38.0</b>	.00934	92041	458057	<b>41.4</b>
40-45	.01788	90092	446434	<b>35.1</b>	.02288	89604	442895	<b>33.6</b>	.01196	91181	453180	<b>36.8</b>
45-50	.02590	88481	436677	<b>30.7</b>	.03275	87554	430599	<b>29.4</b>	.01784	90091	446435	<b>32.2</b>
50-55	.04067	86189	422183	<b>26.4</b>	.04936	84686	412979	<b>25.3</b>	.02919	88483	435961	<b>27.8</b>
55-60	.06208	82684	400587	<b>22.4</b>	.07413	80506	387609	<b>21.5</b>	.04704	85901	419402	<b>23.5</b>
60-65	.09546	77551	369248	<b>18.8</b>	.11256	74538	351713	<b>18.0</b>	.07584	81860	393779	<b>19.6</b>
65-70	.13818	70148	326507	<b>15.5</b>	.15520	66148	305072	<b>15.0</b>	.11709	75652	356115	<b>16.0</b>
70+	...	60455	758403	<b>12.5</b>	...	55881	683971	<b>12.2</b>	...	66794	851907	<b>12.8</b>
<b>Rural</b>												
0-1	.04103	100000	97128	<b>68.5</b>	.03870	100000	97291	<b>67.5</b>	.04269	100000	97012	<b>69.5</b>
1-5	.01357	95897	380986	<b>70.4</b>	.01040	96130	382518	<b>69.2</b>	.01775	95731	379526	<b>71.6</b>
5-10	.00362	94596	472125	<b>67.4</b>	.00313	95130	474903	<b>65.9</b>	.00429	94032	469152	<b>68.8</b>
10-15	.00328	94254	470498	<b>62.6</b>	.00295	94832	473458	<b>61.1</b>	.00354	93629	467315	<b>64.1</b>
15-20	.00551	93945	468432	<b>57.8</b>	.00531	94552	471502	<b>56.3</b>	.00586	93297	465119	<b>59.3</b>
20-25	.00759	93428	465365	<b>53.1</b>	.00807	94049	468348	<b>51.6</b>	.00718	92750	462086	<b>54.7</b>
25-30	.00927	92719	461445	<b>48.5</b>	.01068	93290	463958	<b>47.0</b>	.00807	92084	458562	<b>50.1</b>
30-35	.01102	91859	456766	<b>43.9</b>	.01327	92293	458405	<b>42.5</b>	.00894	91341	454662	<b>45.4</b>
35-40	.01375	90847	451112	<b>39.4</b>	.01714	91069	451442	<b>38.0</b>	.01046	90524	450253	<b>40.8</b>
40-45	.01825	89598	443901	<b>34.9</b>	.02295	89508	442405	<b>33.6</b>	.01322	89577	444926	<b>36.2</b>
45-50	.02642	87963	434003	<b>30.5</b>	.03287	87454	430084	<b>29.3</b>	.01937	88393	437686	<b>31.7</b>
50-55	.04139	85639	419332	<b>26.3</b>	.04953	84580	412426	<b>25.3</b>	.03134	86681	426614	<b>27.3</b>
55-60	.06307	82094	397527	<b>22.3</b>	.07436	80391	387009	<b>21.4</b>	.04994	83965	409340	<b>23.1</b>
60-65	.09701	76917	365928	<b>18.6</b>	.11289	74413	351062	<b>18.0</b>	.08053	79771	382796	<b>19.2</b>
65-70	.14030	69455	322912	<b>15.3</b>	.15568	66012	304369	<b>14.9</b>	.12345	73347	344100	<b>15.6</b>
70+	...	59710	742542	<b>12.4</b>	...	55736	680818	<b>12.2</b>	...	64293	800850	<b>12.5</b>
<b>Urban</b>												
0-1	.03321	100000	97675	<b>70.5</b>	.03642	100000	97451	<b>68.0</b>	.03250	100000	97725	<b>72.5</b>
1-5	.00761	96679	385244	<b>71.9</b>	.00898	96358	383704	<b>69.6</b>	.00859	96750	385337	<b>73.9</b>
5-10	.00186	95943	479270	<b>68.4</b>	.00269	95493	476825	<b>66.2</b>	.00171	95919	479184	<b>70.5</b>
10-15	.00257	95765	478210	<b>63.6</b>	.00276	95237	475526	<b>61.3</b>	.00254	95755	478168	<b>65.7</b>
15-20	.00466	95519	476484	<b>58.7</b>	.00515	94974	473647	<b>56.5</b>	.00438	95512	476515	<b>60.8</b>
20-25	.00660	95074	473804	<b>54.0</b>	.00790	94485	470559	<b>51.8</b>	.00533	95094	474203	<b>56.1</b>
25-30	.00828	94447	470279	<b>49.3</b>	.01054	93739	466223	<b>47.2</b>	.00618	94587	471473	<b>51.4</b>
30-35	.00997	93665	465988	<b>44.7</b>	.01310	92751	460715	<b>42.7</b>	.00695	94002	468379	<b>46.7</b>

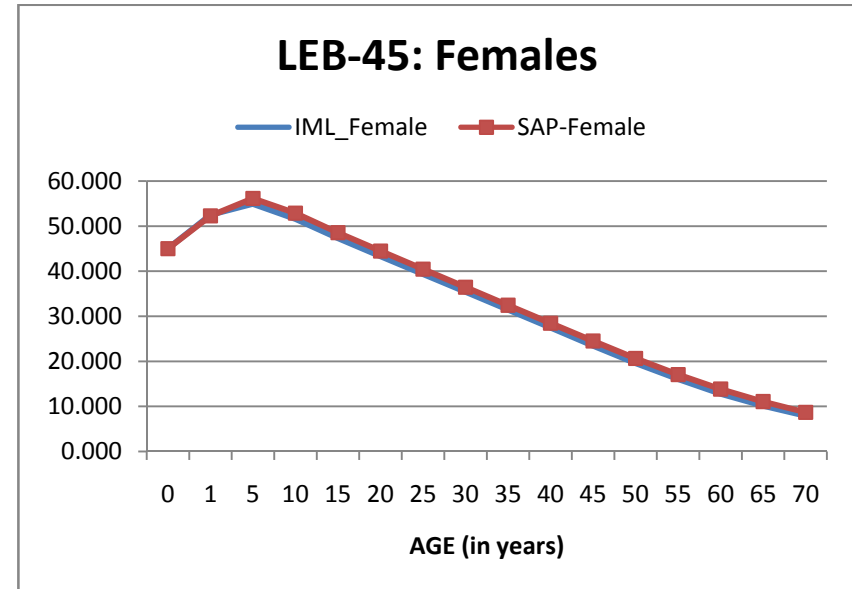
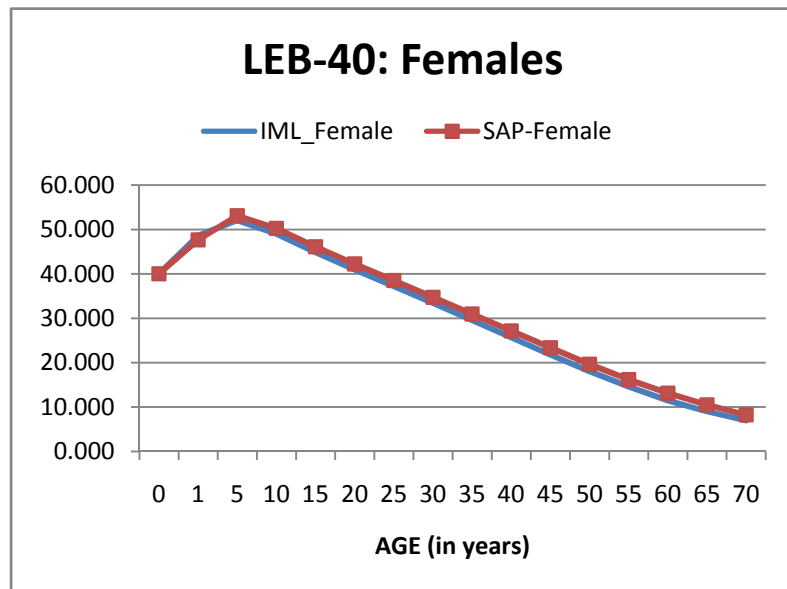
35-40	.01259	92730	460732	<b>40.1</b>	.01691	91536	453808	<b>38.2</b>	.00839	93349	464787	<b>42.0</b>
40-45	.01681	91562	453965	<b>35.6</b>	.02261	89987	444850	<b>33.8</b>	.01089	92566	460308	<b>37.3</b>
45-50	.02439	90024	444629	<b>31.2</b>	.03231	87953	432657	<b>29.5</b>	.01654	91557	453999	<b>32.7</b>
50-55	.03858	87828	430668	<b>26.9</b>	.04871	85110	415188	<b>25.4</b>	.02736	90043	444053	<b>28.2</b>
55-60	.05917	84440	409706	<b>22.9</b>	.07323	80965	390001	<b>21.6</b>	.04460	87579	428129	<b>23.9</b>
60-65	.09093	79443	379156	<b>19.2</b>	.11123	75036	354313	<b>18.1</b>	.07188	83673	403330	<b>19.9</b>
65-70	.13200	72220	337265	<b>15.8</b>	.15333	66689	307883	<b>15.1</b>	.11173	77659	366604	<b>16.3</b>
70+	...	62686	806924	<b>12.9</b>	...	56464	696650	<b>12.3</b>	...	68983	897806	<b>13.0</b>

Table 4B: Life Tables for Kasaragod District, Kerala-2001

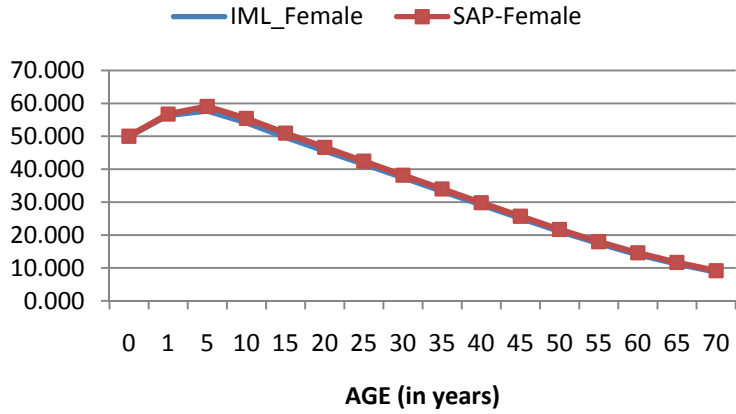
x to x+n	Total				Male				Female			
	q(x,n)	l(x)	L(x,n)	e(x)	q(x,n)	l(x)	L(x,n)	e(x)	q(x,n)	l(x)	L(x,n)	e(x)
	<b>Total</b>											
0-1	.02534	100000	98226	<b>72.6</b>	.02401	100000	98319	<b>70.8</b>	.02861	100000	97998	<b>73.7</b>
1-5	.00156	97466	389562	<b>73.5</b>	.00120	97599	390162	<b>71.5</b>	.00504	97139	387578	<b>74.9</b>
5-10	.00006	97315	486558	<b>69.6</b>	.00026	97482	487347	<b>67.6</b>	.00071	96649	483077	<b>71.2</b>
10-15	.00184	97308	486094	<b>64.6</b>	.00170	97457	486868	<b>62.6</b>	.00215	96581	482387	<b>66.3</b>
15-20	.00379	97129	484725	<b>59.7</b>	.00423	97291	485423	<b>57.7</b>	.00380	96374	480952	<b>61.4</b>
20-25	.00559	96761	482452	<b>54.9</b>	.00697	96879	482706	<b>53.0</b>	.00462	96007	478928	<b>56.6</b>
25-30	.00729	96220	479346	<b>50.2</b>	.00976	96204	478672	<b>48.3</b>	.00545	95564	476518	<b>51.9</b>
30-35	.00892	95519	475463	<b>45.6</b>	.01218	95265	473425	<b>43.8</b>	.00618	95043	473747	<b>47.2</b>
35-40	.01143	94667	470630	<b>41.0</b>	.01571	94105	466828	<b>39.3</b>	.00759	94456	470485	<b>42.4</b>
40-45	.01535	93585	464334	<b>36.4</b>	.02079	92627	458319	<b>34.9</b>	.01000	93738	466347	<b>37.7</b>
45-50	.02236	92148	455590	<b>31.9</b>	.02936	90701	446848	<b>30.6</b>	.01546	92801	460416	<b>33.1</b>
50-55	.03577	90088	442383	<b>27.6</b>	.04434	88038	430434	<b>26.4</b>	.02585	91366	450925	<b>28.6</b>
55-60	.05530	86865	422319	<b>23.5</b>	.06718	84135	406546	<b>22.5</b>	.04256	89004	435552	<b>24.3</b>
60-65	.08488	82062	392896	<b>19.8</b>	.10239	78483	372326	<b>19.0</b>	.06858	85216	411471	<b>20.2</b>
65-70	.12378	75096	352243	<b>16.4</b>	.14088	70447	327423	<b>15.8</b>	.10727	79372	375574	<b>16.6</b>
70+	...	65801	877180	<b>13.3</b>	...	60522	788353	<b>13.0</b>	...	70858	938046	<b>13.2</b>
	<b>Rural</b>											
0-1	.02607	100000	98175	<b>72.4</b>	.02401	100000	98319	<b>70.8</b>	.02861	100000	97998	<b>73.7</b>
1-5	.00212	97393	389158	<b>73.3</b>	.00120	97599	390162	<b>71.5</b>	.00504	97139	387578	<b>74.9</b>
5-10	.00023	97186	485873	<b>69.5</b>	.00026	97482	487347	<b>67.6</b>	.00071	96649	483077	<b>71.2</b>
10-15	.00191	97163	485352	<b>64.5</b>	.00170	97457	486868	<b>62.6</b>	.00215	96581	482387	<b>66.3</b>
15-20	.00387	96978	483949	<b>59.6</b>	.00423	97291	485423	<b>57.7</b>	.00380	96374	480952	<b>61.4</b>
20-25	.00569	96602	481637	<b>54.8</b>	.00697	96879	482706	<b>53.0</b>	.00462	96007	478928	<b>56.6</b>
25-30	.00738	96053	478491	<b>50.1</b>	.00976	96204	478672	<b>48.3</b>	.00545	95564	476518	<b>51.9</b>
30-35	.00902	95344	474570	<b>45.5</b>	.01218	95265	473425	<b>43.8</b>	.00618	95043	473747	<b>47.2</b>
35-40	.01154	94484	469696	<b>40.9</b>	.01571	94105	466828	<b>39.3</b>	.00759	94456	470485	<b>42.4</b>
40-45	.01549	93394	463355	<b>36.3</b>	.02079	92627	458319	<b>34.9</b>	.01000	93738	466347	<b>37.7</b>
45-50	.02255	91948	454555	<b>31.9</b>	.02936	90701	446848	<b>30.6</b>	.01546	92801	460416	<b>33.1</b>
50-55	.03603	89874	441275	<b>27.5</b>	.04434	88038	430434	<b>26.4</b>	.02585	91366	450925	<b>28.6</b>
55-60	.05566	86636	421125	<b>23.5</b>	.06718	84135	406546	<b>22.5</b>	.04256	89004	435552	<b>24.3</b>
60-65	.08544	81814	391594	<b>19.7</b>	.10239	78483	372326	<b>19.0</b>	.06858	85216	411471	<b>20.2</b>
65-70	.12454	74824	350821	<b>16.3</b>	.14088	70447	327423	<b>15.8</b>	.10727	79372	375574	<b>16.6</b>
70+	...	65505	870374	<b>13.3</b>	...	60522	788353	<b>13.0</b>	...	70858	938046	<b>13.2</b>
	<b>Urban</b>											
0-1	.02460	100000	98278	<b>72.8</b>	.02358	100000	98350	<b>70.9</b>	.02733	100000	98087	<b>74.1</b>
1-5	.00099	97540	389966	<b>73.6</b>	.00093	97642	390388	<b>71.6</b>	.00388	97267	388315	<b>75.2</b>
5-10	.00010	97443	487241	<b>69.7</b>	.00017	97552	487715	<b>67.7</b>	.00038	96890	484359	<b>71.5</b>
10-15	.00178	97453	486834	<b>64.7</b>	.00167	97534	487266	<b>62.7</b>	.00202	96854	483779	<b>66.5</b>
15-20	.00371	97280	485499	<b>59.8</b>	.00420	97372	485837	<b>57.8</b>	.00361	96658	482416	<b>61.6</b>
20-25	.00550	96919	483264	<b>55.0</b>	.00694	96963	483133	<b>53.0</b>	.00438	96309	480488	<b>56.8</b>
25-30	.00719	96386	480198	<b>50.3</b>	.00973	96290	479109	<b>48.4</b>	.00521	95887	478184	<b>52.1</b>

30-35	.00882	95693	476355	<b>45.7</b>	.01215	95354	473872	<b>43.8</b>	.00593	95387	475521	<b>47.3</b>
35-40	.01132	94849	471562	<b>41.0</b>	.01567	94195	467286	<b>39.3</b>	.00733	94821	472369	<b>42.6</b>
40-45	.01522	93776	465310	<b>36.5</b>	.02073	92719	458793	<b>34.9</b>	.00971	94126	468346	<b>37.9</b>
45-50	.02217	92349	456624	<b>32.0</b>	.02925	90798	447348	<b>30.6</b>	.01511	93212	462541	<b>33.2</b>
50-55	.03551	90301	443488	<b>27.7</b>	.04419	88142	430971	<b>26.4</b>	.02535	91804	453203	<b>28.7</b>
55-60	.05494	87094	423510	<b>23.6</b>	.06697	84247	407130	<b>22.6</b>	.04189	89477	438014	<b>24.4</b>
60-65	.08433	82310	394196	<b>19.8</b>	.10209	78605	372963	<b>19.0</b>	.06751	85729	414175	<b>20.3</b>
65-70	.12302	75369	353664	<b>16.4</b>	.14046	70580	328117	<b>15.9</b>	.10581	79941	378560	<b>16.6</b>
70+	...	66097	884011	<b>13.4</b>	...	60667	791723	<b>13.1</b>	...	71483	951642	<b>13.3</b>

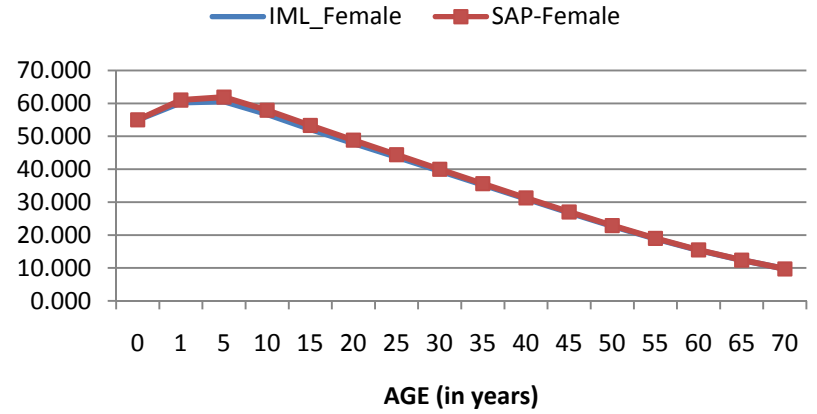
Figure A: Comparison of Model Life Table of India of Females with that of South Asian Pattern Model Life Tables of United Nations (1982)



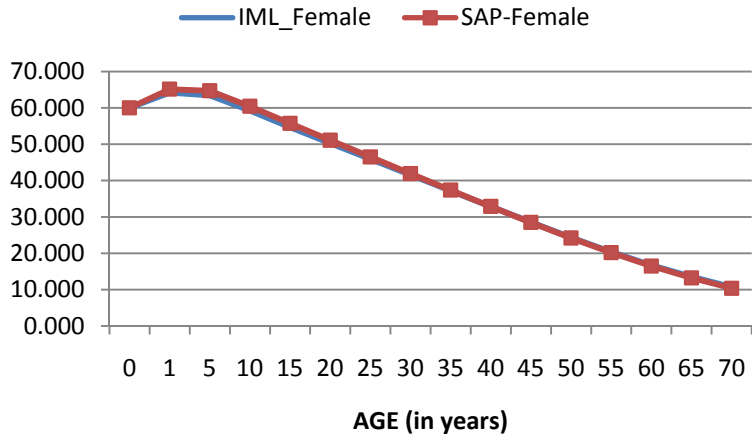
### LEB-50 Females



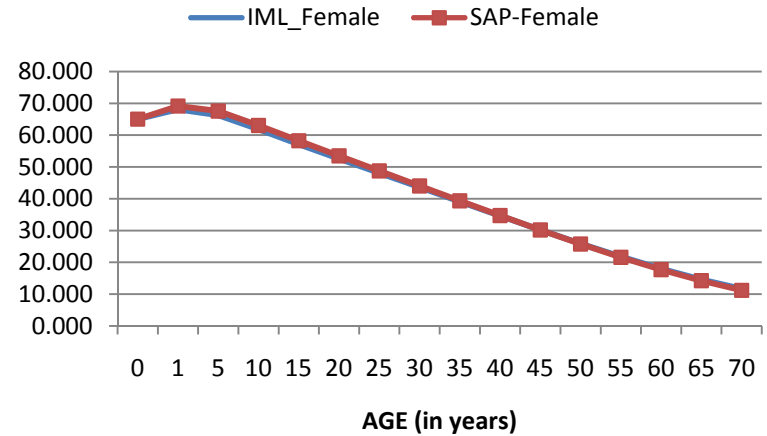
### LEB-55: Females



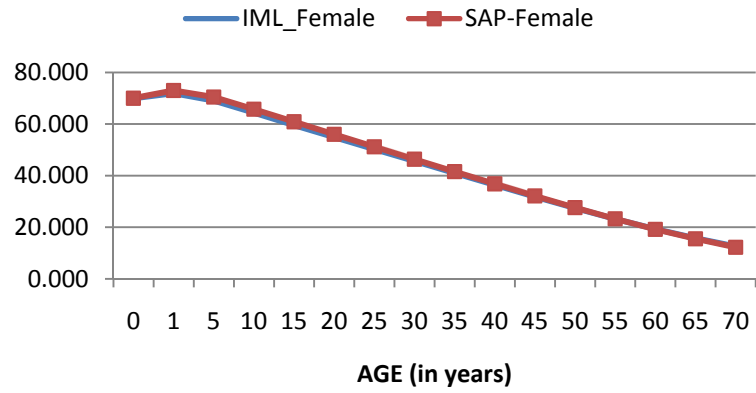
### LEB-60: Females



### LEB-65: Females



### LEB-70: Females



### LEB-75: Females

