

International Institute for Population Sciences (IIPS), Dept. of Fertility Studies:
Construction of Abridged Life Tables for Districts in India: Using UNCOMBIN of
MORTPAK-LITE (by Krishna Murthy Ponnappalli), Mumbai.

Construction of Abridged Life Tables for Districts in India:

Using UNCOMBIN of MORTPAK- LITE

Krishna Murthy Ponnappalli

Associate Professor, Dept. of Fertility Studies, IIPS, Mumbai-88

Extended Abstract

United Nations suggested a program “UNCOMBIN” to calculate a "model" life table from an estimate of life expectancy at age 20 combined with an estimate of survivorship to age 1, survivorship to age 5, or both. In the present study an attempt is made at first to estimate LE(20) indirectly from an estimate of the Infant mortality rate (IMR). These IMR values have been obtained from the 2009 report of the Registrar General of India on “District Level Estimates of Child Mortality in India Based on the 2001 Census Data. The above reports states that these IMR values are obtained using the Brass method and using the U.N. South Asian Pattern as it is the most commonly accepted pattern for India. So when using the UNCOMBIN also UN South Asian Pattern of the Model Life Tables is used. IMR is at first converted into l_1 as l_1 is one of the inputs. No attempt is made to consider the other input l_5 here as it is not a mandatory. LE(20) values of Both Sexes Combined, Males and Females are calculated using the following regression models:

Both Sexes: $LE(20) = 55.105328 - 71.184 * IMR$, $R = .793$; $R^2 = .628$; $Adj R^2 = .627$; $SEE = 1.840$; $F = 508.813$; $N = 303$.
(202.695) (-22.557)

Males: $LE(20) = 53.03461 - 60.01912 * IMR$, $R = .773$; $R^2 = .597$; $Adj R^2 = .596$; $SEE = 1.632$; $F = 446.357$; $N = 303$.
(216.552) (-21.127)

Females: $LE(20) = 56.92699 - 78.01446 * IMR$, $R = .751$; $R^2 = .564$; $Adj R^2 = .563$; $SEE = 2.369$; $F = 389.964$; $N = 303$.
(166.759) (-19.748)

PUNJAB

Table 1: ABRIDGED LIFE TABLES BY SEX AND RESIDENCE,PUNJAB -2001

Age x	Total-Total		Total-Male		Total-Female		Rural-Total		Rural-Male		Rural-Female		Urban-Total		Urban-Male		Urban-Female	
	l(x)	e(x)	l(x)	e(x)	l(x)	e(x)	l(x)	e(x)	l(x)	e(x)	l(x)	e(x)	l(x)	e(x)	l(x)	e(x)	l(x)	e(x)
0	100000	64.590	100000	63.862	100000	64.323	100000	63.850	100000	63.349	100000	63.318	100000	66.061	100000	65.220	100000	66.121
1	94300	67.482	94800	66.354	93700	67.632	93900	66.983	94500	66.024	93200	66.919	95100	68.455	95600	67.214	94600	68.884
5	92174	65.004	92940	63.652	90680	65.837	91545	64.669	92476	63.437	89843	65.366	93407	65.669	94154	64.223	92152	66.675
10	91403	60.531	92001	59.277	89794	61.461	90733	60.225	91506	59.083	88901	61.032	92716	61.139	93295	59.791	91363	62.230
15	91039	55.763	91551	54.556	89425	56.705	90353	55.468	91045	54.370	88508	56.293	92383	56.351	92875	55.051	91036	57.444
20	90554	51.048	90924	49.914	88920	52.012	89852	50.763	90409	49.734	87968	51.622	91928	51.617	92271	50.394	90590	52.714
25	90029	46.331	90288	45.248	88298	47.360	89305	46.058	89758	45.076	87305	46.994	91444	46.877	91674	45.706	90038	48.021
30	89379	41.649	89507	40.620	87593	42.721	88630	41.389	88959	40.458	86557	42.378	90845	42.169	90939	41.054	89407	43.342
35	88580	37.001	88547	36.032	86724	38.123	87800	36.756	87978	35.880	85640	37.804	90106	37.493	90035	36.440	88622	38.703
40	87451	32.444	87210	31.544	85627	33.578	86631	32.216	86615	31.403	84491	33.283	89054	32.905	88768	31.922	87617	34.117
45	85752	28.034	85238	27.212	84154	29.120	84880	27.825	84609	27.084	82963	28.848	87455	28.457	86883	27.557	86242	29.619
50	83138	23.831	82273	23.096	82088	24.786	82204	23.644	81606	22.982	80836	24.536	84968	24.211	84023	23.404	84287	25.244
55	78981	19.945	77677	19.305	78831	20.698	77975	19.781	76969	19.206	77506	20.476	80958	20.278	79541	19.572	81171	21.110
60	72890	16.389	71114	15.842	73778	16.932	71819	16.249	70374	15.758	72367	16.739	75007	16.675	73071	16.070	76284	17.290
65	63980	13.305	61737	12.849	66102	13.591	62868	13.188	60986	12.780	64613	13.430	66196	13.544	63735	13.039	68768	13.889
70	52468	10.655	49877	10.291	55540	10.677	51364	10.561	49153	10.235	54034	10.547	54688	10.847	51820	10.442	58269	10.919
75	38822	8.509	36170	8.234	42113	8.261	37814	8.438	35531	8.192	40701	8.161	40873	8.654	37901	8.348	44712	8.447
80	25173	6.786	22883	6.592	27412	6.353	24368	6.736	22391	6.563	26245	6.284	26834	6.888	24229	6.672	29600	6.481
85	13775	5.418	12190	5.286	14468	4.879	13244	5.384	11878	5.266	13706	4.833	14885	5.487	13053	5.341	15929	4.964