

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

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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)

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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	65.143	100000	64.712	100000	64.523	100000	64.220	100000	63.862	100000	63.318	100000	66.792	100000	66.061	100000	66.718
1		94600	67.850	95300	66.895	93800	67.773	94100	67.233	94800	66.354	93200	66.919	95500	68.931	96100	67.736	94900	69.292
5		92640	65.254	93703	64.010	90846	65.930	91860	64.836	92940	63.652	89843	65.366	94011	65.999	94894	64.577	92633	66.952
10		91900	60.759	92814	59.599	89971	61.547	91069	60.378	92001	59.277	88901	61.032	93359	61.443	94085	60.111	91875	62.484
15		91547	55.984	92383	54.865	89607	56.787	90697	55.615	91551	54.556	88508	56.293	93040	56.645	93682	55.359	91561	57.690
20		91074	51.261	91771	50.214	89108	52.090	90204	50.905	90924	49.914	87968	51.622	92600	51.902	93091	50.694	91134	52.948
25		90565	46.535	91159	45.534	88495	47.433	89668	46.194	90288	45.248	87305	46.994	92136	47.150	92518	45.992	90605	48.242
30		89934	41.843	90407	40.891	87798	42.790	89006	41.518	89507	40.620	86557	42.378	91560	42.431	91811	41.327	89997	43.551
35		89158	37.185	89482	36.287	86939	38.187	88191	36.878	88547	36.032	85640	37.804	90851	37.741	90941	36.697	89239	38.899
40		88058	32.616	88189	31.780	85852	33.637	87042	32.330	87210	31.544	84491	33.283	89837	33.137	89718	32.161	88264	34.300
45		86396	28.192	86271	27.427	84389	29.175	85317	27.929	85238	27.212	82963	28.848	88288	28.671	87888	27.775	86922	29.788
50		83829	23.973	83372	23.288	82335	24.836	82672	23.737	82273	23.096	80836	24.536	85864	24.405	85094	23.598	85005	25.400
55		79727	20.068	78846	19.471	79094	20.743	78478	19.862	77677	19.305	77506	20.476	81930	20.448	80687	19.742	81937	21.250
60		73687	16.495	72340	15.984	74059	16.971	72355	16.318	71114	15.842	72367	16.739	76053	16.822	74281	16.215	77108	17.412
65		64811	13.393	62987	12.967	66399	13.623	63423	13.246	61737	12.849	64613	13.430	67299	13.666	64979	13.159	69652	13.992
70		53298	10.726	51090	10.385	55842	10.703	51914	10.608	49877	10.291	54034	10.547	55805	10.946	53040	10.539	59183	11.002
75		39585	8.562	37248	8.305	42399	8.281	38315	8.473	36170	8.234	40701	8.161	41918	8.728	39000	8.421	45594	8.511
80		25787	6.823	23718	6.642	27649	6.367	24767	6.760	22883	6.592	26245	6.284	27692	6.940	25095	6.724	30354	6.525
85		14182	5.444	12724	5.320	14625	4.888	13506	5.401	12190	5.286	13706	4.833	15467	5.523	13616	5.376	16442	4.994