

World Population

An Analysis of Vital Data

Nathan Keyfitz and Wilhelm Flieger



Standard Book Number: 226-43234-3

Library of Congress Catalog Card Number: 68-14010

The University of Chicago Press, Chicago 60637
The University of Chicago Press, Ltd., London

© 1968 by The University of Chicago

All rights reserved. Published 1968. Second Impression 1970

Printed in the United States of America

TABLE 1
DATA

AGE AT LAST BIRTHDAY	BOTH SEXES	POPULATION				BIRTHS		DEATHS		AGE AT LAST BIRTHDAY
		MALES		FEMALES		BY AGE OF MOTHER		MALES	FEMALES	
		Number	%	Number	%					
0	158549	81936	2.0	76613	1.8	0	6290	3351	2939	0
1-4	592354	307013	7.6	285341	6.7	0	1152	628	524	1-4
5-9	705813	366521	9.0	339292	8.0	0	438	262	176	5-9
10-14	717376	368214	9.1	345162	8.2	33	331	201	130	10-14
15-19	633002	324905	8.0	308097	7.2	5311	447	280	167	15-19
20-24	741491	372932	9.2	368559	8.6	38155	594	368	226	20-24
25-29	734213	356428	8.8	377785	8.9	56679	705	417	288	25-29
30-34	670169	316008	7.8	354161	8.3	38165	849	468	381	30-34
35-39	554002	259930	6.4	294072	6.9	13845	817	448	369	35-39
40-44	482705	227304	5.6	255401	6.0	3347	1015	564	451	40-44
45-49	491364	233767	5.8	257597	6.0	458	1716	1011	705	45-49
50-54	464199	224404	5.5	235795	5.6	60	2462	1488	974	50-54
55-59	396037	190079	4.7	205958	4.8	0	3413	2100	1313	55-59
60-64	309824	143363	3.5	166461	3.9	0	4371	2507	1864	60-64
65-69	243356	106795	2.6	136561	3.2	0	5196	2834	2362	65-69
70-74	189310	80729	2.0	108581	2.5	0	7070	3492	3578	70-74
75-79	135483	57278	1.4	78205	1.8	0	8054	3847	4207	75-79
80-84	76729	32635	0.8	44094	1.0	80731 M.	7874	3614	4260	80-84
85+	31429	14348	0.4	17081	0.4	75322 F.	8999	3564	5435	85+
TOTAL	8327405	4064589		4262816		156053	61793	31444	30349	TOTAL

TABLE 2
MALE LIFE TABLE

x	nq_x	lx	n^d_x	nL_x	nM_x	n^a_x	T_x	r_x	e_x	nM_x	x
0	0.039544	100000	3954	97059	0.040742	0.2563	7009237	0.0049	70.092	0.040898	0
1	0.008088	96046	777	381935	0.002034	1.1071	6912178	0.0049	71.968	0.002046	1
5	0.003562	95269	339	475496	0.000714	2.5000	6530243	0.0044	68.545	0.000715	5
10	0.002727	94929	259	474014	0.000546	2.5545	6054748	0.0114	63.782	0.000546	10
15	0.004300	94671	407	472378	0.000862	2.6049	5580734	0.0000	58.949	0.000862	15
20	0.004922	94263	464	470187	0.000987	2.5632	5108356	0.0000	54.192	0.000987	20
25	0.005841	93799	548	467675	0.001172	2.5858	4638170	0.0154	49.448	0.001170	25
30	0.007396	93252	690	464586	0.001484	2.5754	4170495	0.0301	44.723	0.001481	30
35	0.008614	92562	797	460909	0.001730	2.6161	3705909	0.0311	40.037	0.001724	35
40	0.012357	91765	1134	456226	0.002485	2.7100	3245001	0.0079	35.362	0.002481	40
45	0.021410	90631	1940	448671	0.004325	2.6901	2788775	0.0000	30.771	0.004325	45
50	0.032747	88690	2904	436755	0.006650	2.6944	2340104	0.0136	26.385	0.006651	50
55	0.054211	85786	4651	418124	0.011122	2.6767	1903350	0.0334	22.187	0.011048	55
60	0.084400	81135	6848	389530	0.017580	2.6422	1485225	0.0294	18.306	0.017487	60
65	0.125501	74287	9323	349367	0.026686	2.6328	1095695	0.0294	14.749	0.026537	65
70	0.196857	64964	12789	294056	0.043491	2.5944	746328	0.0294	11.488	0.043256	70
75	0.289698	52176	15115	223817	0.067534	2.5481	452271	0.0294	8.668	0.067164	75
80	0.439169	37060	16276	145794	0.111636	2.5726	228455	0.0294	6.164	0.110739	80
85+	*1.000000	20785	20785	82661	0.251444	3.9770	82661	0.0294	3.977	0.248397	85+

TABLE 3
FEMALE LIFE TABLE

x	nq_x	lx	n^d_x	nL_x	nM_x	n^a_x	T_x	r_x	e_x	nM_x	x
0	0.037132	100000	3713	97221	0.038193	0.2516	7333270	0.0056	73.333	0.038362	0
1	0.007256	96287	699	383123	0.001824	1.1034	7236049	0.0056	75.151	0.001836	1
5	0.002587	95588	247	477323	0.000518	2.5000	6852926	0.0027	71.692	0.000519	5
10	0.001860	95341	177	476263	0.000372	2.5121	6375603	0.0092	66.872	0.000372	10
15	0.002707	95164	258	475197	0.000542	2.5916	5899340	0.0000	61.992	0.000542	15
20	0.003061	94906	291	473825	0.000613	2.5735	5424143	0.0000	57.153	0.000613	20
25	0.003806	94615	360	472222	0.000763	2.6251	4950318	0.0032	52.320	0.000762	25
30	0.005377	94255	507	470057	0.001078	2.5939	4478096	0.0240	47.510	0.001076	30
35	0.006278	93748	589	467336	0.001259	2.6111	4008040	0.0314	42.753	0.001255	35
40	0.008810	93160	821	463887	0.001769	2.6695	3540703	0.0114	38.007	0.001766	40
45	0.013606	92339	1256	458767	0.002739	2.6688	3076817	0.0035	33.321	0.002737	45
50	0.020187	91083	1839	451144	0.004076	2.6775	2618050	0.0181	28.744	0.004062	50
55	0.031629	89244	2823	439769	0.006419	2.7144	2166906	0.0296	24.281	0.006375	55
60	0.054886	86421	4743	421086	0.011264	2.6765	1727137	0.0296	19.985	0.011198	60
65	0.083766	81678	6842	392696	0.017423	2.7061	1306051	0.0296	15.990	0.017296	65
70	0.153846	74836	11513	347134	0.033167	2.6508	913355	0.0296	12.205	0.032952	70
75	0.239630	63323	15174	280264	0.054142	2.6044	566220	0.0296	8.942	0.053794	75
80	0.397085	48149	19119	195833	0.097630	2.6510	285956	0.0296	5.939	0.096613	80
85+	*1.000000	29030	29030	90123	0.322113	3.1045	90123	0.0296	3.104	0.318190	85+

TABLE 4
OBSERVED AND PROJECTED VITAL RATES

RATES PER THOUSAND	OBSERVED POPULATION			PROJECTED POPULATION				STABLE POPULATION			
	BOTH SEXES	MALES	FEMALES	1965		1970		1975		MALES	FEMALES
Birth	18.74	19.86	17.67	18.57	16.65	17.20	15.52	16.37	14.87	14.32	13.69
Death	7.42	7.74	7.12	8.20	7.66	8.63	8.27	9.12	8.82	14.22	13.59
Increase	11.32	12.13	10.55	10.37	8.98	8.56	7.25	7.25	6.06		0.1039
PERCENTAGE											
under 15	26.11	27.65	24.64	26.42	23.64	25.36	22.93	23.97	21.85	20.45	19.62
15-64	65.77	65.18	66.34	65.78	66.57	65.85	66.24	66.17	66.15	63.98	62.64
65 and over	8.12	7.18	9.02	7.81	9.80	8.79	10.83	9.86	12.00	15.57	17.75
DEP. RATIO X 100	52.04	53.43	50.74	52.02	50.23	51.87	50.98	51.13	51.17	56.30	59.65

TABLE 1
DATA

AGE AT LAST BIRTHDAY	BOTH SEXES	POPULATION				BIRTHS		DEATHS		AGE AT LAST BIRTHDAY
		MALES		FEMALES		BY AGE OF MOTHER	BOTH SEXES	MALES	FEMALES	
		Number	%	Number	%					
0	151206	77923	1.9	73283	1.7	0	5829	3096	2733	0
1-4	594898	305844	7.4	285054	6.6	0	913	481	432	1-4
5-9	728148	374358	9.1	353790	8.1	0	400	241	159	5-9
10-14	700177	359084	8.7	341093	7.8	37	303	194	109	10-14
15-19	726008	367435	8.9	358573	8.2	6441	458	290	168	15-19
20-24	623082	308385	7.5	314697	7.2	34918	531	342	189	20-24
25-29	706239	333938	8.1	372301	8.6	52613	655	400	255	25-29
30-34	690096	328891	8.0	361205	8.3	36407	788	451	337	30-34
35-39	618486	295262	7.2	323224	7.4	14547	875	486	389	35-39
40-44	466604	222226	5.4	244378	5.6	2898	1028	583	445	40-44
45-49	468081	223366	5.4	244715	5.6	334	1616	937	679	45-49
50-54	490130	237311	5.7	252819	5.8	54	2499	1514	985	50-54
55-59	428479	210221	5.1	218258	5.0	0	3681	2300	1381	55-59
60-64	351434	164746	4.0	186688	4.3	0	4940	2946	1994	60-64
65-69	267007	119438	2.9	147569	3.4	0	6252	3361	2891	65-69
70-74	200842	85972	2.1	114870	2.6	0	7822	3815	4007	70-74
75-79	137523	59815	1.4	77708	1.8	0	9031	4221	4810	75-79
80-84	84867	36901	0.9	47966	1.1	76740 M.	9106	4210	4896	80-84
85+	46318	18192	0.4	28126	0.6	71509 F.	10086	4265	5821	85+
TOTAL	8479625	4129308		4350317		148249	66813	34133	32680	TOTAL

TABLE 2
MALE LIFE TABLE

x	nq_x	lx	nd_x	nL_x	nM_x	na_x	T_x	rx	ix	nM_x	x
0	0.038539	100000	3854	97039	0.039715	0.2316	7020417	0.0005	70.204	0.039732	0
1	0.006258	96146	602	382833	0.001572	1.0885	6923378	0.0005	72.009	0.001573	1
5	0.003209	95544	307	476956	0.000643	2.5000	6540546	0.0057	68.456	0.000644	5
10	0.002698	95238	257	475561	0.000540	2.5554	6063590	0.0012	63.668	0.000540	10
15	0.003947	94981	375	474023	0.000791	2.6481	5588029	0.0144	58.833	0.000789	15
20	0.005534	94606	524	471760	0.001110	2.5744	5114006	0.0085	54.056	0.001109	20
25	0.005972	94082	562	469032	0.001198	2.5430	4642246	0.0000	49.342	0.001198	25
30	0.006839	93521	640	466047	0.001372	2.5665	4173214	0.0109	44.623	0.001371	30
35	0.008247	92881	766	462609	0.001656	2.6543	3707167	0.0374	39.913	0.001646	35
40	0.013104	92115	1207	457792	0.002637	2.6937	3244559	0.0252	35.223	0.002623	40
45	0.020772	90908	1888	450151	0.004195	2.6756	2786767	0.0000	30.655	0.004195	45
50	0.031438	89020	2799	438672	0.006380	2.7037	2336616	0.0000	26.248	0.006380	50
55	0.053638	86221	4625	420426	0.011000	2.6909	1897944	0.0251	22.013	0.010941	55
60	0.086235	81596	7036	391485	0.019744	2.6556	1477518	0.0264	18.108	0.017882	60
65	0.132499	74560	9879	349349	0.028279	2.6262	1086033	0.0264	14.566	0.028140	65
70	0.201334	64681	13022	292039	0.044591	2.5915	736684	0.0264	11.390	0.044375	70
75	0.301942	51658	15598	219953	0.070914	2.5420	444645	0.0264	8.607	0.070568	75
80	0.448404	36060	16170	140773	0.114864	2.5553	224692	0.0264	6.231	0.114089	80
85+	*1.000000	19891	19891	83920	0.237023	4.2190	83920	0.0264	4.219	0.234444	85+

TABLE 3
FEMALE LIFE TABLE

x	nq_x	lx	nd_x	nL_x	nM_x	na_x	T_x	rx	ix	nM_x	x
0	0.036254	100000	3625	97219	0.037291	0.2330	7371813	0.0001	73.718	0.037294	0
1	0.005951	96375	574	383829	0.001494	1.0895	7274593	0.0001	75.482	0.001495	1
5	0.002239	95801	215	478469	0.000448	2.5000	6890764	0.0053	71.928	0.000449	5
10	0.001597	95587	153	477553	0.000320	2.5123	6412296	0.0000	67.084	0.000320	10
15	0.002342	95434	224	476638	0.000469	2.6238	5934743	0.0076	62.187	0.000469	15
20	0.002999	95210	285	475359	0.000601	2.5737	5458104	0.0000	57.327	0.000601	20
25	0.003419	94925	325	473845	0.000685	2.5998	4982745	0.0000	52.491	0.000685	25
30	0.004662	94600	441	471950	0.000934	2.6151	4508900	0.0132	47.663	0.000933	30
35	0.006035	94159	568	469462	0.001211	2.6508	4036950	0.0378	42.874	0.001203	35
40	0.009108	93591	852	465972	0.001829	2.6735	3567488	0.0259	38.118	0.001821	40
45	0.013783	92739	1278	460688	0.002775	2.6492	3101516	0.0000	33.444	0.002775	45
50	0.019332	91460	1768	453201	0.003901	2.6807	2640828	0.0073	28.874	0.003896	50
55	0.031346	89692	2811	442014	0.006361	2.7068	2187628	0.0237	24.390	0.006327	55
60	0.052477	86881	4559	424037	0.010752	2.7263	1745614	0.0264	20.092	0.010681	60
65	0.094317	82321	7764	393765	0.019718	2.7021	1321576	0.0264	16.054	0.019591	65
70	0.162155	74557	12090	344463	0.035098	2.6573	927811	0.0264	12.444	0.034883	70
75	0.270443	62467	16894	271449	0.062236	2.5797	583348	0.0264	9.338	0.061898	75
80	0.407104	45573	18553	180944	0.102535	2.6137	311899	0.0264	6.844	0.102072	80
85+	1.000000	27020	27020	130955	0.206333	4.8465	130955	0.0264	4.847	0.206961	85+

TABLE 4
OBSERVED AND PROJECTED VITAL RATES

RATES PER THOUSAND	OBSERVED POPULATION			1968		PROJECTED POPULATION 1973		1978		STABLE POPULATION	
	BOTH SEXES	MALES	FEMALES	MALES	FEMALES	MALES	FEMALES	MALES	FEMALES	MALES	FEMALES
Birth	17.48	18.58	16.44	17.66	15.72	16.86	15.10	16.35	14.72	13.87	13.20
Death	7.88	8.27	7.51	8.69	8.07	9.11	8.59	9.66	9.26	14.56	13.89
Increase	9.60	10.32	8.93	8.98	7.65	7.75	6.51	6.69	5.46	-0.6918	
PERCENTAGE											
under 15	25.64	27.06	24.30	25.90	23.30	24.62	22.20	23.38	21.13	19.97	19.06
15-64	65.67	65.19	66.13	65.52	66.14	65.71	66.20	65.94	66.07	64.17	62.57
65 and over	8.69	7.76	9.57	8.58	10.57	9.67	11.60	10.68	12.81	15.86	18.37
DEP. RATIO X 100	52.27	53.40	51.22	52.62	51.20	52.18	51.07	51.66	51.36	55.84	59.82

