

APPENDIX

AN INDEX OF THE FERTILITY OF WOMEN EVER MARRIED WHO MADE NO REPORT ON THE NUMBER
OF CHILDREN EVER BORN, RELATIVE TO THE FERTILITY OF THOSE WHO DID REPORT

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As stated in the Introduction, in the section "Children ever born," about one-eighth of women ever married made no report on number of children ever born in 1940. A special tabulation was made in order to obtain some information on the fertility of these women. Table A-1, which is based on the results of the special tabulation, shows the number of children under 5 years old living with the mother at the time of the census for (a) women ever married who made no report on number of children ever born and (b) women ever married who did report on this subject.¹ The table is limited to women 15 to 44 years old because women outside of this age range had very few children under 5 years old. The figures in table A-1 show that the women of group (a) had relatively fewer children under 5 years old than women of group (b). The differences are too large to be explained solely on the grounds of differential underenumeration of children under 5 years old in the census. Fertility indices are shown for the United States in the right hand column of table A-1 and for regions in table A-3. Each fertility index consists of the fertility rate (in terms of children under 5 years old) for women of group (a) divided by the corresponding fertility rate for women of group (b). For both groups (a) and (b) there is undoubtedly a high degree of correlation between fertility in respect to children under 5 years old and in respect to children ever born; therefore, the fertility indices based on number of children under 5 which are shown in tables A-1 and A-3 may be accepted as rough indications of the relative fertility of the two groups of women in respect to number of children ever born. There is no guarantee, however, that the indices reflect the exact conditions with respect to children ever born and, moreover, they are subject to relatively large sampling fluctuations.

Use of the fertility indices.—Insofar as the indices shown in tables A-1 and A-3 are applicable to relative fertility in terms of children ever born, acceptable approximations of the number of children ever born can be computed for those women ever married who made no report on number of children ever born. These approximations can be used to obtain revised total fertility rates. The method of estimation is shown in the following example for native white women 15 to 19 years old, for the United States, in 1940. Similar computations can be made for other age groups and for regions, urban and rural, from the materials contained in tables A-1 and A-3 and in the detailed tables. The results of several such computations are shown in table A-2.

BASIC DATA

From table 1:

Native white women 15 to 19 years old, in the United States.....	5,377,020 (1)
Single.....	4,778,960 (2)
Ever married.....	598,060 (3)
Reporting on children ever born.....	486,560 (4)
Not reporting on children ever born.....	131,500 (5)
Reported number of children ever born.....	282,740 (6)
Per 1,000 women (excluding women ever married, not reporting on children).....	54 (7)
Per 1,000 women ever married (excluding those not reporting on children).....	606 (8)

From table A-1:

Fertility index for native white women 15 to 19 years old, ever married, not reporting on children, relative to those who did report, for the United States.....	0.490 (9)
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¹ In the classification of women by number of children under 5 years old, only those children born to the woman and living with her at the time of the census were counted. The number of such children was obtained by an inspection of the entries on the successive lines of the Population schedule. Stepchildren, adopted children, grandchildren, and other related children in the family not born to this woman, as well as wards and other unrelated children in the household, were excluded so far as such children could be identified.

COMPUTATIONS

Estimated number of children ever born per 1,000 women ever married not reporting on children: Item (8) x item (9) = 606 x 0.490.....	297 (10)
Number of children ever born, for women ever married not reporting: Item (5) x item (10) + 1,000 = 131,500 x 297 + 1,000.....	39,056 (11)
Total children ever born to all women ever married: Item (6) + item (11) = 282,740 + 39,056.....	321,796 (12)
Adjusted estimate of number of children ever born per 1,000 women: 1,000 x item (12) + item (1) = 1,000 x 321,796 + 5,377,020.....	60 (13)
Adjusted estimate of number of children ever born per 1,000 women ever married: 1,000 x item (12) + item (3) = 1,000 x 321,796 + 598,060.....	538 (14)

The published rate for women 15 to 19 years old was about 10 percent smaller than the adjusted rate in the case of all women, and about 13 percent higher in the case of women ever married. These divergences between the published and adjusted rates for women 15 to 19 years old are about the largest which exist. Much smaller divergences between the published rates and the adjusted rates exist for women in the older age intervals.

Fertility rates computed by various methods.—Table A-2 presents data for native white and Negro women, on number of children ever born per 1,000 women. Rates computed by four different assumptions as to the fertility of women ever married who made no report on children ever born are shown for all women and for women ever married. The assumptions involved and the methods of computation of the fertility rates were as follows:

Assumption 1.—It was assumed that those women ever married who made no report on number of children ever born were all childless. This assumption, of course, is incorrect and results in fertility rates which are much too low. The rates based on this assumption were computed by dividing the reported number of children ever born by the total number of women of the given marital status and age group, including those women ever married who made no report on number of children ever born.

Assumption 2.—It was assumed that those women ever married who made no report on number of children ever born were as fertile as the combined group of women ever married who did report and single women in the corresponding age group. The rates shown in the detailed tables for all women were based on this assumption. The rates were computed by dividing the reported number of children ever born by the sum of the number of single women and of women ever married who reported on children. Since the proportion of women who are single decreases rapidly with age, this method makes an automatic allowance for the increasing convergence with age in the relative fertility of women ever married who did and who did not report on number of children ever born.

Assumption 3.—It was assumed that women ever married who made no report on number of children ever born were as fertile as those women ever married who did report. This is the assumption on which the rates for women ever married shown in the detailed tables are based. The assumption results in rates which are probably too high, particularly for the youngest women. The rates for women ever married, shown in tables A-3 and A-4, were computed by dividing the reported number of children ever born by the number of women ever married reporting on children. The rates for all women, shown in tables A-3 and A-4, were computed by multiplying each rate for women ever married, reporting on children, by the proportion which women ever married comprised of all women at each age level.

WOMEN BY NUMBER OF CHILDREN EVER BORN

Assumption 4.—It was assumed that women ever married who made no report on number of children ever born were relatively less fertile than those who did report, in accordance with the values of the fertility indices shown in tables A-1 and A-2. The method of computing the rates on this assumption was illustrated in the preceding section of this Appendix. This method is probably the most accurate

of the four cited herein. The indices, however, were not used in computing the rates shown in the detailed tables because the amount of additional accuracy to be gained thereby was unknown, the extra work involved would have seriously delayed the publication of this report, and the fertility indices were not available for all of the detailed groups.

Table A-1.—FERTILITY INDEX FOR WOMEN NOT REPORTING ON CHILDREN, NUMBER OF WOMEN AND NUMBER OF CHILDREN UNDER 5 YEARS OLD, FOR NATIVE WHITE AND NEGRO WOMEN 15 TO 44 YEARS OLD REPORTING AND NOT REPORTING ON CHILDREN EVER BORN, BY AGE OF WOMAN, FOR THE UNITED STATES, WITH URBAN-RURAL RESIDENCE FOR NATIVE WHITE WOMEN: 1940

(Statistics based on Sample C. Fertility index represents rate for women not reporting on children ever born as proportion of rate for women reporting)

AREA, COLOR, AND AGE OF WOMAN	WOMEN EVER MARRIED NOT REPORTING ON CHILDREN EVER BORN			WOMEN EVER MARRIED REPORTING ON CHILDREN EVER BORN			Fertility index (c) ÷ (f)
	Number of women	Children under 5 years old		Number of women	Children under 5 years old		
		Number	Per 1,000 women		Number	Per 1,000 women	
	(e)	(b)	(c)	(d)	(a)	(f)	(g)
NATIVE WHITE							
United States							
15 to 19 years.....	131,500	33,460	254	466,560	241,620	518	0.490
20 to 24 years.....	410,400	209,420	510	2,249,520	1,765,160	787	0.548
25 to 29 years.....	474,780	257,280	542	3,199,100	2,337,040	751	0.741
30 to 34 years.....	421,040	182,440	433	3,200,600	1,632,180	529	0.819
35 to 39 years.....	374,420	99,860	267	2,920,620	961,040	329	0.812
40 to 44 years.....	329,140	44,400	135	2,641,580	420,040	159	0.849
Urban							
15 to 19 years.....	47,820	11,480	240	204,780	90,100	440	0.545
20 to 24 years.....	213,540	92,080	431	1,249,260	819,020	656	0.657
25 to 29 years.....	272,820	128,500	471	1,887,860	1,174,340	622	0.757
30 to 34 years.....	247,700	91,100	368	1,898,240	849,800	448	0.821
35 to 39 years.....	216,520	43,700	202	1,710,200	426,920	250	0.808
40 to 44 years.....	191,220	16,940	89	1,549,300	163,740	106	0.840
Rural-nonfarm							
15 to 19 years.....	33,480	10,140	303	135,660	76,880	567	0.534
20 to 24 years.....	99,980	58,420	584	561,100	499,880	891	0.655
25 to 29 years.....	108,680	62,220	573	749,660	601,780	803	0.714
30 to 34 years.....	91,780	43,140	470	738,440	417,740	566	0.830
35 to 39 years.....	80,880	22,980	284	640,600	226,700	354	0.802
40 to 44 years.....	65,780	9,180	140	544,620	92,100	169	0.828
Rural-farm							
15 to 19 years.....	50,200	11,840	236	126,120	74,640	592	0.399
20 to 24 years.....	96,880	58,920	608	433,160	446,260	1,030	0.590
25 to 29 years.....	93,280	66,560	714	561,580	560,920	999	0.715
30 to 34 years.....	81,560	48,200	591	563,920	424,640	753	0.785
35 to 39 years.....	77,020	33,180	431	569,820	307,420	540	0.798
40 to 44 years.....	72,140	18,280	253	547,660	164,200	300	0.843
NEGRO							
15 to 19 years.....	26,280	9,620	366	100,300	62,340	622	0.588
20 to 24 years.....	66,860	36,800	534	336,160	258,200	768	0.695
25 to 29 years.....	75,720	32,420	428	415,020	251,080	605	0.707
30 to 34 years.....	64,440	21,500	334	389,820	162,860	418	0.799
35 to 39 years.....	68,980	17,320	251	406,580	125,100	308	0.815
40 to 44 years.....	54,860	7,620	139	326,100	55,120	169	0.822

DIFFERENTIAL FERTILITY, 1940 AND 1910

Table A-2.—NUMBER OF CHILDREN EVER BORN PER 1,000 NATIVE WHITE AND NEGRO WOMEN 15 TO 44 YEARS OLD, BY MARITAL STATUS AND AGE OF WOMAN, CALCULATED BY FOUR ASSUMPTIONS REGARDING FERTILITY OF WOMEN NOT REPORTING ON CHILDREN, FOR THE UNITED STATES, WITH URBAN-RURAL RESIDENCE FOR NATIVE WHITE WOMEN: 1940

(Statistics based on Sample C. See text for statements regarding the four different assumptions as to the fertility of women ever married who made no report on number of children ever born)

AREA, COLOR, AND AGE OF WOMAN	ALL WOMEN					WOMEN EVER MARRIED				
	Assumption 1 (low)	Assumption 2 (medium; rate published)	Assumption 3 (high)	Assumption 4 (based on fertility index)	Ratio of assumption 2 to assumption 4, percent	Assumption 1 (low)	Assumption 3 (high; rate published for United States)	Assumption 4 (based on fertility index)	Ratio of assumption 3 to assumption 4, percent	
NATIVE WHITE										
United States										
15 to 19 years.....	53	54	67	60	90.0	473	606	538	112.6	
20 to 24 years.....	487	475	517	488	97.3	842	996	941	105.8	
25 to 29 years.....	961	1,090	1,127	1,089	100.1	1,273	1,462	1,413	103.5	
30 to 34 years.....	1,460	1,643	1,675	1,640	100.2	1,739	1,968	1,927	102.1	
35 to 39 years.....	1,895	2,107	2,139	2,093	100.7	2,149	2,425	2,373	102.2	
40 to 44 years.....	2,178	2,417	2,449	2,408	100.4	2,435	2,738	2,692	101.7	
Urban										
15 to 19 years.....	37	37	45	41	90.2	429	530	484	109.5	
20 to 24 years.....	325	348	380	361	96.4	700	820	779	105.3	
25 to 29 years.....	759	836	869	842	99.3	1,038	1,189	1,152	103.2	
30 to 34 years.....	1,179	1,303	1,333	1,305	99.9	1,431	1,618	1,584	102.1	
35 to 39 years.....	1,507	1,667	1,697	1,661	100.4	1,756	1,979	1,936	102.2	
40 to 44 years.....	1,734	1,917	1,948	1,914	100.2	1,993	2,239	2,200	101.8	
Rural-nonfarm										
15 to 19 years.....	79	82	99	90	91.1	526	656	595	110.3	
20 to 24 years.....	606	669	714	677	98.8	968	1,141	1,081	105.6	
25 to 29 years.....	1,246	1,394	1,426	1,375	101.4	1,479	1,694	1,632	103.8	
30 to 34 years.....	1,765	1,959	1,984	1,947	100.6	1,966	2,211	2,169	101.9	
35 to 39 years.....	2,158	2,405	2,430	2,376	101.2	2,358	2,656	2,597	102.3	
40 to 44 years.....	2,435	2,704	2,730	2,679	100.9	2,638	2,957	2,902	101.9	
Rural-farm										
15 to 19 years.....	66	68	92	76	89.5	484	676	561	120.5	
20 to 24 years.....	629	704	770	712	98.9	1,074	1,314	1,215	108.1	
25 to 29 years.....	1,472	1,669	1,716	1,646	101.4	1,776	2,071	1,987	104.2	
30 to 34 years.....	2,203	2,483	2,522	2,454	101.2	2,472	2,829	2,752	102.8	
35 to 39 years.....	2,846	3,197	3,231	3,153	101.4	3,086	3,503	3,419	102.5	
40 to 44 years.....	3,266	3,667	3,696	3,628	101.1	3,475	3,933	3,861	101.9	
NEGRO										
15 to 19 years.....	119	124	151	138	89.9	627	791	723	109.4	
20 to 24 years.....	684	767	824	782	98.1	1,080	1,301	1,234	105.4	
25 to 29 years.....	1,265	1,446	1,496	1,428	101.3	1,560	1,845	1,761	104.8	
30 to 34 years.....	1,736	1,993	2,024	1,966	100.9	1,981	2,309	2,243	102.9	
35 to 39 years.....	2,145	2,474	2,509	2,442	101.3	2,342	2,740	2,666	102.8	
40 to 44 years.....	2,478	2,864	2,895	2,821	101.5	2,646	3,091	3,012	102.6	

Table A-3.—FERTILITY INDEX FOR NATIVE WHITE AND NEGRO WOMEN 15 TO 44 YEARS OLD, EVER MARRIED AND NOT REPORTING ON CHILDREN EVER BORN, BY AGE OF WOMAN, FOR REGIONS, URBAN AND RURAL: 1940

(Statistic based on Sample C. Fertility index represents number of children under 5 years old per 1,000 women ever married not reporting on children as a proportion of the corresponding figure for women ever married reporting on children)

AREA AND COLOR OF WOMAN	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	40 to 44 years	AREA AND COLOR OF WOMAN	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	40 to 44 years
NATIVE WHITE							NATIVE WHITE—Continued						
The Northeastern States.....	0.594	0.655	0.751	0.823	0.789	0.907	The West.....	0.487	0.604	0.715	0.820	0.767	0.890
Urban.....	0.561	0.671	0.755	0.821	0.794	0.928	Urban.....	0.416	0.548	0.717	0.824	0.780	0.800
Rural-nonfarm.....	0.606	0.657	0.779	0.928	0.741	0.887	Rural-nonfarm.....	0.543	0.620	0.722	0.835	0.780	0.853
Rural-farm.....	0.335	0.574	0.691	0.643	0.976	0.980	Rural-farm.....	0.493	0.629	0.640	0.754	0.781	0.906
The North Central States.....							NEGRO						
Urban.....	0.459	0.629	0.696	0.794	0.798	0.832	The North and West.....	0.628	0.777	0.814	0.711	0.816	0.895
Rural-nonfarm.....	0.530	0.652	0.726	0.784	0.817	0.817	The South.....	0.592	0.678	0.716	0.796	0.815	0.793
Rural-farm.....	0.514	0.634	0.645	0.732	0.744	0.722	Urban.....	0.780	0.702	0.680	0.781	0.759	0.660
Rural-farm.....	0.334	0.538	0.639	0.806	0.744	0.854	Rural-nonfarm.....	0.635	0.610	0.601	0.721	1.061	0.694
The South.....	0.495	0.671	0.782	0.833	0.835	0.807	Rural-farm.....	0.493	0.654	0.703	0.778	0.717	0.792
Urban.....	0.602	0.694	0.810	0.841	0.808	0.653							
Rural-nonfarm.....	0.525	0.678	0.719	0.841	0.866	0.849							
Rural-farm.....	0.415	0.617	0.776	0.791	0.805	0.797							