

RECENT FERTILITY TRENDS AMONG ASIANS AND PACIFIC ISLANDERS  
IN THE UNITED STATES

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This paper presents estimates of recent fertility trends for Asians and Pacific Islanders in the United States for the period 1965-80, derived from the 1980 U.S. Census. Estimates are computed for all Asians, all Pacific Islanders, and separately for Asian Indians, Chinese, Filipinos, Japanese, Koreans, Vietnamese, Guamanians, Hawaiians, and Samoans. Also presented, for each of these groups, are estimates of differential fertility by urban-rural residence, educational attainment, nativity, and time of immigration if foreign born.

DATA AND METHODOLOGY

Asians and Pacific Islanders were defined by self-identification in 1980 on the basis of question 4 on race. Although race was asked of all persons, educational attainment, nativity, and period of immigration if foreign born were asked only on the census sample long form, covering about 20 percent of the population. Therefore, the present analysis is based on an approximately 20 percent sample. Each individual in the sample was assigned a weight designed to make the sample representative of the total population. The fertility estimates presented here are based on the weighted sample.

Asian and Pacific Islanders include persons who selected one of the prespecified categories of Chinese, Filipino, Japanese, Asian Indian, Korean, Vietnamese, Hawaiian, Samoan, or Guamanian, as well as

persons who selected "other" and then provided written entries such as Kampuchean, Cambodian, Cantonese, Laotian, Pakistani, or Tongan. Where possible, these written entries were recoded into the prespecified categories; for example, Cantonese were recoded as Chinese. If an entry for race was missing on the questionnaire for a member of a household, an answer was assigned by computer according to reported entries for race for other household members, using a set of rules of precedence of household relationship. If race was not entered for anyone in the household (excluding paid employees), race was assigned by a variant of the Census Bureau's general allocation process for missing entries. In the Census as a whole, 1.5 percent of race entries were allocated.

The own-children method of fertility estimation was applied to the 20 percent census sample tape to generate estimates of fertility trends and differentials for Asians and Pacific Islanders in the United States. For comparison purposes, a tape with 1 percent of all households was used to generate estimates for the United States as a whole and for blacks and whites separately. Also for comparison purposes, a complete tape of American Indians was used to generate estimates for American Indians.

The own-children method has been described in earlier publications (see especially Cho, Retherford, and Choe, 1986) and need be recapitulated only briefly here. The method is a reverse-survival technique for estimating age-specific birth rates for years previous to a census or household survey. Enumerated children are first matched to mothers within households on the basis of responses to questions on age, sex, marital status, relationship to householder, and, in the

present application, number of children ever born. The matched (i.e., "own") children, classified by own age and mother's age, are reverse-survived to estimate numbers of births by age of mother in previous years. Reverse-survival is also used to estimate numbers of women by age in previous years. After adjustments are made for incorrect enumeration and unmatched (non-own) children, age-specific birth rates are calculated by dividing the number of births by the number of women. Estimates are computed for each previous year or group of years back to 15 years before the census.

In the present application no corrections for incorrect enumeration are made. Years of time are grouped into periods 1965-69, 1970-74, and 1975-79. Since the Census was taken on April 1, these periods run from April 1 to April 1. For example, 1975-79 means April 1, 1975, to April 1, 1980. Age-specific birth rates are aggregated to total fertility rates, with only the latter being reported here. Further methodological details about this particular application of the own-children method to 1980 U.S. Census data are contained in the Appendix of this paper.

#### PROFILE OF THE BASE POPULATIONS

The 1980 U.S. Census enumerated 3,726,440 Asians and Pacific Islanders in the U.S., of whom about 90 percent were Asians. Table 1 shows the numbers of specific races, and Table 2 shows additional detail by socioeconomic characteristics for women aged 15-64 in 1980.

Table 1 shows that Chinese were the largest group, followed by Filipinos. Both groups exceeded Japanese, who were the largest group in 1970 but fell to third place in 1980. Each of these groups

constituted more than one-fifth of the U.S. Asian population in 1980. Asian Indians (labeled simply as Indians in this paper) ranked fourth, followed by Koreans and Vietnamese. "Other Asians" constituted about 5 percent of all U.S. Asians. The largest groups in this category were Laotians, Thais, Cambodians, and Pakistanis.

The surpassing of Japanese by Chinese and Filipinos between 1970 and 1980 reflects a selective surge of increased immigration during the 1970s, following changes in United States immigration law after 1965. The increased flow of new immigrants was especially great from the Philippines, Korea, China, India, Pakistan, and Thailand. In addition, more than 400,000 Southeast Asian refugees entered between 1975 and 1980 under a series of parole authorizations granted by the Attorney General.

Among Pacific Islanders, Hawaiians constituted the largest Pacific Islander group in 1980. Samoans (including both American and Western Samoans) were next largest, followed by Guamanians. No other Pacific Islander group had more than 10,000 persons in 1980.

Table 2 shows the base populations underlying the estimates of differential fertility. Since most immigrants settle in urban areas, rural populations tend to be comparatively very small. There is a correlation between the time of peak immigration and the proportion of foreign-born women in particular racial groups. For example, since Japanese immigration slowed to a trickle some time ago, the current proportion of foreign born among Japanese is comparatively low. The proportion of foreign born among Koreans and Vietnamese, on the other hand, is much larger.

Substantial proportions of Samoans and Guamanians were foreign

born in 1980. Persons born in American Samoa and Guam are classified as native born. The foreign born include many Samoans in the U.S. who were born in Western Samoa and Guamanians who were born in the Philippines.

#### FINDINGS

Table 3 shows estimated trends in total fertility rates (TFRs) for Asians and Pacific Islanders, with comparison figures for the United States as a whole and major races.

Asians as a whole show a modest fertility decline, from about 2.4 children per woman in 1965-69 to about 1.9 children per woman in 1975-79. Because fertility was already fairly low to start with, the decline, though modest, was sufficient to bring fertility below replacement. The pattern was rather similar for each of the specific groups shown, except Vietnamese, who began with a comparatively high TFR of 5.4 that declined by 50 percent to 2.7 by 1975-79. By 1975-79, Chinese and Japanese had total fertility rates that were well below replacement, at 1.4 - 1.5 children per woman. Indians, Filipinos, and Koreans had very close to replacement-level fertility, which at 1980 mortality levels would correspond to a TFR of about 2.1 children per woman. (Note that in the tables, TFRs have more significant digits and are presented on a per thousand basis instead of a per woman basis.)

Fertility levels for Pacific Islanders were generally higher than those for Asians. For Pacific Islanders as a whole, the TFR declined from 3.7 children per woman in 1965-69 to 2.5 children per woman in 1975-79. The TFR of Guamanians dropped precipitously over the same period, from 4.0 to 2.1. Hawaiians showed a more modest decline, from

3.3 to 2.3. Samoans showed a decline from 6.1 to 3.8. Among the specific groups shown in Table 3, Samoans were the only group with a TFR greater than three children per woman by 1975-79.

Table 4 shows fertility trends by selected characteristics for the same Asian and Pacific Islander groups as in Table 3. The first two columns of Table 4 show trends in urban and rural fertility. Rural fertility exceeded urban fertility for the United States as a whole and the Asian and Pacific Islander groups, except Samoans in 1970-74 and 1975-79. Within urban and rural categories, fertility fell over the three periods, except urban Indians and rural Koreans, whose fertility increased very slightly. The rural-urban difference in the TFR sometimes increased and sometimes decreased, with no general tendency either way.

The next three columns show trends in fertility by education in three categories: less than 12 years of education, 12 years, and more than 12 years. Fertility declined in all categories for the United States as a whole and the Asian and Pacific Islander groups, except Koreans with less than 12 years of education, among whom it increased very slightly. Fertility was lower among those with more education, except Koreans in 1965-69. Fertility differences by education generally contracted over the three periods. Among the various race-education groups, the lowest TFRs were attained by Japanese and Guamanians with more than 12 years of education, at 1.3 children per woman. This extremely low fertility implies a net reproduction rate of about .6 and a long-run stable population rate of decline of about 40 percent per generation.

The next two columns of Table 4 compare the fertility of native

born and foreign born. Although data for the United States as a whole are unavailable, the fertility of both native born and foreign born Asians and Pacific Islanders declined over the three time periods, except foreign-born Indians, whose fertility increased very slightly. The fertility of native born was lower than the fertility of foreign born, except Filipinos and Japanese during 1965-69, for whom the difference was somewhat reversed. The fertility difference between native born and foreign born did not show any consistent trend, sometimes increasing and sometimes decreasing.

It should be noted that among foreign-born persons who immigrated recently, some past fertility occurred in the country of origin, not in the United States. Because applications of the own-children method tabulate TFRs by characteristics (such as nativity and year of immigration) evaluated at the time of the census, not at the time the births occurred, the assumption that the characteristic at the time of the census is unchanged throughout the entire 15 year estimation period is not always true.

The last two columns of Table 4 examine foreign-born fertility differences between those who immigrated before 1965 and those who immigrated during 1965-80. For brevity we refer to these two groups as pre-1965 and post-1965 immigrants. In both groups fertility declined over the three time periods, except post-1965 Indian immigrants, whose fertility increased very slightly. The fertility of post-1965 immigrants was higher than that of pre-1965 immigrants, except the period 1965-69, during which the difference was usually reversed. This reversal, which characterized all groups except Vietnamese and Samoans, may have occurred because of temporary hardships and dislocations



around the time of immigration, which probably caused many couples to postpone births. This explanation of the reversal seems plausible because in 1965-69 a very high proportion of post-1965 immigrants had arrived in the United States very recently and were still getting settled. Thus the reversal during 1965-69 may be largely an artifact of the choice of 1965 as a cutting point. Some of the pre-1965 immigrant groups had very low fertility by 1975-79; TFRs were 1.3 for Indians, 1.4 for Chinese, 1.4 for Japanese, and 1.3 for Vietnamese.

#### CONCLUSION

Fertility of U.S. Asians and Pacific Islanders generally fell substantially between 1965 and 1980, as did the fertility of the U.S. population as a whole. The fertility of Asians was generally lower than that of Pacific Islanders. Asians as a whole experienced fertility trends not much different from those of the United States as a whole.

In the U.S. population as a whole, the TFR fell from 2.6 children per woman in 1965-69 to 1.8 in 1975-79. During the same period, the TFR fell from 2.4 to 1.9 among Asians as a whole, and from 3.7 to 2.5 among Pacific Islanders as whole. However, these aggregated figures mask considerable variability among subgroups.

Differential fertility conformed to usual patterns: Urban fertility was generally lower than rural fertility; fertility of the more-educated tended to be lower than fertility of the less-educated; fertility of native born tended to be less than fertility of foreign born; and fertility of established migrants tended to be lower than fertility of recent migrants. Fertility tended to fall not only for

each racial group as a whole, but also for each socioeconomic category of urban-rural residence, educational level, and nativity. These generalizations are confirmed not only for the all-Asian category and the all-Pacific Islanders category, but also for virtually every specific racial subcategory within the two broader categories.

Comparisons with the U.S. population as a whole suggest that during 1965-80 a process of assimilation was occurring by which the fertility of the various racial minorities was converging to the fertility of the majority. However, racial differences in fertility had by no means disappeared by 1980.

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Appendix

DETAILS OF APPLICATION OF OWN-CHILDREN METHOD

The first stage of the own-children method of fertility estimation involves matching of children to mothers within the same household. Children are computer-matched on the basis of responses to questions on age, sex, marital status, relationship to householder, and number of children ever born. In the present application, race of mother was used as the classifier. Children were matched to mothers by means of the above census questions, irrespective of the child's own identified race.

Race of mother could not be used, however, in the computation of adjustment factors for non-own (unmatched) children, since mothers of these children could not be identified. To deal with this problem, the normal procedure would be to compute the non-own adjustment factor for children of a specified age as the ratio of all children of that age to all matched children of that age, irrespective of race, and to assume that the non-own adjustment factor is the same for each race. In the present instance, we were able to improve somewhat on this procedure by computing non-own adjustment factors by child's race. In effect, unadjusted fertility estimates were first calculated by mother's race and then adjusted upward for non-own children by means of adjustment factors by child's race.

Reverse-survival requires life tables. Because mortality data for the racial groups considered here are incomplete and sometimes unreliable, we uniformly used life tables by sex for the entire United States for 1980. The absence of race-specific mortality estimates

introduces some error in the fertility estimates, but previous research indicates that this error is very small. This is so because at prevailing low levels of mortality, reverse-survival factors are necessarily close to one and quite insensitive to errors of even several years of life expectancy (Retherford, Chamratrithirong, and Wanglee, 1980).

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Table 1. Asians and Pacific Islanders in the United States, 1980

Detailed Race	Total
Asians	3,466,874
Chinese	812,178
Filipino	781,894
Japanese	716,331
Indian	387,223
Korean	357,393
Vietnamese	245,025
Laotian	47,683
Thai	45,279
Cambodian	16,044
Pakistani	15,792
Indonesian	9,618
Hmong	5,204
Other Asians	27,210
Pacific Islanders	259,566
Hawaiian	172,346
Samoan	39,520
Tongan	6,226
Other Polynesian	2,186
Guamanian	30,695
Other Micronesian	4,813
Melanesian	3,311
Other Pacific Islanders	469

Source: United States, Bureau of the Census (1988, Table 1).

Table 2. Numbers of women aged 15-64 by characteristics: Asians and Pacific Islanders in the United States, 1980

Group	Residence		Education (in years)			Nativity			
	Urban	Rural	<12	12	>12	Native-born	Total	Foreign-born	
								65-80	pre-65
Asians	1,159,685	78,798	345,349	332,007	561,127	349,987	888,496	742,434	146,062
Indian	106,703	9,479	28,833	22,803	64,546	18,990	97,192	92,080	5,112
Chinese	273,421	8,358	84,324	62,185	135,270	75,794	205,985	162,520	43,465
Filipino	260,558	19,532	73,496	53,206	153,388	56,882	223,208	192,519	30,689
Japanese	268,785	25,411	53,616	114,185	126,395	185,872	108,324	56,342	51,982
Korean	129,000	9,356	43,160	46,565	48,631	8,199	130,157	118,244	11,913
Vietnamese	69,892	3,554	35,812	21,491	16,143	1,405	72,041	71,506	535
Pacific Islanders	71,725	11,457	29,704	34,879	18,599	71,564	11,618	8,987	2,631
Guamanian	9,161	883	3,683	3,972	2,389	8,814	1,230	950	280
Hawaiian	47,155	9,717	18,902	25,220	12,750	55,936	936	567	369
Samoan	10,482	484	4,839	4,182	1,945	5,618	5,348	3,649	1,699

Source: Unpublished tabulations from the 1980 U.S. Census. The population estimates in this table are derived from the census long form, covering about 20 percent of the population. Sample N's are about 20 percent of the numbers shown.

Table 3. Estimated trends in total fertility rates for Asians and Pacific Islanders in the United States, racial groups, derived from the 1980 U.S. Census

Group	1965-69	1970-74	1975-79
Asians	2399	2179	1948
Indian	2155	2115	2239
Chinese	2331	1869	1597
Filipino	2574	2319	2148
Japanese	1880	1651	1409
Korean	2404	2391	2183
Vietnamese	5435	4395	2671
Pacific Islanders	3711	2847	2531
Guamanian	4002	2946	2074
Hawaiian	3331	2513	2296
Samoan	6143	4494	3765
United States	2601	2070	1810
White	2488	1959	1714
Black	3182	2487	2115
American Indian	3398	2722	2409

Note: The aggregated "all Asians" and "all Pacific Islanders" categories include all subcategories, not just the specific subcategories shown. In this table and in Table 4, total fertility rates are shown on a per thousand basis.

Source: Unpublished tabulations from the 1980 U.S. Census.



Table 4. Estimated trends in total fertility rates by characteristics for Asians and Pacific Islanders in the United States, derived from the 1980 U.S. Census

Group	Residence		Education (in years)			Nativity			
	Urban	Rural	<12	12	>12	Native-born	Total	Foreign-born	
								65-80	pre-65
Asians									
1965-69	2378	2709	3090	2447	2202	2196	2484	2574	2677
1970-74	2143	2744	2988	2243	1947	1576	2335	2490	1787
1975-79	1918	2455	2451	1978	1763	1345	2133	2207	1595
Indian									
1965-69	2124	2561	2671	2340	2060	2172	2216	2209	2536
1970-74	2104	2363	2422	2162	2126	1803	2176	2204	1899
1975-79	2226	2455	2357	2207	2209	1478	2302	2343	1322
Chinese									
1965-69	2321	2614	3131	2414	2067	2093	2384	2335	2646
1970-74	1857	2184	2583	2014	1689	1306	2005	2098	1706
1975-79	1584	2001	1983	1722	1529	1161	1737	1800	1415
Filipino									
1965-69	2516	3353	3018	2926	2409	2910	2523	2376	3601
1970-74	2268	3026	2844	2396	2167	2112	2323	2388	2252
1975-79	2100	2820	2325	2152	1988	1788	2177	2228	1843
Japanese									
1965-69	1858	2148	2239	2085	1808	1987	1787	1860	2090
1970-74	1615	2083	2267	2028	1481	1426	1929	2181	1429
1975-79	1377	1851	1683	1698	1299	1209	1761	1831	1432
Korean									
1965-69	2365	3026	2258	2370	2632	1834	2412	2427	2637
1970-74	2311	3465	2478	2300	2425	1765	2408	2473	1845
1975-79	2117	3104	2262	2099	2154	1519	2216	2238	1695
Vietnamese									
1965-69	5406	5965	6251	4942	4410	3739	5473	5513	3154
1970-74	4353	5186	5584	3977	2899	3638	4408	4440	1642
1975-79	2671	2738	3474	2473	1739	1812	2687	2699	1256
Pacific Islanders									
1965-69	3646	4112	4760	3661	2803	3539	4904	4778	5233
1970-74	2798	3153	3590	2967	2175	2676	3825	3923	3836
1975-79	2486	2835	2892	2628	2071	2360	3443	3702	2611
Guamanian									
1965-69	3913	4885	4210	4201	3641	4235	2561	2466	2972
1970-74	2940	3050	3408	3245	2080	3018	2443	2563	1982
1975-79	1984	3072	2485	2333	1287	2055	2126	2244	1885
Hawaiian									
1965-69	3180	4067	4268	3464	2629	3347	*	*	*
1970-74	2391	3095	2999	2773	1971	2531	*	*	*
1975-79	2189	2825	2472	2464	1853	2306	*	*	*
Samoan									
1965-69	6126	7647	7415	5435	4181	5623	6522	6764	6306
1970-74	4471	4417	5281	4399	3624	4162	4807	5226	4426
1975-79	3795	3222	4062	3758	3205	3609	3922	4483	2895
United States									
1965-69	2514	2847	3311	2676	2231	**	**	**	**
1970-74	1978	2361	2805	2185	1668	**	**	**	**
1975-79	1727	2090	2150	1880	1473	**	**	**	**

\* Numbers of foreign-born too small to tabulate.  
 \*\* Not calculated.

Source: Unpublished tabulations from the 1980 U.S. Census.