

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).