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## Population Aging in California

Ronald Lee  
Department of Demography  
University of California, Berkeley  
2232 Piedmont Ave  
Berkeley, CA 94720

Valentine Villa  
Social Welfare  
University of California, Los Angeles

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## Executive Summary

The population of California is younger than that of the US as a whole, which in turn is younger than that of most other industrial nations. This reflects the high rate of immigration to California, as well as the fact that the ethnic and immigrant groups that are more heavily represented than in the country as a whole, also tend to have higher fertility. The population of California, like that of the US, will age rapidly from 2010 to 2030, as the large baby boom generations reach old age. According to Department of Finance projections, the number of elderly will increase by 172% over the next 40 years, with most of the growth coming in the next 20 years. The ratio of elderly to working age population will rise from .184 today to .336 in 2040, an increase of 80%. Nonetheless, it is very likely that the California population will remain younger than that of the nation.

Projections of population aging in California are uncertain because we don't know whether fertility will rise or fall, how rapidly mortality will decline, nor how the pace of migration into and out of the state from within and outside the US will vary. We suggest that the population will age somewhat faster than is projected by the Department of Finance, because we think that both fertility and mortality will be lower than they assume in the coming decades. It would be useful to prepare projections reflecting altered assumptions along these lines.

Based on DOF data and projections, the LA Basin and the SF Bay Area now contain about two thirds of the elderly population of the state, and will continue to do so over the next forty years. Currently, the highest ratio of elderly to working age population is found in the SV-NC-MT, and the others are fairly similar. By 2040, however, the rapidly aging SF Bay Area population is projected to become the oldest in the state.

The population of California stands out for its diversity. Estimates by the US Bureau of the Census now for the first time indicate that Non-Hispanic whites have become a minority of the California population. The population share of the Hispanic and Asian ethnic groups is rapidly increasing, due both to immigration and to higher fertility. However, these ethnic groups, as well African Americans and Native Americans, are younger populations than Non-Hispanic whites, and consequently California's elderly population is mainly White, at 73%. Immigrants comprise about 25% of the state's population, but only 21% of the elderly. The US born children of immigrants make up another 23% of California's elderly. Of the immigrant elderly, almost two thirds arrived before 1980, and only 10% have arrived since 1990, so most have had a chance to establish themselves in this country and to qualify for need-based public services and transfers such as Social Security.

Women live six or seven years longer than men, on average, and on average they marry men who are two or three years older. As a result, women have a much higher probability of becoming widows than men do of becoming widowers, and the older women outnumber older men by greater and greater proportions at higher ages. The proportion of the elder population that is widowed rises to 60% above age 85. In part because of this, among the elders not in institutions, nearly half of those over age 85 live alone. Education

is associated with income, health, disability and mortality of the elderly. The current elderly are less educated than the younger population, but as time passes the educational level of the elderly will rise, as these younger people become old.

The elderly have lower poverty rates than any other age group. This is because Social Security benefits keep many of the elderly out of poverty, and SSI provides a safety net for those who don't qualify for Social Security, such as the 10% of elderly immigrants who have arrived in the past ten years. Despite this generally favorable picture, there are subgroups of the elderly with high proportions in poverty, particularly Blacks, Hispanics, widows, immigrants, those without a high school diploma, and particularly for those arriving since 1990.

The elderly both pay taxes and receive benefits, but on average they pay less in taxes than the working-age population, and they receive greater total benefits, largely due to Social Security and Medicare. Even the elderly outside of nursing homes are considerably more likely to receive Medicaid benefits than are younger adults.

The data available for studying aging in California leave room for improvement. Not since the 1990 census do we have a full count of the population and its characteristics. When the results of the 2000 census are available, they will enable us to study the elderly population in considerable detail, although even then the information on many topics such as health and disability will be very limited. In the mean time, the Current Population Survey permitted us to describe many characteristics of the elderly population in California after pooling of several years to increase the size of the sample. However, it does not cover the population in institutions such as nursing homes, and it probably substantially undercounts undocumented immigrants. These are serious drawbacks, which should be kept in mind when interpreting the description of the elderly population in this chapter.

## **I. Introduction**

As time passes, individuals become older. When mortality falls, and life expectancy rises, the average individual lives to be even older, and a higher proportion of the individual life cycle is spent in old age. These kinds of changes are known as “individual aging”. We can also refer to the age of a population, as described by the average or median age of the population, or the proportion of the population over the age of 65 or 85, or the ratio of older people to working-age people. When these measures increase, we say that the population is aging. This is a different matter than individual aging, and can have quite different causes, as will be discussed below.

Individual aging is important for each of us, because it affects our own lives and those of others around us, directly. It is also important for policy makers, because people who live longer have different needs. Population aging is also important. First, it increases the salience of all the issues surrounding individual aging by increasing the relative numbers of the elderly. Second, it raises new policy issues related to the costs of providing services and resources for the elderly, as their number rises relative to the numbers of the working-age population and to the numbers of their children or other potential caregivers.

### ***A. Fundamental Causes of Population Aging***

Individual aging reflects the length of life and its prolongation due to falling mortality. Population aging, however, depends not only on how long people live, but also on the rate of growth of the population. In a rapidly growing population, generations born long ago – the current elderly—were relatively smaller at birth than generations born more recently, tending to make the population younger. The effects of survival are superimposed, and immigration additionally acts in complicated ways. Because high fertility makes a population grow more rapidly, high fertility makes a population young while low fertility makes a population old. In most cases, fertility has the greatest role in causing population aging, followed by mortality, and least of all, immigration.

### ***B. Global Aging***

All around the world, fertility is falling or has already reached low levels. Forty-five percent of the world’s population lives in countries in which fertility is below the level necessary to replace the population, or about 2.1 births per woman. Mortality has also fallen a long way in all regions of the world, although there have been setbacks due to AIDS in Africa and for other reasons in Eastern Europe and the former USSR. For these reasons, population aging is a global phenomenon. The industrial nations are farthest along in this process. Within the industrial nations, the US has a relatively young population because its fertility has been higher both in recent decades, and historically. Currently, the average number of children per woman (Total Fertility Rate) is 1.4 in Europe and Japan, but is 2.05 in the US. Within the US, California has a relatively young population, due to its relatively high fertility and to its high rate of immigration.

### ***C. Other Aspects of Population Aging***

There are other aspects to population aging beyond an increase in the relative size of the elderly population. Within the elderly population, an increasing proportion is at more

advanced ages. Those over 85 are often referred to as the “oldest old”, and their share rises as the population ages. Many needs rise with age, so this steeper rise at the older ages has important implications. At the same time, however, people reaching 65 or any other given age tend to have had better nutrition in childhood, better medical care throughout life, more hygienic living conditions, higher education, and other qualities conducive to better health and better physical functioning. Consequently, older people of a given age today have lower rates of disability, better functional status, and better health than people of that age in earlier decades. One study suggests that in terms of ability to continue to participate in the labor force, elderly people now are similar to people five years younger in the 1960s (Crimmins et al, 1999). Various measures of health status or functional status show continuing improvements.

#### ***D. Fiscal Concerns***

The consequence of population aging that receives most attention from policy makers and the media is the pressure it exerts on our Social Security and Medicare systems. This anticipated pressure is due to the steep increase in the ratio of elderly to the working-age population (old age dependency ratio) that is projected to occur when the baby boom retires in the coming decades, 2010 to 2030. Both Social Security and Medicare are federal programs that do not involve funding by the states, so the most prominent concerns about aging are not concerns for California as a state. However, on the funding side, the portion of Medicaid that is used to fund long-term care for those elderly who pass an asset test is in part born by the state, as is a part of the cost of Supplementary Security Income (SSI). There is also an array of important but less costly services for the elderly provided at the level of the states, as will be discussed at length in subsequent chapters. Furthermore, services for the elderly that are funded in whole or in part by the federal government, such as long-term care or health care, are of course provided within the state, and their adequate provision is a matter of state policy.

Beyond the fiscal issues, the increasing share of the elderly in the population raises many other policy questions for the state. How should highways be designed? How should driver licenses be awarded? How should home care services be provided?

#### ***E. Plan for Chapter***

This chapter will begin with a description of the elderly population in California, discussing their age, sex, education, race/ethnicity, and immigrant status. We will also discuss poverty among the elderly overall and for subgroups, and describe selected other characteristics as well as their use of public programs. Special attention will be given to the immigrant population. The second part of the chapter will focus on the process and outlook for population aging: what are its causes? How is population aging likely to evolve in the state and counties over the coming decades, according to projections? How will aging vary across ethnic groups and by immigrant status?

One of the most prominent features of the demography of California is its race/ethnic diversity and its high rates of immigration. Our discussion will pay particular attention to these aspects of population aging and the elderly in California.

## II. Who Are the Elderly of California?

### A. Data Sources

The results of the 2000 census will not be available for a year or two, so the most recent full count data come from the 1990 census ten years ago. Although we have the benefit of Census and DOF estimates and projections for the intervening years, these are necessarily based on various assumptions, and in any event do not contain detail on the characteristics of the population. The National Center for Health Statistics conducted a national survey in 1994 which over-sampled California, and which provides some useful information which will be discussed below. For the most part, however, we will draw on data from the annual March Current Population Survey (CPS) to update our picture of the current number and characteristics of the elderly in California. In order to generate a larger sample size, we have pooled the surveys for 1997, 1998 and 1999. The survey for March 2000 was not yet available. The results can be viewed as applying to the mid-point year 1998. By pooling in this way, we create a sample size of nearly 40,000 observations.<sup>1</sup> This is sufficient to support tabulation by age, race/ethnicity, sex, and many characteristics of interest for California. Using standard procedures, we can extrapolate from this sample to develop estimates for the entire population of the state. For the study of population aging, a major drawback to the CPS is that it does not include the institutionalized population, and therefore excludes the elderly who are in chronic care facilities. Another difficulty is that the degree of under-representation of undocumented immigrants is unknown; some analysts assume a figure of 50%.

### B. Basic Demography of California's Elderly Population

Ten point three of California's non-institutionalized population is aged 65 or over, a somewhat lower proportion than for the US as a whole. Similarly, the old age dependency ratio (population 65+ divided by population 20-64) is .175, compared to about .21 for the US as a whole. The relative youthfulness of California's population results in part from her higher rates of immigration, and in part from her higher fertility – itself mainly a consequence of past immigration. Because women have a greater life expectancy than men, they make up the greater share of the elderly population: 56% versus 44% for men. Above age 85, women make up 60% of the population.

Many characteristics of the elderly, such as health, functional status, income, poverty, and program use, depend strongly on educational attainment. The distribution of the elderly population by educational attainment is of interest for this reason. Twenty-six percent of the elderly did not receive their high school diploma, and 48% finished with no higher degree than the high school diploma. Six percent earned the AA, 13% the BA, 4% the MA, and 2% the Ph.D. or MD.

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<sup>1</sup> Because of the way the CPS is conducted, about half of the observations over the three years of the survey actually represent repeated observations of the same person in different years (either March 1997 and March 1998, or March 1998 and March 1999). This should not matter for present purposes. The total number of observations generated in this way is 39,515.

### **C. Other Characteristics of the Elderly**

Having outlined the basic demography, we will now consider their other characteristics. We will start by comparing the elderly to the working age population for a selection of characteristics which vary between these two groups. We will then examine the way these and other characteristics vary by immigrant status and time since arrival.

1. **Living arrangements:** Of those age 0-64, only 6% live alone. Of those 65+, 28% live alone, and of those 85+ (and not in institutions) 47% live alone. The proportion living alone doubles between the age group 50-64 and 65-84, from 13% to 26%. The elderly live in households that are only 55% as large as the households in which people age 0 to 64 live.
2. **Migration, Immigration, and Population Aging in California:** Of elderly immigrants, two thirds arrived before 1970; less than a quarter arrived in the 1980s, and a tenth in the 1990s. This is in sharp contrast to non-elderly immigrants, who are much more evenly distributed across arrival times, with most arriving in the 1980s.
3. **Education:** The elderly are less educated than younger generations. Seventy-four percent of the elderly have a high school diploma, compared to 82% for 20-64. Only 61% of those 85+ have the diploma. While 30% of those 35 to 64 have a BA, only 21% of those 65-84 do, and only 12% of those 85+. This means that in the future, the elderly will be more highly educated than the current elderly will. Greater longevity and lower disability rates are associated with more education, so increasing education of the elderly should mean improved health and functional status in the future.
4. **Marital Status:** Women on average live substantially longer than men, and so they are increasingly heavily represented at higher ages. For example, overall, 50% of the state's population is female. However, by age 50-64, 52% is female; by age 65-84, 56% is female, and above age 85, 60% is female. Naturally, this growing discrepancy translates into growing rates of widowhood. At ages 50-64, only 5% of the population is currently in a widowed state (some will have remarried), while at 65 to 84, 27% are currently widowed, and 61% after age 85. Most of those widowed are female, but some are male. At the same time, the proportions of those currently married decline with age. At 35-49, 66% are currently married; 69% at age 50-64; 60% at age 65-84; but at 85+, only 28% are currently married. Some of these differences in proportions currently married are due to differences across generations in attitudes toward divorce. Thus the proportions currently divorced or separated drop rapidly with age, for example from 19% at 50-64 to only 10% at 65-84. Most of the differences, however, are due to mortality.
5. **Race/Ethnic Composition:** The elderly are predominantly Non-Hispanic Whites (70% according to DOF estimates). Hispanic elderly are the second largest group at 15%, followed by Asian/Pacific Islanders (API) at 10%, African Americans at 5%, and Native Americans at less than 1%. Estimates based on the CPS differ slightly from DOF figures with a racial/ethnic distribution of 73% Non-Hispanic White, 12% Hispanic, 10% Asian/Pacific Islander, 5% African American, and less than 1% Native American. Data from the 200 Census when it becomes available should clear up this difference.

6. **Housing:** The elderly are far more likely to live in a “owned” home (whether or not there is an outstanding mortgage balance), at 80% versus 54% for the non-elderly. They are substantially less likely to live in a rented home, at 19% versus 45%.
7. **Income:** The elderly have lower average earnings than others, not surprisingly, at 3,800 versus 17,200. Some of this difference is made up by income from other sources, notably Social Security, so that the difference in total average income is much less. Those age 35 to 65 have average incomes of about 34,700, while those over 65 have incomes of 20,900.

We now consider how characteristics of the elderly population vary by immigrant status and time since arrival. Table 1 presents a subset of the characteristics, selected because they showed interesting variation. For those characteristics not shown here, there was typically no significant variation by time since arrival. We have also computed these interacted with race/ethnicity, but we do not have space to present this material here. Those who arrived longer ago may differ for various reasons because they had different characteristics at the time of arrival, because they have had longer to assimilate to US behaviors, or because they are more likely to have met certain legal requirements based on length of residence or length of work in the US.

**Table 1: Characteristics of California Elderly by Whether Immigrant, and for Immigrants by Year of Arrival**

<b>Characteristic</b>	<b>Non-Immigrant</b>	<b>Arrived &lt;1980</b>	<b>Arrived 1980s</b>	<b>Arrived 1990s</b>
<b>Lives Alone (%)</b>	30.1%	24.3%	13.7%	6.8%
<b>Size of Household</b>	1.9	2.5	3.6	3.7
<b>Naturalized Citizen (%)</b>	n.a.	72.8%	35.2%	17.4%
<b>Live in Owned Home (%)</b>	84%	71%	46%	49%
<b>Rcvs Rental Assist</b>	.7%	1.9%	2.7%	6.9%
<b>Mean Income (\$)</b>	23,060	15,960	8,430	5,440
<b>Mean Earnings (\$)</b>	4,270	2,750	1,460	590
<b>Social Security (\$)</b>	8,100	6,400	3080	1,650
<b>Supplementary Sec Income (\$)</b>	120	480	2,220	1,850
<b>Other Income (Mean – other items)</b>	10,570	6,330	1,680	1,350
<b>State Income Tax (\$)</b>	820	600	60	70
<b>Property Tax (\$)</b>	490	330	100	60
<b>Enrolled in Medicaid</b>	8.2%	20.2%	51.5%	49.3%
<b>Enrolled in Medicare</b>	95.3%	93.4%	86.8%	68.4%

We note first that non-immigrant elderly are far more likely to live alone than are immigrants, and immigrants who have lived in the US longer are far more likely to live alone than are immigrants who have arrived more recently. Doubtless this reflects both differences in incomes (see below) and a process of cultural assimilation. The average size of the household in which the elderly live is also smaller for non-immigrants and for those longer in the US, and substantially larger for elderly arriving more recently. Living alone or with fewer other household members has obvious implications for the possibilities of receiving care. Related characteristics such as age, probabilities of being currently married, ever married, widowed or divorced, do not vary along this dimension.

The probability of owning the home one lives in is higher for non-immigrants (84%) and earlier immigrants (71%) than for those arriving after 1980 (46 to 49%). The probability of receiving rental assistance also varies accordingly, from 1% for non-immigrants, to 7% for immigrants in the 1990s.

The probability of being a naturalized citizen also varies strongly by time since arrival, for immigrants, dropping from 73% for those arriving before 1980, to 17% for those arriving in the 1990s. Being naturalized affects eligibility for certain need-based government programs.

The dollar amounts reported on Table 1 are averages per person and not averages per recipient. The average amount per person is the average amount per recipient multiplied by the percentage of recipients. So, a low group average can reflect either lower amounts per recipients or a lower percentage of recipients.

Income varies strongly, from \$23,000 for non-immigrants down to \$5,000 for immigrants in the 1990s. One component of income, labor earnings, varies in the same way from \$4300 down to \$600. Social Security is another important component of income, varying from \$8100 down to \$1700.<sup>2</sup> Supplemental Security Income (SSI) is an alternative, need-based, source of income for elderly who do not qualify for Social Security, but who do qualify for need-based transfers. Qualification is based on own-income, so elderly who are living with their families can receive SSI even if the level household income is relatively comfortable. SSI income rises from only \$120 for non-immigrant elderly to around \$2000 for immigrants who arrived after 1980. There are many other programs which help to augment the resources of the elderly, including EITC, energy assistance, food stamps, rental assistance (reported above), public housing, unemployment compensation, veterans benefits and educational assistance. However, these either involve on average very small amounts of money, or else do not vary much by time since arrival. Enrollment in Medicaid does vary by time since arrival, and it is, of course, an important benefit. It varies from 8.2% for non-immigrant elderly up to about 50% for immigrants arriving since 1980 (the cost of the services received is not available). Enrollment for Medicare varies from 95% for non-immigrant elderly to only 68% for arrivals since 1990.

We can make a rough inference about income from private pensions and from financial assets by subtracting from total income, the sum of income from earnings, Social Security and SSI. The result is \$10,600 for non-immigrants, dropping down to \$1300 for immigrants since 1990.

#### ***D. Poverty of the Elderly Population***

**Table 2. California Poverty Rates by Age (%)**

<b>0-19</b>	<b>20-34</b>	<b>35-49</b>	<b>50-64</b>	<b>65-84</b>	<b>85+</b>	<b>65+</b>
25.3	17.9	11.0	9.4	8.1	11.6	8.4

<sup>2</sup> It is likely that \$1700 overstates the Social Security income for immigrants arriving in the 1990s, who would not be able to work and contribute here for 40 quarters. It is likely that some people report their most recent date of arrival rather than their first date of arrival on the Current Population Survey, and that such people have earlier work histories as well. However, it is also possible that some elderly immigrants arriving in the 1990s receive benefits in other ways, for example through a spouse who is the primary beneficiary.

We see that the elderly outside of institutions have the lowest poverty rates of any age group, and that the rate is only a third that of children. A closer look at poverty by age for the elderly shows that it is lowest for those age 65-69, at 7%, and then rises steadily and regularly to 14% for those 90 and over. The generally low poverty rates for the elderly are in large measure due to their Social Security benefits. These are keyed to the general wage level in the year a generation turns 60. The older retirees reached 60 at a time when the general wage level was lower, hence they have lower benefits and higher poverty rates. Also, the proportion of elderly who are women rises with age, and older women are less likely to have income from private pensions than are men.

On average, poverty rates are not high for the elderly, but they are high for certain subgroups of the elderly as we see in the next table.

**Table 3: Poverty Rates of CA Elderly by Sex and Race/Ethnicity (%)**

<b>Poverty Measure</b>	<b>Tot</b>	<b>Male</b>	<b>Fem</b>	<b>NH White</b>	<b>NH Black</b>	<b>Nat Am</b>	<b>Asian /PI</b>	<b>Hisp</b>
<b>Pov</b>	8.4	6.4	10.0	5.8	17.5	n.a.	13.0	17.6
<b>&lt;1.5Pov</b>	22.0	16.0	26.6	17.7	38.1	47.1	28.4	35.7

Poverty rates for elderly women are substantially higher than they are for men, at 10% versus 6.4%. Since there are also more elderly women than men, we find that almost exactly two thirds of poor elderly in CA are women, and one third are men. There are also strong differences by race/ethnicity. The rates for Blacks and Hispanics are fully three times as high as they are for elderly Non-Hispanic Whites. The rates for Asian/PI are also high. The differentials persist when we use the more inclusive poverty criterion with a 50% higher cut-off point.

**Table 4: Poverty Rates of CA Elderly by Immigrant Status and Time of Arrival**

<b>All</b>	<b>Non-Immig</b>		<b>Immigrants</b>			
	<b>Second Gen</b>	<b>Third Gen</b>	<b>All</b>	<b>&lt;1980</b>	<b>1980s</b>	<b>1990s</b>
6.1	6.2	6.1	17.1	15.2	17.4	28.5

There are also strong differentials by immigrant status: the rates for the children of immigrants, the Second Generation, are indistinguishable from those for Third +, at around 6%. However, the rates for immigrants are nearly three times this high, and for those arriving in the 1990s they rise to 28.5%. The rising poverty rates with recency of arrival reflect the combined effects of the fact that recent arrivals have had less time to adjust to their new situations, less time to qualify for need-based benefits, and also have different characteristics than those who arrived earlier on.

Education is another dimension along which poverty rates vary greatly. Table 5 reports these:

**Table 5. Poverty Rate of the Elderly by Educational Attainment (CA 1997-1999, from CPS)**

Poverty Rate (%)	All Ed	<HS Dip	HS Dip	AA	BA	MA	PhD/MD
8.4	16.1	6.9	4.5	2.6	5.1	7.2	
Share of All	100	49	39	3	4	3	2

Poverty rates are far higher for those who do not have a high school diploma, and these people account for a half of all the elderly in poverty (49%). It is also interesting that poverty rates are lowest for those with a BA, and are actually higher for those with the MA or PhD/MD (this pattern at the higher categories of educational attainment does not hold for the working age population).

***E. The Elderly and the Public Sector: Taxes and Benefits***

**Taxes:** Table 6 shows that the elderly pay less in taxes than other age groups as we see in the table below. Given their lower incomes, this is not surprising. Most relevant for current purposes are the State Income tax, of which they pay less than mature workers (35 to 64), and Property Tax, of which they also pay substantially less than mature workers (but more than 20-34 year olds).

**Table 6. Taxes Paid by Age in California by Kind of Tax (in 1998\$)**

Kind of Tax	20-34	35-49	50-64	65-84	85+
Fed Inc	2,250	4,820	5,330	2,160	1,430
State Inc	780	1,830	1,910	730	810
FICA (Payroll)	1,320	2,100	1,900	310	130
Property	150	530	780	460	290
Total	4,520	9,280	9,920	3,660	2,670

**Receipt of Benefits:** Table 7 shows the benefits for which a dollar value was given in the CPS. Table 8 shows those benefits for which enrollment or receipt of benefits was shown, but not the dollar value of the benefits received. Some items are received by a household rather than by an individual. Such items are reported in two different ways in the tables below. First they are reported based on the age of the head of the household receiving them. Then an amount per capita is calculated for the household, and this amount is reported for individuals in the household according to their age, and the entry is labeled “shared”. For example, in Table 7, people aged 85+ are reported to receive no Public Assistance, meaning that households headed by those 85+ receive 0 dollars of Public Assistance. But under Public Assistance Shared, those 85+ are reported as receiving \$12 per year in Public Assistance, because some of those 85+ live in households of which they are not the head, and which receive Public Assistance, perhaps for children in the household. Note that the table does not include estimates of the value of Public Education, which is not included in the CPS. Such information could be added from other sources. Note also that because CPS does not survey the institutionalized population, the report of enrollment in Medicaid by the elderly does not include those whose nursing home care is funded by Medicaid.

Inspection of Table 7 shows that the elderly receive lower benefits than others for Educational Assistance, Earned Income Tax Credit, Food Stamps, Public Assistance, Unemployment and Workers Compensation. (Several of these are employment or education related, so there are no surprises here). They receive substantially higher benefits from Social Security, SSI, and Veterans Benefits. The first two programs dominate all others in size.

**Table 7. Benefits Received by Age**

<b>Amt of Bens Rcvd ('98\$)</b>	<b>All</b>	<b>0-19</b>	<b>20-34</b>	<b>35-49</b>	<b>50-64</b>	<b>65-84</b>	<b>85+</b>	<b>0-64</b>	<b>65+</b>
<b>Educational assistance</b>	110	40	370	60	10	10		130	10
<b>Earned Income tax credit</b>	90	0	190	170	60		0		
<b>Food stamps rec'd by head</b>	40	0	90	70	40	10	20	50	10
<b>Food Stamps shared</b>	50	80	40	30	20	10	30	50	10
<b>Public assistance rec'd by head</b>	90	20	220	130	60	10	0	100	10
<b>Public Assistance shared</b>	90	170	90	60	40	10	10	100	10
<b>Social security</b>	930	30	50	200	730	7,410		180	
							7,980		7,470
<b>Supp Sec Income (SSI)</b>	100	10	70	130	190	300	440	80	320
<b>Unemplmt compensation</b>	70	0	90	130	130	10	20	80	10
<b>Veterans benefits</b>	40	0	10	30	120	200	40	30	180
<b>Workers compensation</b>	50	0	40	100	140	0	0	60	0

Note: "Received by head" assigns the entire amount of food stamps or public assistance received by the household to the household head. "Shared" shares the food stamps or public assistance received by the household among all household members.

It has sometimes been noted that receipt of SSI income is particularly high for Asian elderly in California, and this has sometimes been viewed as a problem requiring change in the regulations. The CPS data confirm that Asian immigrants do receive high levels of SSI, on average. While Non-Hispanic White immigrant elderly receive \$630 per year, and Hispanic immigrants receive \$920 per year, Asian immigrant elderly receive \$1630. However, when we examine these patterns controlling for time since arrival, the differences diminish markedly. An estimated regression equation confirms that when time since arrival and receipt of Social Security benefits are taken into account, Asian immigrants do not receive more SSI benefits than other immigrants.

**Table 8. Percent Receiving Benefits by Age**

<b>Percent Rcvng Benfts</b>	<b>All</b>	<b>0-19</b>	<b>20-34</b>	<b>35-49</b>	<b>50-64</b>	<b>65-84</b>	<b>85+</b>	<b>0-64</b>	<b>65+</b>
<b>Enrolled in Medicaid</b>	13.6	23.7	9.7	7.8	6.9	12.4	19.6	13.6	13
<b>Enrolled in Medicare</b>	11.1	.7	.4	1.8	5.5	93.6	97.9	1.6	94
<b>Receives Rental assistance</b>	.5	0	.6	.8	.6	.9	3.1	.4	1.1
<b>Receives Rental Assistance shared</b>	.5	.5	.4	.5	.4	.9	3.1	.5	1.1
<b>Receives Public Housing</b>	.9	0	1.2	1.2	1.2	1.9	.3	.8	1.7
<b>Receives Public Housing shared</b>	.9	.8	.8	.7	1	1.7	.3	.8	1.6
<b>Children of Head Receive free lunch</b>	3.5	.1	6.3	6.9	2.7	.7	.6	3.8	.7
<b>Child Receives free lunch</b>	4.3	13.9	0	0	0	0	0	4.8	0

The non-institutionalized elderly are enrolled for Medicaid at about the same rate as those under 65, but if we compare them to other adults and exclude children, then they are enrolled at around twice the rate, with those over 85 with the highest proportion. In the case of the elderly, Medicaid provides supplemental coverage for low-income Medicare recipients and for those who do not qualify for Medicare.

The elderly receive rental assistance more frequently than the non-elderly, particularly those over 85, of whom 3% receive rental assistance. The proportion of elderly receiving public housing is also relatively high, about 1.5 times as high as other adults. However, these proportions are absolutely low, both for public housing and for rental assistance. The final program shown is free lunch for children, and naturally no elderly receive this, although they occasionally live in a household with children who do.

### **III. Elderly Immigrants in California**

Because of the importance of immigration to California, the characteristics of elderly immigrants deserve a further, focused look.

#### **A. Background**

Clearly, the California elderly population is diverse, and that diversity will only increase as we move into the 21st century. Often overlooked in discussions of diversity among the state's population are immigrants (foreign born). California has the largest immigrant population in the United States, 8.1 million individuals, representing 25% of the state's population. The largest growth in the California immigrant population occurred between 1980 and 1990. In 1980 there were 1.3 million immigrants in California, by 1990 the immigrant population of the state grew to 6.4 million representing a 397% increase. Between 1990 and 1997 the immigrant population grew an additional 25% and is expected to continue to increase over the next few decades (U.S. Bureau of the Census, 1999a). The majority of immigrants in California are of Hispanic and Asian Pacific Islander origin, having immigrated from Mexico and Asia (U.S. Bureau of the Census, 1999b). The median age of U.S. immigrants is somewhat higher than the native born population, 37.4 versus 33.7, however, the median age differs depending on country of

origin. The bulk of immigrants from Mexico settle in California and have a median age of 31, compared to immigrants from Europe who are more likely to settle in the northeast region of the U.S. and have a median age of 51 (U.S. Bureau of the Census 1999a).

Among California immigrants, 9% of the population or approximately 700,000 individuals are age 65+ (elderly) (Adams and Marano, 1995). In 1994 the National Health Interview Survey (NHIS), a federally sponsored annual national household survey conducted by the National Center for Health Statistics (NCHS) designed primarily to collect data on the health of the civilian non-institutionalized population, included an over-sample of the California population. The NHIS 1994 is one of the few sources of data for the California population inclusive of immigrants. These data indicate that the mean age of elderly immigrants in California is 73, slightly lower than the native-born elderly who have a mean age of 74. The bulk of California's elderly immigrant population is Latino (24%) and Asian Pacific Islander (28%) (see Table 9). The majority of elderly immigrants, like their native counterparts, are female (57%) and are married (56%). The most significant difference between the elderly native-born population and the elderly immigrant population in California is revealed by examining socioeconomic status. Specifically, elderly California immigrants are more likely to be near poor and are less educated than their native born peers. Over one half (53%) of the elderly immigrant population in California are near poor i.e., living within 200% of the poverty level, compared to 33% of native born elderly. Moreover, while 26% of native born elderly have less than 12 years of education, nearly one-half (49%) of older immigrants have less than this level of education. Mean education levels for older immigrants and native born populations are 9.9 and 12.3 years respectively. Elderly immigrant's social and economic vulnerability is further reflected in the population's uninsurance rates which are three times that of the native born elderly population in the state. Elderly immigrants are also less likely than elderly natives to have employer-based insurance, private insurance, or Medicare.

**Table 9: Demographic, Socioeconomic Status, and Insurance Status of Immigrant and Native Born Populations, Age 65+, California, 1994 (percentages presented).**

	Immigrant (N=298)	Native Born (N=1160)	Chi-Square
Gender -Female	57	56	--
Ethnicity -Latino -White/other -Black -Asian	24 47 1 28	5 84 8 3	338.443***
Marital Status -Married	56	56	--
Near Poverty -<200% of Poverty	53	33	37.471***
Family Income -<\$10,000 -\$10,000-\$19,999 -\$20,000-\$34,999 -\$35,000+	18 27 25 30	12 27 30 31	--
Education -<12 years	49	26	55.408***
Insurance Status -uninsured -employer based -private -Medicaid -Medicare -other	4 27 25 29 15 0	1 46 36 7 10 0	160.898***

-- not significant

\*\*p<.001

Source: National Health Interview Survey (NHIS), 1994(table produced by the UCLA Center for H

Concerns over the growth of the immigrant population have expressed themselves recently in public policy aimed at cutting benefits and services to low income immigrants such as proposition 187 and Federal Welfare reform. The exclusion of immigrants from eligibility for health services under these polices was based in part on the fear that health

and welfare benefits acted as a magnet to foreigners in need of services. (Benjamin, et al, 2000.) The National Health Interview Survey (NHIS), 1994, includes a supplement which surveys the disabled population regarding their use of supportive services. A comparative analysis of use of supportive services among disabled native-born elderly and disabled immigrant elderly in California finds no significant differences between the populations in use of supportive services (see Table 10). Disabled immigrant and native-born elderly in California have similar use of physical therapy, visiting nurse, transportation, personal attendant, and social work services. In addition, both populations use is relatively low with less than 10% of the populations utilizing these supportive services. This lends partial support to arguments that fears regarding overuse of services by immigrants are unfounded.

**Table 10: Supportive Service Use (past 12 months) Among Immigrant and Native-Born Disabled Populations, Age 65+, California, 1994 (percentages presented).**

	Immigrants (N=126)	Native Born (N=506)	Chi-Square
Physical Therapy	11	13	--
Visiting Nurse	11	10	--
Personal Attendant	5	5	--
Transportation	3	3	--
Social Work	3	3	--

-- not significant

\*\*p<.001

Source: National Health Interview Survey (NHIS), 1994(table produced by the UCLA Center for Health Policy).

Still, the current and expected growth of the California immigrant population suggests that the state must consider the immigrant elderly population when planning services that will meet the needs of current and future cohorts of older adults. Elderly immigrants have relatively high levels of poverty and uninsurance, suggesting that the population is socially and economically vulnerable. Social and economic vulnerability throughout the life course can translate into poor health and greater dependency in old age. Examination of socioeconomic status among immigrant age 18-64 in California utilizing the NHIS 1994 data described above, finds that younger immigrants like their elderly counterparts are economically and socially vulnerable. Near poverty levels among immigrants age 18-64 in California are double those of the native-born population (58% versus 27%). Additionally, nearly three times as many immigrants as native-born individuals have less than a high school education (38% versus 13%). The uninsurance rate among younger immigrants is double that of those that are native-born (36% versus 16%). As this cohort of Californians age over the next few decades how will lifelong vulnerabilities impact

health and therefore demand for services? This is somewhat unknown and requires further investigation of the level of health of younger immigrant populations. With the largest growth in the immigrant population in the United States, California has the opportunity to take the lead in articulating and identifying the issues that an increasingly immigrant population will bring to the structuring and delivery of services across the state. Doing so will require further investigation of the health of the population as well as service use, employment patterns, education, and levels of family support. Investigation of these issues can reveal points of intervention for programs and policies that can lessen vulnerabilities, improve health, and make services more effective.

**B. Data from the 1997-99 Current Population Survey for California**

In this section, we present results from another data source with information on the immigrant elderly: the Current Population Survey. We define the foreign-born population to include non-citizens and naturalized-citizens who were born outside the US and its territories.<sup>3</sup> We will also refer to the foreign-born as immigrants or First Generation. Note that the US-born children of immigrants are not themselves immigrants. Children born in the US who have at least one foreign-born parent will be referred to as Second Generation. All others will be called Third Plus Generation which make up most of the population. Both Second and Third Plus Generations are US native born.

Table 11 shows the distribution of the California population by generation. We see that nearly a quarter of the population is First Generation, or immigrants, while their children make up just over a fifth. Third Generation Plus comprise the remainder, or about 55% of the total.

**Table 11. The Distribution by Generation of the California Population**

<b>Generation</b>	<b>Number (millions)</b>	<b>Percent of Total</b>	<b>Youth Dep Ratio</b>	<b>Old Age Dep Ratio</b>
<b>First (Immig)</b>	8.0	24.3	.157	.113
<b>Second</b>	6.9	21.0	1.824	.363
<b>First+Second</b>	14.9	45.3	.583	.177
<b>Third Plus</b>	18.0	54.7	.479	.173
<b>All</b>	32.9	100.0	.525	.175

Note: The Youth Dependency Ratio is the population under age 20 divided by the population aged 20 to 64. The Old Age Dependency Ratio is the population aged 65 and over divided by the population aged 20 to 64.

The age distributions of the various generations are quite distinctive, as shown in Figure 4 and in the last two columns of Table 11. Immigrants (that is, First Generation) in California are heavily concentrated in the prime working ages 20-45, with very few children and very few elderly; their dependency ratios for both are very low. The Second

<sup>3</sup> Note that there is a small group of citizens born to US parents who are temporarily overseas. This group is classified as Third-plus generation and not as immigrants.

Generation, that is the US born children of immigrants, is heavily concentrated in the child ages below 20, with relatively few in the working ages. However, the size of the elderly generations is roughly the same as that of the working ages. These elderly second-generation immigrants are the children of the huge wave of immigrants at the turn of the century, which is why they are so numerous. Thus the child dependency ratio is strikingly high for the Second Generation, and the old age dependency ratio is also strikingly high. If we combine the First and Second generations, and compare the total to the Third Plus or to the state as a whole (last three rows of Table 16), we find that the dependency ratios are similar in all three groups.

For immigrant elderly, the time since arrival bears on many other aspects of their situations as well, as we saw earlier. Here we will simply describe the way in which the elderly of California in each race/ethnic group are distributed by immigrant generation and time since arrival for those who are first generation immigrants. In Table 12, each race/ethnic group is the basis for the data in each column, and each column sums to 100%.

**Table 12: Immigrant Generation and Time of Arrival by Race/Ethnic Groups of California Elderly (1997-1999 CPS)**

<b>Immig Gen</b>	<b>NH White</b>	<b>NH Black</b>	<b>Am Ind</b>	<b>Asian or PI</b>	<b>Hispanic</b>	<b>Total</b>
<b>First</b>	10.6	1.4	n.a.	72.8	52.6	21.1
<b>Arrival</b>						
<b>&lt;1980</b>	8.2	1.1	n.a.	30.0	40.8	13.8
<b>1980s</b>	1.6	.4	n.a.	31.7	8.0	5.2
<b>1990s</b>	.8	0	n.a.	11.1	3.8	2.1
<b>Second</b>	23.2	.7	18.2	22.3	34.2	23.2
<b>Third</b>	66.3	97.9	81.8	4.9	13.3	55.7
<b>Total</b>	100	100	100	100	100	100

Of the whites, about two thirds are neither immigrants nor children of immigrants; that is, two thirds are third generation or higher. Blacks are overwhelmingly third generation or higher (98%). The situation is the reverse for Asian/PI, for whom only one in twenty is of third+ generation, while nearly three fourths are immigrants. For Hispanics, more than half are immigrants, with only 13% at third+. It is also interesting to consider the immigrant elderly by date of arrival in the US. Here, the striking fact is that of the Asian/PI elderly, fully 45% have immigrated to the US since 1980. This contrasts to only 12% of Hispanic elderly; most Hispanic elderly either were born in the US, or arrived here before 1980. The date of arrival of the elderly is important, because it affects the length of their work histories in the US, and therefore the likelihood that they have qualified for Social Security retirement benefits, which requires 10 years (40 quarters) of contributions. As we discussed earlier, when we consider the high rate at which Asian/PI elderly receive benefits from Supplemental Security Income (SSI).

We have just seen how each race/ethnic group is distributed by generation and time since arrival. The next table, Table 13, now focuses on the elderly population of California as a

whole, and shows how the total number of elderly is distributed across the race/ethnic groups, and by immigrant generation. Now all the entries in the table together sum to 100%, rather than for each race/ethnic group separately as in the previous table. We see that almost three fourths of California elderly are Non-Hispanic Whites. Of the balance, 5% are Non-Hispanic Blacks, with about twice that share for Asians/PI and for Hispanic elderly. We can say, then, that about two thirds of California elderly are either Non-Hispanic Whites who are at least three generations in the US, or Asian/PI or Hispanics who were born abroad.

**Table 13: The Distribution of California’s Elderly by Race/Ethnicity and Immigrant Generation (1997-1999, CPS)**

<b>Immig Gen</b>	<b>NH White</b>	<b>NH Black</b>	<b>NH Amer Ind</b>	<b>NH Asian/PI</b>	<b>Hispanic</b>	<b>Total</b>
<b>First</b>	7.8	.1	0	7.2	6.1	21.1
<b>Second</b>	17.0	.0	.1	2.2	4.0	23.2
<b>Third</b>	48.5	4.9	.3	.5	1.5	55.7
<b>Total</b>	73.2	5.0	.3	9.9	11.6	100.0

#### **IV. Projections: Future Population Aging in California**

Having examined the characteristics of the current elderly population in California, we now turn to the question of how this population will change over the next 40 years. Since the population projections we will be discussing do not attempt (wisely) to project the characteristics of the population beyond age, sex, race/ethnicity, and county of residence, our discussion will be confined to these topics.

The California Department of Finance (DOF) carries out demographic analysis for the state, and prepares county level projections of the population by age and race/ethnicity. These DOF projections provide an excellent starting point for our discussion of future population aging in California. The DOF demographic unit is composed of highly competent analysts, and their projections reflect both demographic expertise and a close knowledge of conditions and trends in the state. Nonetheless, there is always room for professionals to differ in their judgments about likely future trends. This section begins with a discussion of fertility, mortality and migration, and considers the DOF projection assumptions in the context of national and international trends.

##### **A. Underlying Demographic Trends Affecting Population Aging**

**Fertility:** It is useful to place California fertility in the context of national and international fertility trends. Fertility in the US is among the highest of industrial nations. In part this reflects the higher fertility of immigrant and minority women, but even Non-Hispanic White women have substantially higher fertility at 1.8 than do women in other industrial countries. The future pace and extent of population aging in the US will depend strongly on the future course of fertility, and the same is true for California. If fertility tends in the direction of other industrial countries, population aging will be more rapid

and more severe than if fertility remains at its current levels. The US Census Bureau projects that fertility in the US will actually rise by about .2 children per woman, as the proportion of ethnic minority population in the US rises from about 25% now to about 50% by 2050. The Actuaries of the Social Security Administration, who also make long term projections for the US, project that fertility will decline slightly from its current levels to 1.95 in the long run. There is a great deal of uncertainty in projecting fertility, and the past record of the Census Bureau and Social Security is fraught with large errors, sometimes as great as 1.5 children. Because fertility has fluctuated in the past, and because we have no successful theory or method for projecting fertility far in advance, no one can claim to know what the future will hold. However, in my view, the Social Security projection is the more likely one. The major countries and regions that send immigrants to the US already have fertility that is dropping or already low. For example, fertility in Mexico is projected by the United Nations to reach replacement level by 2015, fertility in China is already below replacement as it is throughout much of East Asia, and fertility is falling throughout Latin America. For this reason, it seems unlikely that first generation immigrants will continue to have fertility that is substantially higher than the average of others in the US. The children of previous immigrants have had fertility that is roughly halfway between that of their parents and that of the general population, while their children, that is the grandchildren of immigrants, have had fertility that is nearly indistinguishable from that of the general population (NRC, 1997). There is some indication that the descendants of Mexican immigrants in recent years have not been following this pattern (Bean et al, 1999). Nonetheless, it seems likely that immigrants, their descendants, and the ethnic minority population in general, will not continue for many more decades to have fertility that is substantially higher than the rest of the population.

What about the possibility that US fertility will decline toward the very low levels currently observed in Europe or Japan (around 1.4 children per woman) or in Spain or Italy (around 1.1 children per woman)? One reason fertility is so low in these countries is that the age of childbearing has been rising steadily for several decades. When women postpone childbearing, it temporarily depresses fertility, so that the measured fertility rates fall below the number of children that the women will ultimately bear. In Europe, it appears that such changes in the age at childbearing have depressed fertility by .2 to .4 births per woman, so that the true underlying fertility may be more like 1.6 or 1.8 births per woman. Taking this into account, the Social Security Administration's fertility forecast, of 1.95 births per woman over the long run, appears prudent.

With that background, we turn to fertility in California. During the 1990s, the Total Fertility Rate (TFR) in California has been .2 to .4 children per woman higher than the national average, although at times in the 1970s it was lower than the national average. The fertility of immigrants, particularly Hispanic immigrants, is on average higher than that of natives, and the fertility of race/ethnic minorities is generally higher than that of Non-Hispanic Whites in the US and in California. For example, for 1996 the DOF reports the following TFR:

**Table 14. Fertility by Race/Ethnic Group in California and the US: Current and Projected**

Race/Ethnic Group	Actual TFR		Projected TFR	
	CA (1996)	USA (1999) <sup>a</sup>	CA (Eventual)	USA (2050) <sup>a</sup>
<b>Total</b>	2.37	2.05	2.60 (for 2040) <sup>b</sup>	2.22
<b>Hispanic</b>	3.49	2.92	3.49	2.56
<b>Asian/Pacific Islander</b>	2.03	2.23	2.06	2.15
<b>American Indian</b>	1.79	2.42	1.79	2.23
<b>Black (Non-Hispanic)</b>	2.09	2.08	2.09	2.11
<b>White (Non-Hispanic)</b>	1.60	1.83	1.80	2.04

<sup>a</sup> Taken from the US Bureau of the Census Projections of the Population of the United States, 1999.

<sup>b</sup> The California average projected TFR is a simple consequence of the individual race/ethnic rates shown and the population composition, and is not a separate assumption. The number shown is the implied state average for 2040, taken from an unofficial DOF document.

The table shows that there is no clear pattern in California fertility relative to the nation: the fertility of Whites and API in the state is lower, but that of Hispanics is substantially higher, relative to the national averages. The fertility of American Indians is probably not reliably measured at either the state or the national level, for reasons discussed in the next section. Overall, fertility is higher in the state than in the nation, and this is primarily due to the higher proportion of Hispanics in the state (29% versus 11% for the nation), and to the higher fertility of Hispanics in the state (3.49 for the state versus 2.92 for the nation).

The projected level of fertility for the state in 2040 is 2.6 births per woman, whereas it is 2.22 for the nation. This large difference is primarily due to two factors: First, the proportion of Hispanics in the state is projected to increase substantially by 2040, from 29% to 48%; and second, the fertility of Hispanics is projected to be 3.49 children per woman for the state, versus 2.56 for the nation. We have no reason to question the projected increase in the proportion of Hispanics in the state, but we do suggest that it is unlikely that the fertility of Hispanic women will be so high as 3.49 in 2040. On the one hand, the fertility of the children and grandchildren of earlier immigrants is likely to converge towards that of the general population, as it has in the past (although a recent study by Bean et al, 1999, does report evidence that third generation descendants of Mexican immigrants have fertility higher than their parents). On the other hand, fertility in the sending countries such as Mexico is itself falling rapidly, and is projected by the United Nations to reach replacement level around 2015 to 2020. This means that future Hispanic immigrants are likely to have far lower fertility than those in the past.

As was discussed above, we believe that the Census Bureau fertility forecasts are already somewhat too high, and we suggest that the DOF fertility projections for Hispanics should be revised downward substantially, which would lead to a considerable reduction in the projected fertility level for the state. If Hispanic fertility in 2040 were instead 2.1, and fertility of all other groups was as projected by the DOF, then statewide fertility would be below 2.0 rather than at 2.6, and the projected population for 2040 would be

substantially smaller and older.<sup>4</sup> The DOF projections had a baseline of 1996. Subsequent DOF estimates for the state in 1998 indicate a TFR of 2.24, as opposed to the level of 2.37 estimated for 1996 at the time of the DOF projections. It is important to realize that whatever happens to fertility between now and 2040, it will have no effect on the size of the elderly population until 2065 at the earliest. The relevance for population aging is not that it will affect the numbers of elderly within this time horizon, but rather that it will affect the number of working-age people available to assist the elderly through tax payments and provision of services.

**Mortality:** As with fertility, it will be helpful to put California's trends in a national and international context. Official population projections for the industrial nations have a long record of under-projecting the elderly population, because they under-project life expectancy gains (Keilman, 1997). A recent study (Tuljapurkar et al, 2000; Horiuchi, 2000) concludes that this practice is continuing, with most industrial countries under-projecting life expectancy in 2050 by 2 to 4 years, and some by much more. It is important, therefore, to consider the evidence carefully.

Some analysts point to newly emerging diseases like AIDS, or drug resistant strains of old diseases like TB, to caution that life expectancy may rise more slowly in the future, may stagnate, or may even decline. This view is also held by some who believe that there are biological limits on life expectancy at around 85 years (average for the sexes), and that progress will slow as these limits are approached (Fries, 1980 ; Olshansky et al, 1990).

Other analysts point to the dramatic gains that have been made or are anticipated in biomedical science, with the development of genetic therapies, the mapping of the human genome, and the potential of stem cells, as well as striking progress against heart disease and cancer. Some distinguished scientists have suggested that a life expectancy of 150 years or so might be attained by the middle of this century.

Historical trends in the US, going back 50 or a hundred years, suggest that life expectancy will reach 86 by 2075 (with the plus or minus four-year range having 95% probability coverage; see Lee and Carter, 1992; Lee and Miller, 2000; Wilmoth, 1998 ). International evidence from the other industrial nations indicate that many countries have higher life expectancy than the US, and that mortality declines in these countries are continuing at a rapid pace. Japan already has reached 81 years. Furthermore, this

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<sup>4</sup> The DOF has compiled time series of fertility by race/ethnicity from 1970 to the present. Linear regressions on time are used to project these fertility rates forward. Then all the age-specific rates are adjusted so that the implied TFR matches the current level of the TFR in the sending areas such as Mexico and East Asia. Thus the regressions are used to identify and project changes in the age distribution or timing of fertility, but the levels are determined by source country fertility. We have two comments on this procedure. First, extrapolation of the linear time trend in age-specific rates is not advisable. We suggest instead the use either of a more flexible time series analytic approach, or better yet, a use of professional judgment based on an inspection of the plotted trends. Second, while we endorse the approach of using fertility levels in sending countries to inform the forecasts, we suggest that it would be better to use the United Nations forecasts of future levels in sending countries in the projection year, rather than the level in the current year.

international evidence shows that the rate of decline of death rates at older ages has actually accelerated (Wilmoth and Horiuchi, 1999; Kannisto et al, 1994).

The Actuaries of the Social Security Administration project rather slow gains in life expectancy for the US, for which they are often criticized (e.g. Technical Advisory Panel, 1999). The US Census Bureau (1999) projects more rapid gains, in line with the projections cited above using the Lee-Carter method. We believe it is prudent to follow these Census Bureau projections, and the recommendations of the Technical Advisory Panel to Social Security, and the Lee-Carter method, in foreseeing life expectancy of around 86 in the year 2075.

We now turn to mortality in California, relative to that in the nation as a whole. Mortality is measured most accurately in census years, since in those years there is an enumeration of the population which supplies reliable denominators for calculating death rates. In 1990, life expectancy for the US as a whole was 75.4 years, and for California was 75.1 years. The slight advantage for the US as a whole also held for Whites (76.1 versus 75.7) and for Blacks (69.2 versus 69.0). In 1997, life expectancy for the total population in California was 76.8, and for the US as a whole was 76.7. It is reasonable, therefore, to use the race/ethnic mortality forecasts of the US Census Bureau as a basis for the California forecasts.

There are strong differences in mortality by race/ethnic group, although estimates are rather uncertain. This is because data on deaths come from death certificates, and data on numbers of people at risk come from the census (or estimates and interpolations based on the census). The reporting of race/ethnicity differs between these two data sources, and there are many differences in procedures. Often, mortality is underestimated for minority groups as a consequence. With this caveat, the California data for 1990 (DOF) are given in the table below. Also given are the most recent US Census Bureau estimates for the country as a whole, by race/ethnicity. Unfortunately, these are available only for 1999, not for 1990 (and these 1999 numbers reported below are actually projections from the 1998 data). Also given are the DOF projections to 2040, and the Census Bureau projections to 2050.

**Table 15. Life Expectancy by Race/Ethnic Group in California and the US, Current and Projected**

Race/Ethnic Group	Actual Life Expectancy		Projected Life Expectancy	
	CA (1990)	US (1999) <sup>a</sup>	CA (2040)	US (2050) <sup>a</sup>
<b>Total</b>	75.1	77.0	79.9	84.0
<b>Hispanic</b>	79.1	80.5	83.0	85.7
<b>Asian/Pacific Islander</b>	80.8	83.9	86.2	87.3
<b>American Indian</b>	83.5	76.5	n.a.	85.7
<b>Black (Non-Hispanic)</b>	69.0	71.8	76.0	81.1
<b>White (Non-Hispanic)</b>	75.7	77.4	81.9	83.8

It is clear that the estimate for American Indians is far too high, due to the data problems mentioned. The figures for the other groups are in line with national estimates, taking into account the nine year difference in date, and in particular both API and Hispanics typically are found to have longer life expectancy than Whites.

The DOF mortality forecasts are based closely on what were at the time the most recent projections by the US Bureau of the Census. At that time, the Census forecasts of life expectancy gains were roughly consistent with those of the Social Security Actuary, but in the 1999 projections, they were raised to be consistent with the Lee-Carter projections. Interpolated to 2040, the national projection is 82.6 years, or 2.7 years longer than the DOF projection of 79.9. We suggest that the DOF continue its practice of following the US Bureau of the Census in formulating its mortality projections.

**Migration/Immigration:** The future size and age distribution of the California population will be influenced by both international immigration and by domestic migration, both of which are difficult to predict. International immigration is determined to a considerable extent by policy, so to project immigration one must project policy, with all the difficulties that entails. The Actuaries of the Social Security Administration are constrained to make forecasts consistent with current law, so they simply assume that the number of immigrants per year will remain constant into the distant future at 900,000 per year at the national level. Since the 1950s, however, the flow of immigrants has been increasing rapidly and quite regularly, and it would be prudent to expect this increase to continue as does the projection by the Census Bureau. It requires another step to convert national projections into projections for California, since we don't know where the immigrants will go. Will they continue to come to California? Will earlier immigrants disperse around the country? Historically, and at the national level, it appears that roughly 30% of immigrants return to their country of origin, that is emigrate from the US. We know of no comparable study for the state of California, nor is it clear how one could be done.

Hans Johnson (1999), in an analysis of various population projections for California, found that differences between projections were due mostly to differences in projections of domestic migration patterns. Will California experience substantial net inflows from other states as it often has in the past, or will there be substantial outflows, as there were in the early 1990s? It is primarily the population of working age that would be affected by these uncertain trends, rather than the elderly, so there could be a substantial impact on the number of workers available to support each elderly person. Johnson (2000) discusses domestic migration to and from California in more depth.

**Summary Evaluation:** The DOF projections are done to a high professional standard. A new version will be prepared after the results of the 2000 census are available to provide a new baseline population. We suggest that the assumed future level for Hispanic fertility, and therefore for statewide fertility, is too high, and that the projected gains in life expectancy may be somewhat low. Projections reflecting lower fertility and longer life would show a somewhat older population than do the current DOF projections. On the one hand, the projections of numbers of future elderly in California may be a bit low,

in light of the revisions to the US Census Bureau mortality forecasts since these DOF projections were constructed. On the other hand, the old age dependency ratio projections may be more substantially too low, since in addition to the mortality issue, future fertility may be substantially lower than the DOF projects, and therefore there may be considerably fewer people in the working ages than are currently projected.

### ***B. Projections of Population Aging in California According to the Department of Finance***

California has a relatively young population compared to the nation as whole. Although life expectancy in the state is similar to the nation, fertility has often been higher in California, and most important, there has been a high rate of immigration. One convenient summary measure of population aging is the old age dependency ratio: the ratio of the population 65 and over to the population 20-64<sup>5</sup>. Although these age boundaries are somewhat arbitrary, the measure is still useful. In the US in 2000, this ratio is .21. In California, it is only .18.

Over the next few decades, the population of California will age rapidly as the baby boom generations reach age 65; in this respect the California experience will be similar to that of the nation as a whole. Figure 1 plots the Old Age Dependency Ratio (OADR) derived from DOF projections, up to 2040. It can be seen that the OADR begins to rise around 2010. It rises smoothly through 2036, reaching .34, and then begins to decline. I suspect, but am not sure, that this decline in the OADR reflects the rise in birth rates that is assumed in the DOF projection. No comparable decline is seen in the national projections. In my view, it would be a mistake to expect population aging in California to abate after 2036.

While the population over 65 is growing relative to the rest of the population, and relative to the working-age population, the segment of the elderly 85 and over is growing even more rapidly. In the 2030s, while the general population is growing at about 1.25% per year, and the population age 65-84 is growing at about 1% per year, the 85+ segment is growing at 5% per year. Relative to the working-age population, the 85+ grows from 2% as large in 2000 to 6% as large in 2040. This is important because people aged 85+ have greater needs for care and support than do younger old people.

### ***C. Population Aging and the Changing Race/Ethnic Composition of the Population***

In characterizing the race/ethnic groups, we will follow practice of the US Census Bureau and the California DOF. Hispanic versus Non-Hispanic is the sole ethnic distinction, and this dichotomy cuts across lines of “race”. We will divide the population into Non-Hispanic Whites, Non-Hispanic Blacks, Non-Hispanic Asians, Non-Hispanic American Indians, and Hispanics. In the remainder of this report, we will drop the “Non-Hispanic” qualifier and refer simply to “Whites”, “Blacks”, and so on, but it should be kept in mind that the qualifier is implicit, and that Hispanics can be of any race.

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<sup>5</sup> Sometimes the denominator for this ratio is taken to be the population age 18-64 and sometimes 15 to 64, but we will consistently use 20-64. The choice of denominator makes little difference to the result, and any choice is somewhat arbitrary.

Within the population of the state, the different race/ethnic subgroups are at different stages of the process of population aging, and have widely varying dependency ratios. Table 16 displays the shares of the groups in the total population and in the elderly population, in 2000 and in 2040, as well as their OADRs. In 2000, the Non-Hispanic White subgroup makes up 50% of the general population, but has 70% of the elderly population. Thus while the OADR for the state is .18, that for Whites is higher at .25 ( $=.18 \times 70.3 / 50.3$ ). The Hispanic population has a younger age distribution in 2000, due to its much higher fertility and immigration in the past. While it has 31% of the general population, it has only 15% of the elderly population, leading to an OADR of only .09, half the ratio for the state, and around a third that of the White population. Similar but less extreme differences can be seen for the API, Black and American Indian populations, all of which are substantially younger than the White population.

These differences in age distribution by race/ethnic group have led some analysts to say that young minority workers are supporting elderly Whites. There is truth to the claim. At the national level, the race/ethnic minority groups combined pay ten to fifteen billion dollars more per year in Social Security payroll taxes than they take out in benefits, even after adjusting for the surplus revenues used to build up the trust fund. This situation is projected to continue for the foreseeable future. However, the overall situation is complex since these groups also receive much more in benefits than they pay in taxes through other programs, particularly those like public education which are targeted to children.

Looking to the future, Table 16 shows that the population share of Whites will drop from 50% to only 31%, while their share of the elderly will decline dramatically from 70% to 46%. Despite their declining share of the elderly population, the White OADR will rise from .25 to .48, nearly doubling by 2040. While the White subpopulation is aging, the same process is occurring even more rapidly for the other subgroups, so that by 2040 they are as old or older than the current White subpopulation. An important implication of these changes is that the race/ethnic composition of the elderly population will be strikingly altered. Whereas the elderly are currently overwhelmingly White, by 2040 their share will have shrunk to less than half, while the share of Hispanics will have more than tripled to nearly a third and the share of API will also have increased substantially. The elderly population of 2040 will be far more diverse.

Table 17 is structured just like Table 16, but it describes the population 85 and over.

**Table 16. Population Aging in California by Race/Ethnic Group**

Race/Ethnic Group	2000			2040		
	%Pop	%Elderly	OADR	%Pop	%Elderly	OADR
<b>California</b>	100.0	100.0	.184	100.0	100.0	.336
<b>White</b>	50.3	70.3	.246	30.7	45.9	.481
<b>Hispanic</b>	30.8	14.5	.095	47.8	31.7	.236
<b>Asian/PI</b>	11.5	9.7	.150	15.5	16.8	.345
<b>Black</b>	6.8	5.0	.134	5.5	5.0	.280
<b>Amer Ind</b>	.6	.5	.153	.5	.7	.451

Note: The OADR, or Old Age Dependency Ratio, is here defined as the ratio of the population age 65 and over to the population age 20-64.

**Table 17. The Population 85+ in California by Race/Ethnic Group**

Race/Ethnic Group	2000			2040		
	%Pop	%85+	OADR	%Pop	%85+	OADR
<b>California</b>	100.0	100.0	.022	100.0	100.0	.058
<b>White</b>	50.3	75.0	.031	30.7	53.1	.096
<b>Hispanic</b>	30.8	12.5	.010	47.8	24.0	.031
<b>Asian/PI</b>	11.5	8.0	.015	15.5	18.1	.064
<b>Black</b>	6.8	4.1	.013	5.5	4.1	.039
<b>Amer Ind</b>	.6	.5	.018	.5	.9	.092

Note: The OADR, or Old Age Dependency Ratio, is here defined as the ratio of the population age 85 and over to the population age 20-64.

For the oldest old, those 85 and over, Table 17 shows similar changes. The ratio of oldest old to the working-age population will increase even more steeply than will the ratio of elderly to that group, rising from .022 to .058. This is particularly important, since the oldest old are more frail, need more assistance, and are more likely to be in institutions than are those 65 to 84. While Whites currently make up 75% of the oldest old in California, that share will drop sharply to 31% by 2040. The Hispanic share will almost double, and the API share will more than double. The African American population is projected to keep its current share. The projections for the American Indian population are of questionable reliability.

#### ***D. Regional Variations in Aging***

For purposes of examining regional differences in aging, we form seven regional groups from the 55 counties of California. The groups are: Los Angeles Basin, San Francisco Bay Area, San Diego, Sacramento, Coastal, San Joaquin Valley, and SV-NC-MT (this last combines Sacramento Valley, North Coast, and Mountain, and includes 25 counties). The allocation of each county to these groups is given in the appendix.

Two regions, the LA Basin and the SF Bay Area, together contain two thirds of the elderly population and of the 85+ population of the state (See Table 18). The LA Basin area is slightly younger than the state as a whole, and the SF Bay Area is slightly older. This situation is not projected to change over the next 40 years. By 2040 their combined share of the state’s elderly population is projected to increase very slightly, and similarly for the 85+ population.

**Table 18. Regional Distribution of the Elderly and 85+ Population in California**

Regions	2000		2020		2040	
	65+	85+	65+	85+	65+	85+
San Joaquin Valley	9.5	10	9.6	10.4	10	9.8
SV, NC, MT	5.8	6	5.4	6.2	4.6	5.2
San Diego	8.7	8.9	7.2	8.6	6.9	6.6
San Francisco Bay Area	21.4	21.5	21.7	20.8	20	21.5
Sacramento	5.4	5	5.8	5.9	5.6	5.8
Los Angeles Basin	44.80	43.8	46	43.60	48.5	46.9
Coastal	4.4	4.8	4.3	4.50	4.3	4.3
California	100.00	100.00	100.00	100.00	100.00	100.00

The elderly population of the state is projected to increase by 172% over the next 40 years, with the greater part of the growth over the next 20 years. While every region experiences this strong growth in the elderly population, the greatest 40 year increase will be in the LA Basin (195%) and in the San Joaquin Valley (189%), and the slowest growth will be in SV-NC-MT (116%) and in San Diego (118%).

The regions vary considerably in their race/ethnic composition, as shown in Figure 2. The most striking points from this figure are: the 25 counties in the SV-NC-MT region are 82% White, with the smallest share of all other race/ethnic groups except American Indians, with the largest share (where shares are expressed relative to the population of each region, and are not shares of the total subgroup population in the state). The LA Basin has the smallest share of Whites and the largest share of Hispanics, while the SF Bay Area has the largest share of API.

Figure 3 shows the OADRs for each region in 2000, 2020 and 2040- California as a whole for a baseline. Currently, the highest ratio is in the SV-NC-MT region, at .25, which is also the average OADR for Whites altogether, not coincidentally. Otherwise, the OADRs across the regions are fairly similar in 2000. By 2040, however, there is more variation. SV-NC-MT is still considerably higher than the state as a whole, but it has been surpassed by the very rapidly aging SF Bay Area, in which the ratio has more than doubled. The San Joaquin Valley, with a relatively high proportion of Hispanics, and San Diego, are both relatively young in 2040, with the other regions in between.

## V. Conclusions

The population of California is younger than that of the US as a whole, which in turn is younger than that of most other industrial nations. This reflects the high rate of immigration to California, as well as the fact that the ethnic and immigrant groups that are more heavily represented than in the country as a whole, also tend to have higher fertility. The population of California, like that of the US, will age rapidly from 2010 to 2030, as the large baby boom generations reach old age. According to Department of Finance projections, the number of elderly will increase by 172% over the next 40 years, with most of the growth occurring in the next 20 years. The ratio of elderly to working-age population will rise from .184 today to .336 in 2040, an increase of 80%. Nonetheless, it is very likely that the California population will remain younger than that of the nation.

Projections of population aging in California are uncertain because we don't know whether fertility will rise or fall, nor how rapidly mortality will decline, nor how the pace of migration into the state from elsewhere in the US and from other countries will vary. We suggest that the population will age somewhat faster than is projected by the Department of Finance, because we think that both fertility and mortality will be lower than they assume in the coming decades. It would be useful to prepare projections reflecting altered assumptions along these lines.

Based on DOF data and projections, the LA Basin and the SF Bay Area now contain about two thirds of the elderly population of the state, and will continue to do so over the next forty years. Currently, the highest ratio of elderly to working-age population is found in the SV-NC-MT, and the others are fairly similar. By 2040, however, the rapidly aging SF Bay Area is projected to become the oldest in the state.

The population of California stands out for its diversity, and estimates by the US Bureau of the Census now for the first time indicate that Non-Hispanic Whites have become a minority of the California population. The population share of the Hispanic and Asian ethnic groups is rapidly increasing, due both to immigration and to higher fertility. However, these ethnic groups, as well African Americans and Native Americans, are younger populations than Non-Hispanic Whites, and consequently California's elderly population is mainly White, at 73%. Immigrants comprise about 25% of the state's population, but only 21% of the elderly. The US born children of immigrants make up another 23% of California's elderly. Of the immigrant elderly, almost two thirds arrived before 1980, and only 10% have arrived since 1990, so most have had a chance to establish themselves in this country and to qualify for need based public services and transfers such as Social Security.

Women live six or seven years longer than men, on average, and on average they marry men who are two or three years older. As a result, women have a much higher probability of becoming widows than men do of becoming widowers, and the older women outnumber older men by greater and greater proportions at higher ages. The proportion of the elder population that is widowed rises to 60% above age 85. In part because of this, among the elders not in institutions, nearly half of those over age 85 live alone. Education

is associated with income, health, disability and mortality of the elderly. The current elderly are less educated than the younger population, but as time passes the educational level of the elderly will rise, as these younger people become old.

The average income of the elderly is lower than that of other age groups, yet they also have lower poverty rates than any other age group. This is because Social Security benefits keep many of the elderly out of poverty; SSI provides a safety net for those who don't qualify for Social Security, such as the 10% of elderly immigrants who have arrived in the past ten years. Despite this generally favorable picture, there are subgroups of the elderly with high proportions in poverty, particularly Blacks, Hispanics, and widows. Immigrant elderly have a high poverty rate, and for those arriving since 1990, the rate is extremely high. Elderly without a high school diploma also have high rates of poverty.

The elderly both pay taxes and receive benefits, but on average they pay less in taxes than the working-age population, and they receive greater total benefits, largely due to Social Security and Medicare. Even the elderly outside of nursing homes are considerably more likely to receive Medicaid benefits than are younger adults.

The data available for studying aging in California leave room for improvement. Not since the 1990 census do we have a full count of the population and its characteristics. When the results of the 2000 census are available, they will enable us to study the elderly population in considerable detail, although even then the information on many topics such as health and disability will be very limited. In the mean time, the Current Population Survey permitted us to describe many characteristics of the elderly population in California, after pooling of several years to increase the size of the sample. However, it does not cover the population in institutions such as nursing homes, and it probably substantially undercounts undocumented immigrants. These are serious drawbacks, which should be kept in mind when interpreting the description of the elderly population in this chapter.

## References

- Adams, P.F. & Marano, MA. (1995) Current Estimates from the National Health Interview Survey, 1994. Vital and Health Statistics Vol.10 #193. Hyattsville: National Center for Health Statistics.
- Bean, Frank, C. Gray Swicegood, and Ruth Berg (1999) "Mexican-Origin Fertility: New Patterns and Interpretations." *Social Science Quarterly* 81, 404-420.
- Benjamin, A.E., Wallace, S.P., Villa, V.M., and McKarthy, K. (2000). Disability and Access to Health and Supportive Services Among California's Immigrant Population, Final Report. Los Angeles: U.C.L.A. Center for Health Policy.
- Crimmins, Eileen, Sandra Reynolds, and Yasuhiko Saito (1999) "Trends in Health and Ability to Work Among the Older Working Age Population" *Journal of Gerontology: Social Sciences* v. 54B, no. 1, pp.S31-S40.
- Fries, J.F. (1980) "Aging, natural death, and the compression of morbidity," *New England Journal of Medicine* 303:130-136.
- Horiuchi, S. (2000) "Demography-Greater lifetime expectations," *Nature* (June);405(6788):744-745.
- Johnson, Hans (1999) "How Many Californians?" *California Counts: Population Trends and Profiles* v.1, n.1 (October)
- Johnson, Hans (n.d.) "Here's Looking at 50: Past, Present, and Future Demographic Structure of California", paper presented at the conference Employment and Health Policies for Californians Over 50.
- Johnson, Hans (2000) "Movin' Out: Domestic Migration in the 1990s" *California Counts: Population Trends and Profiles* v.1, n.4 (July/August).
- Kannisto, Vaino, Jens Lauritsen, A. Roger Thatcher, and James W. Vaupel (1994) "Reductions in mortality at advanced ages: Several decades of evidence from 27 countries," *Population and Development Review* 20(4): 793-810.
- Keilman, Nico. (1997) Ex-post errors in official population forecasts in industrial countries. *Journal of Official Statistics* (Statistics Sweden) 13(3): 245-277.
- Lee, Ronald D. and Lawrence R. Carter (1992) "Modeling and forecasting U.S. mortality," *Journal of the American Statistical Association* 87(419): 659-671.

Lee, Ronald D. and Timothy Miller (2000) "Immigration, social security, and broader fiscal impacts," paper presented at the Annual Meeting of the American Economic Association, Boston, January, and forthcoming in *American Economic Review* (May).

National Research Council, Panel on Economic and Demographic Consequences of Immigration (1997) *The New Americans*, James Smith and Barry Edmonston, eds., National Academy Press.

Olshansky, S. Jay, Bruce A. Carnes and C. Cassel , "In Search of Methuselah: Estimating the Upper Limits to Human Longevity," *Science*, 1990, 250, 634-640.

The 1999 Technical Panel on Assumptions and Methods 1999 *Report to the Social Security Advisory Board* (November).

Tuljapurkar, Shripad, Nan Li and Carl Boe (2000) "A universal pattern of mortality decline on the G-7 countries," *Nature* 405 (June): 789-792.

U.S. Bureau of the Census (1999a) The foreign born population of the United States: March 1997. *Current Population Reports*, PPL-115. Washington, D.C.: U.S. Government Printing Office.

U.S. Bureau of the Census (1999b) Profile of the foreign born population of the United States: August 1997. *Current Population Reports*, P23-195. Washington, D.C.: U.S. Government Printing Office.

Wilmoth, J.R. (1998) "The future of human longevity: a demographer's perspective," *Science* v.280, n.5362 (April):394.

Wilmoth, J.R., and S. Horiuchi (1999) "Rectangularization revisited: Variability of age at death within human populations," *Demography* (November) 36(4): 475-495.

**Appendix 1. Regional groupings of California counties used in this chapter**

Region	County	Region	County
Los Angeles Basin:	Ventura	SV, NC, MT: Sacramento Valley	Shasta
	Los Angeles		Tehama
	Orange		Butte
	San Bernardino		Yuba
	Riverside		Sutter
San Francisco Bay Area:	Imperial	North Coast	Colusa
	Napa		Glenn
	Sonoma		Lake
	Solano		Mendocino
	Marin		Humboldt
	Contra Costa		Del Norte
	San Francisco		Siskiyou
	Alameda		Modoc
	San Mateo		Lassen
Santa Clara	Plumas		
San Diego:	San Diego	Mountain	trinity
			Sierra
Sacramento:	Yolo Sacramento El Dorado Placer		Nevada
			Inyo
			Mariposa
			Mono
			Tuolumne
Coastal:	Santa Cruz San Benito Monterey San Luis Obispo Santa Barbara		Calaveras
			Amador
			Alpine
San Joaquin Valley:	Kern Kings Fresno Merced Stanislaus San Joaquin Tulare Madera		

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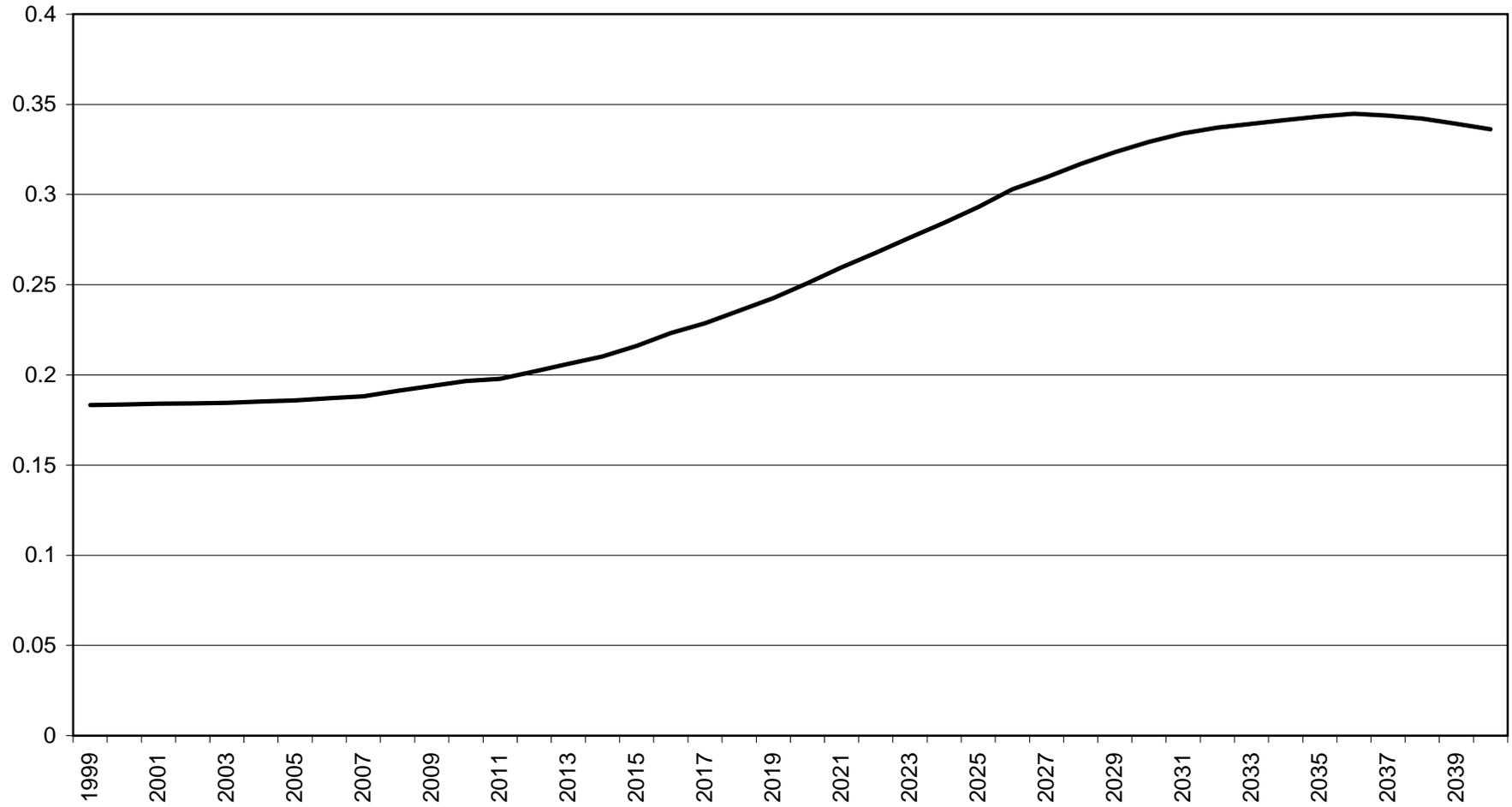
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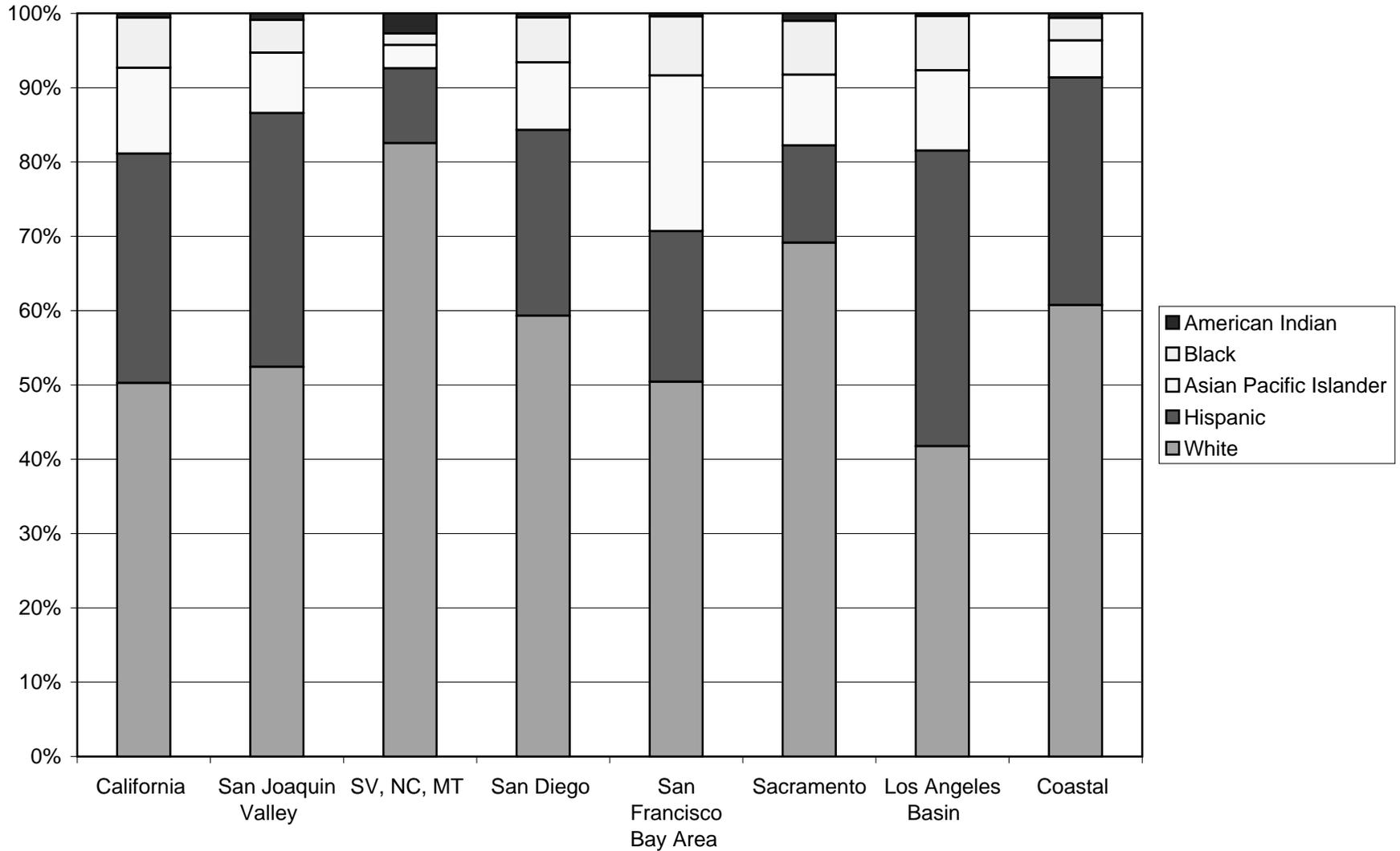
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**Figure 1. Old Age Dependency Ratios, California 1999 to 2040**

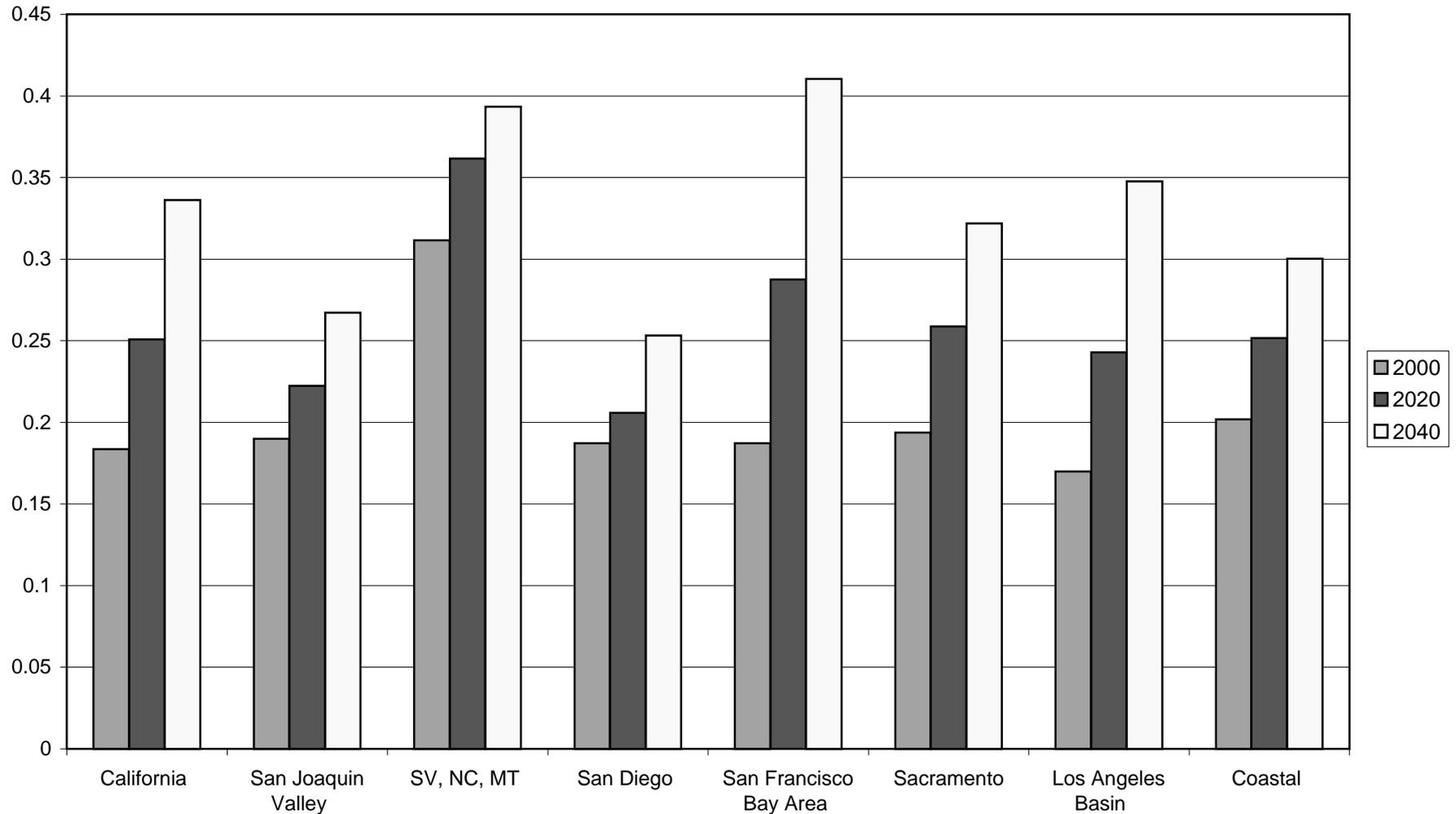


Note: The Old Age Dependency Ratio is defined here as the ratio of the population age 65 and over to the population age 20-64

**Figure 2. Total Population Ethnic Composition, California and by Regions, 2000**



**Figure 3. Old Age Dependency Ratios, California and by Region, 2000, 2020, 2040.**



Note: The Old Age Dependency Ratio is defined here as the ratio of the population age 65 and over to the population age 20 to 64.

Figure 4. Population Age Distribution by Immigrant Generation for California

