

## LABOR FORCE PROJECTIONS FOR CALIFORNIA, 1960-1975

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In June 1959, Governor Brown asked the members of the State Interdepartmental Research Coordinating Committee<sup>1</sup> to prepare projections of socio-economic trends in California through the year 1975 to be used in long-range planning for the needs of the State.

Under the plan developed by the Committee, each member was assigned a field covered by, or related to, his department. Among the fields assigned for the 1960-1975 projections were the following:

Population, by age and sex  
 Water requirements -- urban and agricultural  
 Agricultural production by commodity groups  
 Cash farm income by commodity groups  
 Births, deaths, marriages, and divorces  
 Labor force, by age and sex  
 Employment, by industry  
 Social welfare recipients, by type of aid  
 Patients in state-operated and state-subsidized mental hygiene programs  
 Prison and parole population  
 School and college enrollment  
 Personal income  
 Appropriations for construction of flood control and reclamation projects  
 Capital expenditures for water developments  
 State revenues  
 Highway expenditures  
 Motor vehicle registrations  
 Electric power load

The assumptions underlying all of the California projections, although independently arrived at, are very similar to those adopted by the Bureau of Labor Statistics for the national labor force projections.

Among the California assumptions were the following:

1. Present world tension will continue. There will be no major war or other cataclysmic event.
2. The total volume of defense expenditures will not change significantly, and the shift from missiles to aircraft will not be to the detriment of the California economy.
3. There will be no appreciable increase in governmental controls. Personal and business taxes will remain at present levels in relation to incomes.
4. Economic activity will continue at a relatively high level.

Joint responsibility for the labor force and employment projections was assumed by the State Departments of Industrial Relations and Employment.

Population

California's future labor force will be shaped by changes in the population. We can turn this statement around and say that the future population will reflect changes in the labor force and economic developments. We chose to break into this circle by accepting as a starting point the population projections for California prepared by the population research unit in the State Department of Finance under the direction of Carl Frisen. These are based upon estimated natural increase plus projections of future immigration.

California's total population is expected to increase from 15,830,000 in mid-1960 to 22,090,000 in 1970 and 25,600,000 in 1975 -- a 15-year gain of almost 10 million. This represents a rate of increase about  $2\frac{1}{2}$  times that for the United States as a whole.

In the United States' projections, net immigration is considered a minor factor. Not so in California. We expect more than half our population growth in the next 15 years to come from migration into the State.

Labor Force

The California labor force projections assume that the labor force participation rates by age and sex will tend to be the same as for the United States, except for the younger age groups where the California rates have always been significantly below those for the nation.

Accordingly, the labor force participation rates used by the United States Bureau of Labor Statistics for the U. S. projections<sup>2</sup> were applied to the California population projections by age and sex with the following modifications based on the 1950 relationship between labor force participation rates in California and in the United States: For males 14 to 17 years, the United States rates were cut approximately 12 percent. For females 14 to 17 years, the United States rates were decreased by 18 percent; and for the 18 to 19 year group, the rates were dropped 11 percent.

The national labor force projections and participation rates are in terms of total labor force, which includes the armed forces. In making the California projections, the national participation rates, with the modifications indicated above, were applied to California population projections that included the armed forces.

This yielded projections of the total labor force for California comparable with the labor force projections for the nation. The armed services component was then subtracted to arrive at civilian labor force projections for California. Thus we have two sets of labor force projections for our State.

### California - United States Comparisons

I would like to turn from this brief discussion of methodology to a review of some interesting comparisons between our projected trends for California and those for the United States prepared by the Bureau of Labor Statistics.

The total labor force in California is expected to increase from an average of 6,330,000 in 1960 to 9,002,000 in 1970 and to 10,609,000 in 1975. This means a rise of 68 percent in the next 15 years which contrasts with an expected increase of 29 percent in the nation. At present, California accounts for about 8.6 percent of the country's labor force. By 1975 we expect this ratio to increase to 11.2 percent.

#### Age

In terms of age, the largest increases in the California labor force will be among those under 25 years of age. This parallels the national trend. A marked difference, however, is anticipated for the age group 35-44 years. The California projections indicate an increase of 24 percent in this age group, which is in sharp contrast to the projected decrease in the nation.

The net result of the changes in the respective age distributions of the labor force in the next 15 years will be that California will have a younger work force than the United States as a whole. California will have a larger proportion of its total labor force in the ages 20 to 44 years and a smaller proportion in all other age groups.

It is interesting to note that although we projected the same or lower labor force participation rates for the individual age-sex groups than for the United States, the overall rates come out higher, in general, in California than in the nation, as follows:

TOTAL LABOR FORCE PARTICIPATION RATES  
(Percent)

	Total		Male		Female	
	U.S.	Calif.	U.S.	Calif.	U.S.	Calif.
1960	58.0	58.6	80.9	82.0	36.4	36.2
1965	58.1	58.7	79.1	80.8	37.6	37.6
1970	57.8	59.0	78.4	80.4	38.3	38.5
1975	57.9	59.3	78.4	80.5	38.5	39.0

This is so because of differences in the relative weights of the various age groups in the United States and California projected populations. California is expected to have a larger proportion of its population in the age groups with the highest labor force participation rates.

#### Women workers

As in the nation, the number of women workers will increase faster than men in the next 15 years, but the differential growth will not be as great in California as in the United States. Between 1960 and 1975, the female labor force in

California will increase 75 percent and the male labor force 64 percent. The corresponding increases for the United States will be 38 and 25 percent respectively.

#### Employment by industry

Projections of employment by industry are extremely difficult to make under any circumstances. But in a fast-growing state like California during a period of rapid technological changes, such a venture borders on crystal ball-gazing.

We have attempted some industry employment projections which, in part, represent what we believe we must achieve if the total labor force grows as we have projected it, and if unemployment is to be kept low. Basically, California will need to provide more than a quarter of a million new jobs a year for the next 15 years.

We assumed an unemployment rate of 4 percent of the labor force and distributed the other 96 percent as employment among the various industry divisions on the basis of past trends, relationship of the industry divisions to one another and to the total, relationship to population, and anticipated future trends. There is an extremely large measure of subjectivity in these estimates which we regard as a first approximation.

We foresee a different pattern of industry growth for California than for the United States as a whole.

As in the nation, the largest relative growth is anticipated in the finance, insurance, and real estate division.

One of the major differences between the California and United States projected trends concerns manufacturing. In California, we anticipate that employment in this industry will have the second largest relative increase of any industry division, well above the average rate for all industries combined. The national projections indicate a less-than-average rate of increase for manufacturing. Despite the rapid rise of manufacturing employment in California in the past 15 years, this industry division still accounts for a smaller proportion of total employment than in the nation as a whole and than in a great many other states. As the population of the West continues to increase relative to the rest of the country, we expect an acceleration of the shift of manufacturing operations to California to serve the expanded population.

We see a continued sharp increase in government employment to provide services for California's growing population. In terms of relative gain, this division ranks third in California and fifth in the United States.

Another interesting difference concerns construction. Employment in this industry presently is at a relatively high level in California. Percentage changes from 1960, therefore, are measured

from a high base. In terms of percent change to 1975, construction ranks fourth among the various industry divisions in California as against second for the nation.

Our employment projections for services may be low. We rank this division fifth. In the national projections, it is third.

Trade is in sixth place in California and fourth in the United States.

The transportation and public utilities and mining divisions are expected to have less-than-average increases in the next 15 years in both California and in the nation.

The percentage increases between 1960 and 1975 in projected total employment in California for each of the industry divisions are as follows:

	Percent
1. Finance, insurance, and real estate	86.5
2. Manufacturing	77.5
3. Government	75.7
4. Construction	75.3
5. Services	73.3
6. Trade	72.7
7. Transportation and utilities	46.8
8. Mineral extraction	14.3
Total <sup>a/</sup>	67.5

<sup>a/</sup> Includes agriculture.

It is not possible to make direct comparisons between California and the nation as to percentage change for the individual industry divisions because the United States' projections of employment by industry are in terms of nonagricultural wage and salary workers. The California estimates are in terms of total employment.

#### Employment by occupation

We do not, as yet, have any projections by occupations. We foresee very much the same trends for California as for the country as a whole -- largest increases in the occupations requiring the most education and training.

Because of the heavy concentration in California of activity in the space-age technologies, we may have an even greater rise relative to the United States in the number employed in professional and technical occupations.

#### Summary

The projections of the California labor force to 1975 seem very steep; and they are steep. If the projections are realized, it will mean an addition to the California work force of more than  $4\frac{1}{2}$  million -- equivalent to the combined present total population of 8 of our states.

The projected rates of increase for both population and labor force are quite in line with

past experience. Since 1860, California's population has been doubling about every 20 years. The projected population growth for 1960-1975 is at a somewhat lower rate than this.

Labor force growth has paralleled population growth. The projected rate of increase in the California work force is also less than the rate of growth of the past.<sup>3/</sup> Our labor force projections rest squarely on population projections which were made independently of estimated labor force growth. If the population projections prove wrong, the labor force estimates will be wrong.

The opposite approach, being taken by the Stanford Research Institute, is first to project the probable growth of the labor force by estimating future employment. The Institute is making studies of past trends and prospects for individual industries. On the basis of these industry employment projections, the total labor force will be estimated.

These labor force estimates will then be the basis for projecting the population of California. The results of the Stanford Research Institute study have not yet been released. It will be interesting to compare their projections with ours.

In our approach, we say, "If there will be this much population, there will be this much of a labor force." The Stanford Research Institute method says, "There probably will be this much employment and, consequently, the population will be of this size."

We have taken the much simpler approach. The great difficulty in attempting to project employment opportunities is how to allow for the unknowns -- the new industries which will inevitably spring up in the next 15 years.

I am certain that no matter how wide our projections may be of the mark, there will be startling differences between what will happen in California in the next 15 years and what will happen in the nation as a whole.

#### FOOTNOTES

- 1/ The State Interdepartmental Research Coordinating Committee was established in 1945 by an executive order of the Governor. The members, appointed by the Governor, are the heads of the research and statistics agencies of the various departments of State government. For an outline of the committee's functions and organization, see The American Statistician, June 1957, Vol. II, No. 3, p. 4; also California Statistical Abstract, 1958, State Printing Division, Sacramento, 1958, p. 1.
- 2/ Population and Labor Force Projections for the United States, 1960 to 1975, U. S. Department of Labor, Bureau of Labor Statistics, Bulletin No. 1242.
- 3/ For an excellent study of population and employment trends, see Employment Expansion and Population Growth, The California Experience, 1900-1950 by Margaret S. Gordon, University of California Press, Berkeley, 1954.

ESTIMATED LABOR FORCE OF CALIFORNIA  
1950-65, 1970, 197

(In thousands)

Year (annual average)	Total	Civilian
Estimated:		
1950	4,687	4,514
1951	5,099	4,722
1952	5,415	4,971
1953	5,561	5,141
1954	5,543	5,202
1955	5,738	5,402
1956	5,998	5,664
1957	6,172	5,851
1958	6,293	5,973
1959	6,420	6,100
Projected:		
1960	6,631	6,331
1961	6,860	6,560
1962	7,096	6,796
1963	7,341	7,041
1964	7,596	7,296
1965	7,859	7,559
1970	9,302	9,002
1975	10,909	10,609

Source: Division of Labor Statistics and Research,  
Department of Industrial Relations and  
Research and Statistics Section, Depart-  
ment of Employment.

ESTIMATED CIVILIAN LABOR FORCE OF CALIFORNIA,  
BY SEX, 1950-65, 1970, 1975

(In thousands)

Year (annual average)	Total	Male	Female
Estimated:			
1950	4,514	3,169	1,345
1951	4,722	3,287	1,435
1952	4,971	3,430	1,541
1953	5,141	3,552	1,589
1954	5,202	3,584	1,618
1955	5,402	3,706	1,696
1956	5,664	3,869	1,795
1957	5,851	3,973	1,878
1958	5,973	4,038	1,935
1959	6,100	4,105	1,995
Projected:			
1960	6,331	4,242	2,089
1961	6,560	4,382	2,178
1962	6,796	4,526	2,270
1963	7,041	4,675	2,366
1964	7,296	4,830	2,466
1965	7,559	4,989	2,570
1970	9,002	5,904	3,098
1975	10,609	6,953	3,656

Source: Division of Labor Statistics and Research,  
Department of Industrial Relations and  
Research and Statistics Section, Depart-  
ment of Employment.