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GOVERNOR'S CONFERENCE ON EMPLOYMENT

September 30 to October 3, 1965
Casa Munras, Monterey, California

sponsored in cooperation with the

IIR Institute of Industrial Relations
University of California, Berkeley

PREFACE

On September 30 - October 3, 1965, approximately 75 persons from labor, management, government and the academic community will gather at the Casa Munras Hotel in Monterey, California, for a Governor's Conference on Employment. For three days, they will engage in separate round-table discussions of issues raised in this volume of papers and the 1965 Economic Report of the Governor of California, which together provide the background reading materials for the sessions. On the fourth day, conference participants will review in plenary session a final report on the discussions. This report will be published.

The Conference will be under the general direction of Professor Lloyd Ulman, Director of the Institute of Industrial Relations, University of California, Berkeley, who assumed responsibility for obtaining the cooperation of the scholars who prepared the papers which follow. Although the papers themselves will not be read at the Conference, their authors will be present as resource people to participate in the discussions.

There will be three round-table groups, and each participant will be assigned to one of the groups for the entire three days of discussion. Preparation of the final report for the plenary session on the fourth day will be undertaken by the discussion leaders and rapporteurs selected for the three round-table groups.

The papers in this volume, of course, reflect the thought and experience of the individual authors. The University of California takes no official stand on the subjects of the sessions.

We are looking forward to a highly meaningful Conference, and strongly urge all the participants to read the materials prior to the opening of the Conference.

Edmund G. Brown
Governor
State of California

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STATE ECONOMIC POLICIES AND THEIR IMPACT ON AGGREGATE DEMAND AND ITS COMPOSITION

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State Economic Policies and Their Impact on Aggregate Demand And its Composition

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One of the salient features of the U.S. economy in the postwar years has been the growing size and significance of the economic activities of the state and local governments. In the 1947-49 period, the state and local governments were reported in the national income accounts as purchasing about twice as much in goods and services as did the Federal government, if we omit the national defense expenditures of the latter. Currently, however, the state and local governments are spending not twice as much, but about five and one-half times as much as the Federal government is spending for nondefense purposes. Even when all Federal government expenditures are considered, including those for defense, state and local government expenditures rose over the period from 80 per cent of the Federal expenditures to about 96 per cent.

The role of the Federal government's monetary and fiscal policy in determining the level of aggregate demand and employment in the nation is now widely appreciated. The Employment Act of 1946 explicitly stated that it is the "continuing policy and responsibility of the Federal Government...to coordinate and utilize all its plans, functions, and resources" to "maintain employment, production, and purchasing power." With the growth in the importance of state and local government expenditures, it is particularly appropriate that we ask how the economic

policies of state and local governments can influence the level and composition of aggregate demand. In California especially this question is timely, since recent and prospective changes in Federal expenditures on the defense and space programs suggest that these expenditures will not have, over the coming decade, the buoyant effect on California's growth which they had in the 1950's and the early 1960's.

I. The Objectives of the State's Economic Policies

The discussion of the impact of state economic policies on the level and composition of aggregate demand can benefit from some consideration of the objectives of those policies. The assigned subject of this paper might be interpreted as meaning that the objective, or at least one of the objectives, of state economic policies should be to maximize aggregate demand in the state. One's thinking on this question can be clarified a bit if we go back to the language of the "Policy for Full Employment" as enacted by the state legislature in 1963:

> The Legislature declares that it is the continuing policy and responsibility of the State to foster and promote full employment and increased productivity, income, and purchasing power.
>
> The Legislature further declares that in attaining these goals, the State shall:
>
> 1) Use all practical means within its power consistent with its needs and obligations and other essential considerations of state policy;
> 2) Seek the assistance and co-operation of industry, agriculture, labor, and federal government and local government;
> 3) Co-ordinate and utilize all of its policies, plans, functions and resources;
>
> for the purpose of creating and maintaining, within the framework of free, competitive enterprise, the general welfare and conditions under which there will be afforded useful employment opportunities, including self-employment, for all those qualified persons, willing and seeking work.

The emphasis here quite clearly is on full employment and rising income. But these two goals are not being sought unconditionally; the law leaves room for the introduction of some constraints. Full employment and rising income will be sought only if this is consistent with "other essential considerations of state policy" and with the general welfare. And by "full employment" in this statement we mean employment only for those qualified persons who are willing and seeking work. With a sufficiently narrow definition of the term "qualified," one might agree that even 6 or 8 per cent reported unemployment in the state could be tantamount to full employment.

It would be interesting to know what other objectives of state economic policy would be given what sort of priorities by a cross section of the citizens of California. No doubt many would be unhappy if we were not to have as an objective a rate of growth of the state (presumably in terms of population and total income) which is at least as great over the next decade as it has been over the last; perhaps some would prefer a slower rate of growth but one which is less dependent on Federal expenditures in the defense and space programs; others might wish to emphasize that the state should try to maintain an income per capita which is at least as high, relative to other states, as it is now. A significant proportion of Californians, too, would presumably cite as an objective the maintenance of certain amenities which have made the state attractive in the past.

A number of additional specific goals might be mentioned. Making our central cities more attractive is of great concern to many people. The need for improved transportation in our metropolitan areas, for more green space in the suburban fringe, for reduced air and water pollution,

for improved housing, for better education, for more and better public facilities and services, for fuller economic and social integration of the nonwhites into the main stream of society, for the alleviation of poverty, for better conservation of the state's natural beauties -- these are only the more obvious goals which might be considered in addition to full employment and increased incomes. In a sense, all of the specific objectives could be included within the meaning of "the general welfare" as it is used in California's "Policy for Full Employment."

It is important to recognize, as we consider the possible objectives of state economic policies, that some of the goals may well conflict with each other. More and better public facilities and services, including education, might mean higher tax rates, which could in turn discourage the growth of industry and of the employment it could bring. Plans for urban renewal, for altered zoning and for pollution control may discourage the growth of employment by restricting the location of firms. The resolution of such conflict among objectives lies at the heart of economic planning in California.

It is a compliment to legislative craftsmanship that all of the objectives mentioned above might be considered as included in one phrase or another of the "Policy for Full Employment." But as one begins to look at the state economic policies with a view for determining their effect on the level and composition of aggregate demand, it would be helpful if a more explicit definition of economic objectives of the state were in hand. At the same time we should grant that it would be wholly inappropriate for economic objectives to be spelled out in such detail in the law; the objectives might change over time, and the law should state only the broader goals if it is to be sufficiently flexible to fit

the times.

As California looks at its record of aggregate demand and the concomitant economic progress over the last several years, there is in a sense little cause for alarm; indeed, an observer from almost any other state would surely be impressed. Since 1960, personal income in California has risen by 30 per cent in current dollars, compared with 23 per cent for the nation as a whole; even in 1964 the state gained relative to the nation, despite the rumblings about cutbacks in defense and space program expenditures by the Federal government. A number of new records were set in the state. These were duly noted by Governor Brown in his Economic Message early this year. Indeed, his emphasis on these is consistent with the point mentioned above, namely, that we all seem to have as an economic goal for the state some idea of a minimum acceptable rate of growth.

Governor Brown was careful to stress, however, that these records are not enough. Even though "we created more new jobs than any other state -- more even than in 1963..., there is little comfort in such improvement. Our objective must be the creation of enough jobs and the lifting of enough skills to push unemployment down, to spread our abundance to hundreds of thousands of Californians still denied a share in it."[1]

Although the majority of Californians would no doubt agree that full employment, or at least some very high level of employment, should be the central objective of state economic policy, we must recognize

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1. Economic Report of the Governor, 1965, p. ii, iii.

the arguments of those who dissent from this view. It is becoming common to hear that we are putting far too much emphasis on full employment.

There are at least four schools of thought here. Two of these argue that our unemployment figures are conceptually bad. One group holds that the present 4½ per cent unemployment includes a lot of unemployable people who should not be counted. I find it difficult to accept this as a serious problem in the light of Professor Aaron Gordon's committee's report on this subject.[2] Also, this has always struck me as rather hollow since the main concern is not so much the absolute level as it is the level compared with the years when the economy was operating closer to capacity. In 1953 only 2.9% of the work force was unemployed; arguing that we should ignore the higher figures of recent years is to contend that somehow the number of unemployables being included in the work force has gone up. This is a very difficult point to support.

The other group which complains about the conceptual fuzziness of the unemployment percentage sees the figure as understated rather than overstated. This school of thought is on much more solid ground. They make the point that the unemployed older worker, for example, who tires of looking for a job and consequently goes into semi-retirement is really unemployed but he does not show up in the data as unemployed because he is not seeking work; he is simply not a member of the labor force because he is not "working or looking for work." The argument here is that the size of the labor force is in part a function of the availability of jobs. When jobs are plentiful marginal workers who otherwise might neither work

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2. President's Committee to Appraise Employment and Unemployment Statistics, Measuring Employment and Unemployment, Washington, 1962, p. 48.

nor look for work come into the labor force and take jobs; conversely when jobs are scarce many marginal workers stop looking for work. Empirical investigation has shown that the labor force participation rates (i.e., the percentage of population in each age group which is a member of the labor force) does in fact fluctuate with the level of employment itself.[3] So the so-called "discouraged worker effect" does work to keep the reported unemployment percentage lower when jobs are scarce than it would be if everyone willing to work were included in the labor force.

The third school of thought argues with the full employment objective from an entirely different viewpoint. This group is struck with a rate of technological change in our society and particularly with the prospects for automation. If work becomes obsolete, we should aim at providing each family with income and not necessarily with employment. The Ad Hoc Committee on the Triple Revolution defending this point of view would rely on the government to redistribute income to an even greater extent than the present. Louis O. Kelso and Mortimer J. Adler suggest a redistribution of income by redistributing equity capital. Through an FHA-like institution, individuals would be able to buy stock on credit, paying for the stock with the dividends on the stock. A requirement that corporations pay out 100% of their profits as dividends would presumably facilitate this process. In the end, the ownership of capital would be spread so that the income from one's capital could support more families.[4]

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3. See K. Strand & T. Dernbroig, "Cyclical Variation in Civilian Labor Force Participation," Review of Economics & Statistics, XLVI, November, 1964.

4. Louis O. Kelso and Mortimer J. Adler, The New Capitalists, New York: Random House, 1961.

The fourth argument about the full employment goal is concerned with full employment as a goal for the state of California itself. If the state were successful in establishing a set of policies which would assure that the rate of growth in aggregate demand in the state would continue to run well ahead of the national average, migration into California might work to keep the unemployment level in the state consistently above the national average. Average hourly earnings in manufacturing in California run about 1/6 above the national average; income per capita is high; the educational system is admirable; the social services generally are good in comparison with other states; and of course the climate is famous. If people migrate to California before they have arranged for employment here, one could expect the state to have more than its share of frictional unemployment. Thus for a variety of reasons we could expect success in raising the level of aggregate demand to lead to failure in reducing the unemployment rate to (or below) the national level. As long as labor mobility in the United States is high, this does seem to be a fairly convincing line of argument.

These alternative views of full employment objective are mentioned only to make the point that some observers would prefer to see public policy focus only on income rather than employment and income, in which case the policy recommendations of course could be quite different.

II. Aggregate Demand, Employment and Economic Development[5]

The topic of this paper, State Economic Policies and Their Impact

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5. This section has benefitted substantially from discussions with Professor Hyman Minsky, whose California Banking Study Monograph, "Commercial Banking and Rapid Economic Growth in California," soon to be published, was particularly helpful.

on Aggregate Demand and Its Composition, suggests that we can talk of the impact of our state government's economic policies on aggregate demand just as we talk of the impact of Federal government's economic policies on aggregate demand.

It is instructive to pursue this possible parallel between state and nation so that we can sharpen our perspective on the nature and role of state economic policies.

This approach is interesting in part because of the sheer size of the California economy, compared with many nations. Suppose we ignore the underdeveloped world and look only at the 23 member nations of the Organization for Economic Cooperation and Development, consisting mostly of the industrialized countries of the western world. If California were a member of the OECD instead of the United States, we would rank fourth among all 23 in national income and tenth in population. In the absence of a national income figure for California, I have applied to the state's total personal income the U.S. ratio of national income to personal income. (Table I) Only Germany, the United Kingdom and France would be larger than California. By this comparison I do not mean to suggest that we vote California "Most likely to secede" but rather that many nations which consider seriously the effect of their own economic policies on aggregate demand and employment are much smaller than California. Therefore, it would seem appropriate for us to ask just what California's economic policies should be if we have full employment and rising incomes as our primary objective.

If we were planning for economic development of California as an independent nation, most economists would first look to the state's monetary and fiscal policies to influence the development of aggregate

demand. Let us assume that as an independent nation California could determine its own monetary policy. To raise aggregate demand and to move to full employment, the state's equivalent of the Federal Reserve Board would ease credit, thus letting the money supply increase more rapidly. The lower interest rates and the greater supply of loanable funds would encourage private investment, thus providing more jobs. Fiscal policy would be shaped so that total state expenditures would exceed state revenues; the state would engage in deficit financing. Thus the effect of the state budget would be to add to the income stream in the state.

If California were independent, such a set of policies, however, could lead to a serious balance of payments problem and the threat of devaluation. If California's economy were expanding faster than the economies of other countries, California's imports presumably would rise faster than would her exports. Under these circumstances the rest of the world would probably be increasing its imports from California at the same rate as before the change in California's policies, whereas California would be increasing its imports at a faster rate. Thus, California's imports would be rising faster than her exports, so her trade balance would suffer. She might be saved by an increase in the inflow of capital, but this would be difficult to arrange if the interest rates have been eased in order to accelerate economic development and growth of employment.

California might avoid this kind of problem by persuading the rest of the world that everyone should follow expansionist fiscal and monetary policies. Then California's exports would rise along with her imports and there would be no balance of payments problem. It was just this recognition of the interdependence of growth that led to the OECD resolution

Table I

NATIONAL INCOME, POPULATION AND INCOME PER CAPITA, OECD MEMBER COUNTRIES AND CALIFORNIA

Country	Year	National Income (millions of dollars)	Rank	Population (thousands)	Rank	Income per Capita Amount (dollars)	Rank
Germany	1964	79.28	1	58.2	2	1,362	7
U. K.	1963	73.37	2	53.8	3	1,363	6
France	1963	60.85	3	49.0	5	1,241	10
California	1964	56.4	4	18.6	10	3,032	1
Japan	1963	48.79	5	95.89	1	508	17
Italy	1963	35.37	6	50.49	4	700	16
Canada	1964	32.68	7	19.3	8	1,693	4
Sweden	1963	15.47	8	7.60	15	2,035	2
Spain	1964	15.43	9	31.33	6	492	18
Belgium-Lux.	1963	11.46	10	9.62	12	1,191	4
Switzerland	1964	10.79	11	6.00	17	1,798	3
Turkey	1963	6.56	12	30.25	7	216	22
Austria	1964	6.49	13	7.19	16	202	14
Denmark	1963	6.32	14	4.68	18	1,350	8
Finland	1963	4.72	15	4.54	19	1,039	13
Yugoslavia	1963	5.57	16	19.06	9	292	20
Norway	1963	4.31	17	3.67	22	1,174	12
Greece	1963	3.65	18	8.48	14	430	19
Portugal	1963	2.56	19	9.04	13	283	21
Netherlands	1963	17.91	20	12.0	11	1,492	5
Ireland	1964	2.08	21	2.85	21	729	15
Iceland	1964	0.24	22	0.185	22	1,297	9
U. S.	1964	510.1		192.		2,656	

Source: International Monetary Fund, International Financial Statistics, vol. XVIII, no. 8, August 1965.

in 1962 in which it was agreed that the OECD countries would attempt to achieve a 50 per cent increase in the combined GNP's of the member countries between 1960 and 1970. The purpose of the "growth oath," as someone has called it, was to help assure those countries wishing to minimize unemployment and to achieve rapid economic growth that they could do so without being hindered by balance of payments difficulties.

Although this is a very simplified explanation of the basic method by which California, if it were an independent country, might try to raise aggregate demand and move toward full employment, it does give us a basis for considering whether California as a state rather than as a nation might apply some version of the same technique. Suppose that the Federal Reserve Bank of San Francisco were persuaded to drop the rediscount rate for the 12th district below that for other districts and that this led to a substantial increase in loans for new construction and for business generally. Since California presumably has a high propensity to import, i.e., since our purchases of goods and services from the rest of the country rise rapidly with increases in economic activity in the state, member bank reserves in California in the first instance would be drawn down as they would shift to other parts of the country.

The process here is fairly simple. Most of the commercial banks in California maintain accounts at the San Francisco Federal Reserve Bank; generally speaking, these serve as reserve accounts and as clearing accounts. Checks deposited with California banks and drawn on banks outside the 12th district are sent by the California banks to the San Francisco Reserve Bank for collection. The San Francisco Federal Reserve Bank increases the member banks' reserve accounts by the amount of such checks presented for collection.

But there is a simultaneous flow of checks which California firms and individuals have written on California banks and which have been made payable to firms and individuals outside the district; these too are cleared through the Federal Reserve Bank of San Francisco, reducing the California banks' reserve accounts by this amount. If business activity in California runs well ahead of the rest of the country, then the California member banks' deposits into their accounts at the Federal Reserve Bank in San Francisco will not keep up with the value of the checks presented, since the latter are increasing as Californians increase their purchases from outside the state.

The out-of-state beneficiaries of the increased sales of goods and services to California take their proceeds and buy not exclusively from California but primarily from elsewhere, so most of the effect of ease in credit in California is distributed over the rest of the country. Consequently the expansion of business activity by this device in California can reduce the member banks' reserves, which would cause them then to restrict lending. This would dampen California's economic expansion so that it does not outpace the rest of the country.

One can ask how California in fact has been able to outpace the rest of the country quite consistently over its history, if there is the potential problem just noted. The answer is twofold. First, California has grown faster than the country because of a strong export demand, i.e., a strong demand from the rest of the country (and from the rest of the world) for California's goods and services.

Over the last two decades or so, the state's position as an exporter of the goods and services associated with the space and defense programs of the Federal government has been especially strong. The flow of Federal

government funds into California has been running about $2 billion a year greater than the Federal government's tax collections from California. (See Table II.) The large exports of these and other goods and services served to increase the California member banks' reserve accounts as funds flowed into the state. Secondly, California has imported capital; in essence California firms have exported stock certificates and bonds, and the checks to pay for these have helped keep the local bank reserves up. The state's rapid growth has generated a demand for capital to be invested in housing as well. Savings and loan deposits have come in; mortages have been exported. State and local government bonds have also been exported. The strong export base in California has thus led to both the exports and the capital inflow which has helped to maintain bank reserves in California.

The California member banks' reserve accounts at the Federal Reserve Bank of San Francisco can be thought of as California's "foreign exchange reserves." These reserves rise when California's exports rise and when capital flows in; they fall when California imports rise or when capital flows out. An attempt to raise California's aggregate demand by "easy money" in California would mean increased imports (and perhaps an outflow of capital) and hence a fall in these "foreign exchange reserves." With reduced services, California banks would eventually be forced to restrict their lending.

Now suppose that California were to be faced with a marked reduction in her exports of goods and services to the rest of the country, e.g., a reduction in Federal government spending in the state. In order to keep bank reserves in the state expanding at a rate which would avoid a tightening of credit conditions, the state might consider increasing its "deficit financing" by issuing more bonds. Perhaps local governments

Table II

ESTIMATED FEDERAL EXPENDITURES AND TAX COLLECTIONS IN CALIFORNIA

(millions of dollars)

Fiscal year	Military spending	Income disbursed by Federal Government	Total internal revenue collections
1959	5,283	4,406	6,923
1960	4,839	4,832	7,998
1961	5,277	5,374	8,486
1962	5,993	5,682	9,091
1963	5,836	6,082	9,806

Source: U.S. Bureau of the Census, Statistical Abstract of the United States, 1960 through 1964; U.S. Office of Business Economics, Survey of Current Business, August issue, 1960 through 1964; U.S. Treasury Department, Combined Statement of Receipts, Expenditures and Balances of the U.S. Government.

could also be encouraged through moral suasion to step up their bond financing, insofar as their debt ceilings would permit. Thus an expansionary monetary and fiscal policy in California could combine ease of credit conditions with the sale of state and local government bonds and conceivably increase aggregate demand with the former while preventing the shrinkage of reserves by the sale of the state and local bonds.

Realistically, however, we must recognize that California's propensity to import is surely so high that much if not most of the increase in demand generated in California in the first instance would "spill over" and become demand for goods and services provided from outside the state. This would make it virtually impossible for deficit financing by California's state and local governments to have any significant effect on aggregate demand and employment in the state.

A simple (and technically incomplete) illustration will make the point here. Assume that for every dollar increase in California's gross product (i.e., the value of all goods and services produced in the state in a year) imports from other states increase by fifty cents. (We will ignore trade with other countries.) This is a "marginal propensity to import" of 0.5. When the gross product of the rest of the country goes up by one dollar, the resulting increase in their imports from California is probably fairly small; the rest of the country is less dependent on California than vice versa. Let us just guess that for the rest of the country the marginal propensity to import from California is 0.05. Now suppose that the state floats a bond issue for $100 million for some purpose. Skipping some steps for the sake of simplicity, $50 million of this is spent outside the state, and 0.05 times this $50 million, or $2.5 million then shows up as increased exports from California to the rest of

the country. Without tracing the whole process through in detail, one can see from these numbers alone how much of the $100 million "escapes" from California. For the nation as a whole, the marginal propensity to import is about 0.03; this is not a guess, but is clear from the data on the U.S. Gross National Product and U.S. imports. (Lack of data on the gross product for the state or on state imports from other states prohibits our establishing a comparably firm figure for California.) Thus when the U.S. government takes steps to increase domestic aggregate demand by $100 million, only about $3 million "escapes" to foreign countries, but when California takes such a step, a far higher percentage surely leaves the state economy, and very little returns.

Should California take the lead in urging other states to join in an OECD-like "growth oath"? In answering this, we must recognize first that the Federal Reserve System operates to prohibit any persistent differential in rediscount rates in the 12 Federal Reserve Districts. So monetary policy does not present any real opportunity for the individual region of the country; it is exclusively a province of the Federal government.

Most states would probably be unwilling to increase significantly the rate at which they are increasing their debt for the sake of a hope that this would be reflected in a greater rate of growth. For any given state, there is probably too much uncertainty about whether they would get some "fair share" of the resulting expansion in the nation's economic activity. The individual states, on the other hand, presumably would recognize that even if they grow more slowly than the national average they will from time to time need to borrow for certain purposes, and a good credit rating is essential when that time comes. Consequently we

can probably say that the concern for a good credit rating generally would take precedence over the concern for the rate of growth, particularly since a state would not be assured that its increased debt would result in commensurate growth for the economy of that state.

We should point out in passing that the individual state does not look on its debt policy as does the Federal government. State and local debt is undertaken for specific purposes, most of them associated with the projects which must be financed because of economic growth. Thus a state which is growing rapidly is likely to be expanding its debt rapidly to meet all the demands for schools, public buildings, water projects and the like. Thus an expanding state economy brings an expansionary state fiscal policy. A slowly-growing state economy, which could use an expansionary state fiscal policy, on the other hand, has less need for new public investments and it is likely to be much more careful in guarding its credit rating on the bond market.

In sum, the state of California can do relatively little through monetary and fiscal policy to increase aggregate demand in the state. Monetary policy at the state level is virtually foreclosed, since the Federal Reserve System operates to discourage regional differentials in rediscount rates. The state could increase the rate at which the state's debt is rising, but because of the high marginal propensity to import, much of the employment effect would be lost to other states. Since this would be an expensive way to "purchase" new jobs, and since the state and local governments might wish to save their bonding capacity for a rainy day, the state fiscal policy approach does not seem particularly attractive. Finally, we can ask whether it would be possible politically to use state and local budgets (both operating and capital budgets) for anything

but immediate needs. The local political who argues that the new school or the new sewer system should be looked on primarily as a means of providing construction jobs when we are in a slump rather than as a means of providing a new school or a new sewer system would presumably be rather unpopular. And when the local economy sags, concern about the ability to finance bond issues is of course reinforced. On balance, the prospects for changing the perversity of state and local financing does not seem bright.

III. The Optimum Level of the State's Bonded Indebtedness

I have been asked to give particular attention to the matter of the state debt and its role in the state's economic policies. The level of aggregate demand in California could no doubt be raised at least to some extent by rapid increases in the state's capital expenditures, with some significant share (if not all) of the increases being financed by new bond issues. If the argument of the last section is valid, however, this is probably a very expensive way to raise the level of aggregate demand because of the likelihood that the state's propensity to import is high.

During the depression of the 1930's, construction of public works by the Federal government played an important part in the attempt to raise the level of aggregate demand and employment. Transferring such a policy to the state level in the 1960's would be of limited effectiveness not only because of the high propensity to import but also because so much construction now involves relatively few jobs, and those highly skilled. Such projects would provide relatively few jobs for those persons most in need of work. The experience with the Federal government's Accelerated Public Works program, however, indicates that some types of public works, e.g., rehabilitation of parks, do involve a substantial number of jobs per

thousand dollars spent, but these typically are not the types of investment which lend themselves to financing through a state's capital budget.

Increasing the state's expenditures on capital projects for the sake of the immediate employment effects, therefore, does not appear promising. It might be argued, however, that an increase in capital projects in California would be justified on two grounds. First, such projects are effective in making the state an attractive one in which to live and do business. Our competitive advantage lies at least in part in our ability to attract skilled and well-educated people, and these are the groups most sensitive to the services of public investment projects such as schools, colleges, small craft harbors and other public facilities. Therefore, we should continue to maintain our good relative position in this regard. This would keep aggregate demand rising and thus increase employment opportunities over the long pull.

The second argument is that an imaginative program of public investments now can save public funds later on. By investing in some kinds of projects now we might "buy our way" out of later trouble. For example, public investment in the renovation of the central cities might reduce the cost of crime and delinquency in later years.

It is for these reasons, rather than because of the immediate employment effect, that the state might wish to consider not only continuation but expansion of the program of public investment projects. Such projects could be financed either by state borrowing or from current revenues or from some combination of the two.

Financing public investment projects through more bond issues is opposed by many for a variety of reasons. First, some people have a basic preference for avoiding debt in public as well as private finance simply

because it is a sign that, in some sense, one is "living beyond one's means." Second, the state debt is already large and the market may be approaching what is often referred to as a "point of saturation."

This second argument requires some elaboration, for the concept of a "point of saturation" is not a precise one. The gross debt of the state has increased from $243 million in 1950 to $2,978 million as of July 1, 1964. (See Table III.)

By the end of the calendar year 1964 the total bonds outstanding was up to $3.17 million. The major categories of these bonds are shown in Table IV. This twelve-fold increase is of course huge in absolute terms and in comparison with other public debt. Over the same period the Federal debt increased by not quite 25 per cent and the total of all state and local government debt in the U.S. by about 315 per cent. But at what point does the market for California bonds become "saturated"? One's first thought might be that as the supply of California state bonds on the market is increased, the interest rate which the state would have to pay would rise, relative to competing issues, rather steadily. In the judgment of the specialists with whom I have had the opportunity to discuss this matter, however, this is probably not the case. They argue that most institutional investors have their own rules of thumb which limit their holdings of the bonds from any one state to some fixed percentage of their total portfolio. If the supply of California bonds were to be increased, at some point these investors would bump into their ceiling and would simply drop out of the market. It is quite conceivable, then, that they would not be interested in more California bonds even if the interest rate were substantially above comparable issues from other states. Consequently beyond this point the market for further California issues could be very thin indeed, and the

Table III

STATE OF CALIFORNIA PRINCIPAL DEBT RATIOS AT FIVE-YEAR INTERVALS SINCE 1930 and IN 1964

Fiscal year ending June 30	State debt (Amounts in thousands)		Net debt		Service on net debt	
	Gross	Net	Per capita	Per $100 personal income	Per $100 personal income	Per $100 General Fund revenue
1930	$ 119,727	$ 74,795	$13.10	$1.47	$.10	$7.85
1935	204,422	135,442[2]	21.93	3.37	.17	6.28
1940	261,852	186,438[2]	26.83	3.19	.16	5.23
1945	113,888	62,370	6.67	.41	.05	2.28
1950	243,400	65,095[3]	6.12	.33	.02	.71
1955	767,334	222,980[3]	17.15	.74	.03	1.30
1960	1,928,705	585,415[3]	36.90	1.36	.06	1.71
1964	2,978,210[1]	1,026,585[3]	56.30	1.82	.12	2.91

1. As of July 1, 1964.
2. Includes short-term debt.
3. Includes 60 per cent of state school building aid bonds issued which are assumed to be serviced by the State.

Source: State Treasurer, The California Bonding Picture, 1965, p. 7.

Table IV

SUMMARY OF BONDED DEBT, STATE OF CALIFORNIA
AS OF DECEMBER 31, 1964

(Thousands of dollars)

GENERAL FUND		
State Construction Program Bonds	$ 458,200	
All Others	4,485	
		$ 462,685
SELF-LIQUIDATING		
Harbor Improvement -- India Basin	$ 11,892	
Harbor Development	32,125	
Veterans	1,324,520	
Water Resources Development	250,000	
		$1,618,537
PARTIALLY SELF-LIQUIDATING		
School Building Aid		$1,088,500
TOTAL BONDS OUTSTANDING		$3,169,722

Source: State Treasurer, The California Bonding Picture, 1965, p. 31.

interest rate might rise sharply.

One index of the rate at which the state might be approaching this range of saturation ("point" of saturation seems a bit misleading) is found in the interest rates which the state is now paying relative to the national average. The State Treasurer has reported that "In recent sales, our net interest cost has been above the national average. This is attributable not to any weakness in the state's financial structure but directly to an oversupply of California state bonds in the market."[6] Within recent weeks, the differential has been on the order of one-quarter of one per cent.

A third reason for resisting an increase in the state's indebtedness follows from the second. As the state's debt increases the cost of debt servicing becomes a greater charge against the state's revenues, leaving less money for other state programs. This problem is compounded if the new issues call for higher interest rates. In fiscal 1964, the cost of general debt service in the general fund budget was $27 million, or about 1.3 per cent of the $2,028 million of total general fund expenditures. (See Table V.) Service on all the state's net debt (self-liquidating issues included) is now up to $2.91 per $100 of general fund revenue, as Table III shows. This figure has been rising sharply since the end of World War II, but it is still far below the level of the prewar decade.

Any new bond issues of course mean a debt service commitment extending years into the future; the water bonds sold early this year have maturities extending out to the year 2015. Even though these bonds will be largely self-liquidating, the full faith and credit of the state is pledged

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6. The California Bonding Picture, 1965, p. 3.

to them. We must keep in mind that in issuing bonds now we are in effect making, or at least influencing, expenditure decisions for each of the state legislatures which will meet over the many years in which the debt service must be paid. If the effect of the increased debt in the end is to raise tax rates in the state, this can discourage further economic growth.

A fourth reason cited by those opposed to further increases in the state debt concerns the relationship between the debt of the state government and that of the local governments and various special jurisdictions in the state. Local government debt outstanding in California is more than twice the state debt and has been increasing at roughly the same rate as the state debt. (See Table VI.) The interest rate on the bond issues of the local governments and special districts is not wholly independent of the interest rate on the state's issues. Institutional investors to a certain degree look on all bond issues originating in California as part of the same bundle since they all have, in a very rough sense, the same tax base. The debt of each jurisdiction is of course assessed on its own merits by prospective buyers, as are such issues as the state water bonds which will be financed primarily from revenues generated by the project involved. Nevertheless at some point in the evaluation of any particular issue the total of all public debt within the state's boundaries is taken into account.

This partial interdependence of interest rates means that a decision by the state legislature to increase the state debt further might well raise the debt service costs for a host of local governments and special districts. Even private capital issues, it is said, might conceivably suffer a bit as well.

Table V

EXPENDITURES FROM THE GENERAL FUND AND FROM OTHER GOVERNMENTAL COST FUNDS, STATE OF CALIFORNIA, FISCAL 1964

(Thousands of dollars)

	General fund	Other governmental cost funds	Total
Legislative, judicial, & administrative	$ 20,667	$ 7,070	$ 27,737
Agriculture	11,782	15,550	27,332
Corrections	91,027	--	91,027
Education	1,179,592	38,333	1,217,925
Fiscal affairs	38,440	5,739	44,179
Health & welfare	537,805	--	537,805
Highway transportation	117	425,401	425,518
Regulation & licensing	11,718	18,777	30,495
Resources	71,994	80,512	152,506
General debt service	27,004	--	27,004
Payment of shared revenues to counties & cities	--	349,884	349,884
Not classified above	37,548	7,510	45,058
Total	$ 2,027,694	$ 948,776	$ 2,976,470

Source: State Treasurer, The California Bonding Picture, 1965, p. 25.

Table VI

DEBT OUTSTANDING, CALIFORNIA STATE AND LOCAL GOVERNMENTS, 1961 AND 1964

(Amounts in millions of dollars)

	1961	1964	Percentage increase
State government	$ 2,497.0	$ 3,263.2	31
Local government	5,365.5	6,945.8	29
Total	7,862.5	10,208.9[a]	30

[a]Components do not sum to total because of rounding error.

Source: U.S. Bureau of the Census, Government Finance in 1961, Table 16; and U.S. Bureau of the Census, Governmental Finances in 1963-64, Table 18.

The final reason of major consequence concerns the huge volume of state bonds which are authorized but unsold. As of December 31, 1964, these amounted to $2,787 million, which would raise the present debt by nearly 90 per cent.[7] As these bonds are actually issued over the coming years, the cost of debt service will obviously become a more important charge against state revenues.

A rebuttal to these arguments would start with the two general points mentioned earlier, namely that public investment projects are important in giving the state a competitive advantage in attracting people and firms, and that many types of public investment now might reduce the expenditures of both state and local governments in the future by preventing the development of troublesome conditions which are cheaper to avoid now than to correct later.

A third argument is based on the still comparatively favorable debt position of the state in terms of the usual indeces. The net debt is only $1.82 per $100 of personal income. The total of state and local debt on a per capita basis is $565 below that of six other states.[8] Considering the rapid rate of growth of the state, which requires that public facilities be

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7. This total includes $1,500 million in water bonds, $250 million in veterans bonds, $550 million in state construction bonds, $310 million for school building aid, $27.5 million in harbor development bonds and $150 million for state beach, park, recreational and historical facilities bonds. The California Bonding Picture, 1965, p. 6.

8. The six states and their per capita state and local debt as of 1963-64 are Delaware, $1,061.40; Washington, $893.77; New York, $867.92; Connecticut, $765.82; Hawaii, $562.63; and Maryland, $615.42. U.S. Bureau of the Census, Governmental Finances in 1963-64, Table 21.

expanded at a fast pace, the state and local government debt is by no means overly burdensome.

A fourth argument is that nearly two-thirds of the outstanding state bonded debt is self-liquidating or partially so and does not require tax support. The fact that the general debt service requires less than one and one-half per cent of the general fund expenditures seems conservative; a large percentage increase in this expenditure category could be accommodated by a small percentage reduction in the other programs.

A fifth argument is that shifting over to pay-as-you-go financing of the state's capital investment program would mean either a reduction in current programs, a reduction in the rate at which we are investing in new public facilities and projects, or an increase in tax rates. Depending on one's evaluation of these alternatives, all of these might be considerably less attractive than continuing with debt financing as in the recent past.

One possible view of the problem would start with an analysis of the costs and benefits of the individual programs in the state budget, including the capital expenditures. It is conceivable that such an analysis, although difficult to execute because of the extensive element of subjective judgment required and because of the different possible view of future developments in the state, would indicate that over time we should increase the percentage of the state's expenditures going to debt service and decrease the percentage in the other programs. For example, cost-benefit analysis might reveal that the effect of more capital expenditures on the level of aggregate demand and employment might work to reduce the need for some portion of the increases in the state and local welfare budgets.

In sum, the decision about how far we should move toward pay-as-you-go financing of capital expenditures could be sharpened considerably if we

had a clearer notion about the costs and benefits of the individual expenditure items in the state budget, including the capital investment projects. This is a large order indeed. President Johnson has recently called on all the branches of the Federal government to engage in this type of program analysis, which had its origin in the Department of Defense. It would seem to be in the interest of good public administration for the state government, if not the local governments as well, to consider moving in the same direction so that more light can be shed on this critical question of the optimum size of the state debt.

IV. A View of Aggregate Demand, Past and Future, in California -- Forecasts and the Design of State Economic Policies

We have argued that state economic policies cannot hope to have as great an effect on the level of aggregate demand in the state as the Federal government's economic policies can have on the level of aggregate demand in the country as a whole. This is not to say, however, that they will have no effect whatever. In order to move toward some conclusions about how state economic policies might affect aggregate demand in the state, it is necessary to consider what the primary factors determining aggregate demand in California appear to be and how they may change in the future. Perhaps we can then discuss more satisfactorily how these factors might be altered by state economic policies.

Before talking of California's future, I would like to clear the air of one temptation at the outset. One often hears references to certain of the problems California will face in, say, 1980 or the year 2000 if the population of the state continues to increase at the rate of the 1950's and early 1960's. Projections of this rate of growth can indeed give some rather startling figures. In 1950 there were 10,586,000 people in the

state; by 1960 this had climbed to 15,717,000, an increase of about 48½ per cent. Now there are an estimated 18.6 million people in California. If the rate of increase over the next 15 years matches that of the last 15 years, by 1980 there will be nearly 33 million Californians. Most of us would consider that to be just too many people.

Population forecasting, particularly for individual regions of the country, can be a dangerous game, especially if the target date is a distant one. In 1928 the respected Scripps Foundation predicted that the population of the United States would hit a peak of 145,000,000 in 1970 and then decline.[9] Even relatively short-range forecasting is treacherous. In 1955 Warren S. Thompson published the low, medium and high estimates of California's 1965 population as 14,379,000, 16,279,000 and 17,354,000.[10] Even the careful 1960 study of the California economy by the Stanford Research Institute apparently undershot the mark by a substantial margin, for it forecast a 1970 population of 19 million.[11]

Since even short-range population forecasting can be a slippery business indeed, it is important that any population forecast be viewed with a certain amount of skepticism. But beyond that, it is important to avoid the reasoning that <u>since</u> the projected population of California in such-and-such a year is going to be such-and-such a figure, the labor force in the state will be so big, which means that we must generate "x" jobs if

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9. W. S. Woytinsky and E. S. Woytinsky, <u>World Population and Production, Trends and Outlook</u> (New York, 1953), pp. 251-253.

10. Warren S. Thompson, <u>Growth and Changes in California's Population</u> (Los Angeles, 1955).

11. Stanford Research Institute, <u>The California Economy, 1947-1980</u>, by Robert K. Arnold and others, Menlo Park, California, 1960.

we are to avoid massive unemployment. Most people concerned with forecasting regional growth trends with any care are disposed to work the other way around, i.e., to estimate the probable employment level first, then say that those jobs can support a population of such-and-such a number.[12] But even this approach is very difficult and can lead to substantial forecasting errors, as the good work of Thompson and of the Stanford Research Institute Report indicate. Although the tie between migration to California and job opportunities in the state is not at present an easy one to establish with any precision, most economists would agree that in considering the future growth of a region the jobs-to-population causal relationship is a better gamble than population-to-jobs, but it is a gamble nevertheless.

Over the course of the state's development, most of the major surges in aggregate demand can be traced, either directly or indirectly, to the demand for California's exports. The role of the export commodity in shaping the industrial structure of the state in the early days of California history stands out dramatically in Table VII. The largest manufacturing industries (they are arrayed in Table VII by a value of product) other than gold and silver mining were clearly either supplying the mines or the miners, and with goods which presumably were more expensive to import from outside the state than to produce at home. Furthermore it is interesting that such a high proportion of manufacturing establishments, employment

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12. See for example S. Kuznets and D. S. Thomas, Population Redistribution and Economic Growth (Philadelphia: The American Philosophical Society, 1957-1964); Perloff, E. S. Dunn, Jr., Eric E. Lampard and Richard F. Muth, Regions Resources and Economic Growth (Baltimore: Johns Hopkins Press, 1960); Thompson, op. cit. and Stanford Research Institute, op. cit.

and production should be concentrated in so few industries -- the state's production was very highly specialized indeed.

(Fortunately for the growth of the state at the time, the labor/output ratio was far higher for gold production than for silver production. Had the ratio been as low for gold as it was for silver, only about 330 gold miners instead of nearly 43,000 would have been needed. Presumably the capital output ratio was also much greater in gold mining than in silver mining. If gold production had required as little labor and capital per dollar of output as did silver, manufacturing in California would have been off to a much slower start indeed.)

These data for a century ago are presented because they suggest with just a few numbers the role an export industry can play in providing demand for (1) the capital goods required for the export industry, (2) the consumer goods to support the labor force and (3) the consumer capital, i.e., in this case housing. (Table VII is limited to manufacturing and so does not reflect employment in the trades and services, which were also of course largely export-based.) In other periods over the last century, other export commodities have accelerated the expansion of aggregate demand and the supporting structure of both capital goods and consumer goods industries has also grown. Thus oil discoveries led to a jump in the value of oil production from $1.0 million in 1895 to $37.7 million in 1910. The war years saw the state grow at a relatively slow rate; defense industries were not the stimulus to the state's expansion in World War I that they were in World War II. Oil production was again a significant cause of growth in the 1920's as new discoveries were made in the Los Angeles area. The growth of California agriculture, particularly the production of specialty

Table VII

NUMBER OF ESTABLISHMENTS, NUMBER OF HANDS AND ANNUAL VALUE OF PRODUCTION IN LEADING MANUFACTURING INDUSTRIES IN CALIFORNIA, 1860

Type of manufacturing	Number of establishments	Number of hands	Annual value of production
Gold mining	7,042	42,612	$44,717,333
Flour and meal	91	378	4,620,952
Lumber, sawed	279	1,870	3,943,881
Sugar, refined	1	120	1,586,500
Machinery, steam engines, etc.	22	357	1,575,500
Liquors, malt	83	246	1,216,261
Silver mining	1	6	810,000
Wagons, carts, etc.	140	358	734,472
Blacksmithing	128	252	499,368
Subtotal	7,787	46,199	59,704,267
Total, all manufacturing	8,468	49,226	$68,253,228
Listed categories as percentage of total	92	94	87

Source: U. S. Census Office, Eighth Census, 1860, Manufactures of the United States in 1860 (Washington, 1865).

crops was also of great influence during the 1920's.[13]

In the late 1930's the aircraft industry became a significant source of growth and of course the role of the space and defense industries in the last 25 years is apparent to even the most casual observer.

It would be erroneous to suggest that the growth of aggregate demand in California has arisen only because of the direct impact of export demand for the state's goods. As the state's economy grew and became more complex, the secondary impact of the growth of the export industries became more significant. Thus at various times in-migration stimulated construction and the industries manufacturing building materials. Oil production led not only to exports, but to a cheap substitute for coal as a source of energy for California manufacturing. The growth of the markets of the West permitted in the years immediately following World War I a particularly fast rate of growth in rubber, textile and forest products, and in printing and publishing, in petroleum productions and the paper and paper products. Perhaps Walt Rostow would say that by the early 1920's, if not earlier, California had reached a "take-off" point in economic growth.[14] It was no longer so dependent on the growth of exports for absolute growth but export demand was clearly to help the state in later years to continue to grow faster than the national average.

If we grant that the periods of rapid growth in aggregate demand in California over the last century or more have been based largely on increases in export demand, we can well ask from what quarter the state can expect

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13. For a brief review of these movements see Margaret S. Gordon, Employment Expansion and Population Growth, the California Experience: 1900-1950, (Berkeley and Los Angeles: University of California Press, 1954) Chapter VI.

14. W. W. Rostow, The Stages of Economic Growth (Cambridge, England: Cambridge University Press, 1960).

to be favored next. It seems clear that, with the expected leveling off of the space and defense program expenditures of the Federal government, little growth can be anticipated from that particular market. The tone of recent comments on this question has been somewhat pessimistic, perhaps justifiably so.

In trying to decide just what the prospects for further growth of aggregate demand in California might be, several considerations might be put forward. Perhaps it is not too naive to ask, for example, whether a slower rate of growth would be such a bad thing for the state in the first place. Conservationists and others who are concerned about the rate of which the natural beauty of the state is being destroyed presumably would offer this thought, as might any number of harrassed school superintendents and other public officials. Many new arrivals to the state are delighted with their decision to migrate here but at the same time wish that no one else would follow suit. This argument would stress that we should focus state economic policies on what some have called "the quality of life" in California -- this to include, presumably, improving the lot of Californians who do not enjoy a reasonable standard of living. Perhaps the economic policies of the state should be directed more toward this latter kind of problem and less toward the implicit objectives of a rapid increase in the level of aggregate demand.

Even a small retardation in the rate of growth could be troublesome in those industries which depend not so much on the level of aggregate demand in the state but rather on the rate on which that demand is increasing. The housing industry and the capital goods producers and all those dependent on these industries offer perhaps the most obvious case in point. Certain service industries such as real estate, architectural services and

the like would also be affected. A decline in the rate of growth can therefore be self-reinforcing to some extent.

Referring again to the parallel between California as a state and as an independent country, one can ask whether with a retardation in the rate of growth we might have some trouble with flight capital -- "hot money." California has been able to grow in the past because of an inflow of capital, attracted by the higher rates of interest in the state. If we were to have a significant decline in economic activity, the demand for capital would presumably subside a bit. If interest rates fall, it is at least conceivable that out-of-state funds now invested in California savings and loan banks, for example, could be withdrawn. If this were extensive, California bank reserves could be drawn down sufficiently to cause some tightening of credit and the commensurate depressing affect on growth. At the same time, of course, this would work to stiffen interest rates and so stop the outflow of capital. This seems a difficult point to assess, but it may warrant some consideration.

The California economy may be vulnerable to a retardation rate of growth on another score. If the prospects for expansion here dim a bit relative to other parts of the country, what types of workers are most likely to leave the state? In Western Europe we are told that the Italians, Spaniards, Greeks, and others who are now working in Northern Europe would return home virtually within hours after they are laid off at the factory or mine; they are only temporarily members of the work force and many if not most have not brought their families with them. In California, by contrast, the members of the work force most likely to leave the state are the more highly trained and skilled, those high income workers who have the savings to finance a move and who have the best alternatives (and knowledge

of those alternatives) elsewhere. The possibility that the state could be left with those unemployed who are most difficult to put back to work could conceivably raise a serious problem.

As an offset to such somber thoughts, we can ask whether we should expect the rate of growth in California to slacken so much over the next few years that the state would face serious difficulties. It may be that we cannot now see on the horizon any new way of export demand which will provide a stimulus similar to that of the defense and space programs over the last decade or two. But no doubt in the past we would have been unable to anticipate most of those developments which have contributed so mightily to the state's economic development. It would seem unduly pessimistic to assume that California cannot continue to do well in selling its goods and services to others. On the other hand, it would be very foolish indeed to gamble that from somewhere out of the blue will come a new wave of export demand which will cause the state to maintain the recent deferential in the rate of growth as compared with the national average.

To cast the discussion into some of the terminology of economic development, we are saying that it is not clear what new comparative advantage California is likely to develop over the coming years. A "new" comparative advantage might come to the surface because of a new kind of demand in the national or the world markets; or it might arise because of new resources in California, natural or otherwise, which find a market. In the past tourism could be an example of the former, while gold and oil have provided examples of the latter. The defense and space development contained elements of both: a new demand coupled with the development of a new resource, i.e., the human and environmental resources which the state could collect and provide.

The idea of comparative advantage may be quite satisfactory as an explanation of history, but it is of little predictive value in any specific sense. In a general sense, however, it may be useful. If the state is such an open economy, i.e., if increases in aggregate demand bring large increases in imports (which we can only guess to be the case) then the state's fiscal policies can be only a very expensive means of increasing aggregate demand; and monetary policy is largely foreclosed to it. Besides, the mobility of the labor force in the United States may mean that California cannot hope to reduce its unemployment rate below the national average. Perhaps, therefore, state economic policies should be directed primarily toward making the most of the development of those kinds of economic activity in which the state has a comparative advantage.

As a broad policy recommendation, this simple proposition seems unquestionable. As it stands, however, it is not operational -- one cannot see readily what decisions should follow from such a statement. It is not easy to make it operational, but perhaps the following observations can be of some use.

One must begin with some vision of the future demand of the entire country -- and indeed of the world -- for goods and services; the next step would be to ask which of these goods and services California would be in a particularly good position to provide. The state's economic policies could then be directed toward maximizing the state's competitive position in the production of these goods and services. In this process it would seem wise not to gamble on any great new discovery of natural resources comparable with the gold or oil discoveries, although the conceivable development of the ocean resources is an exciting possibility; and tourism is a promising and rapidly growing means of exploiting other natural resources. Given

the level of technical and managerial inports required in the production of so many of the goods and services for which demand is growing more rapidly, the comparative advantage of greatest importance in the future may rest with the state or nation with the best trained and best educated human resources.

This line of thought has been reflected in part in the four well publicized $100,000 contracts which the state has let to various firms in the aerospace industry. These have had as one objective the development of the capability to deal more effectively with the problems of sanitation and waste management, transportation, the management of criminals and delinquents, and the collection, storage and retrieval of social and economic data. In the context of the present discussion, this effort might be interpreted as an attempt to develop in California an outstanding ability to deal with these problems, in large part because they are important problems in California but also because we might develop a new export industry, namely expertize in solving these particular socio-economic problems.

At best, however, California's share of the market (U.S. and worldwide) for services of this sort is not likely to provide any dramatic new source of "foreign exchange earnings" and of economic growth; these services, however, might well provide a base for less dramatic increases in aggregate demand and employment. Although the leveling of defense and space expenditures in the Federal budget may permit substantial increases in expenditures on the Great Society programs, the new funds will surely not be as concentrated in California as are the space and defense program expenditures. While 20 per cent and more of the space and defense prime contracts have been coming to California, the Great Society funds (if I may use such a crude shorthand phrase) will be spread more evenly among the states. We

have a strong comparative advantage in the space and defense work; we do not have such a comparative advantage in the production of poverty, for example, and we should be happy to let Mississippi have the honors on that front. We might hope to attract Federal funds to do research on poverty, but these research funds in the Great Society programs are small indeed compared with the space and defense R & D budgets. And even though California may have a comparative advantage in research on poverty, on medical care, on urban problems and the like, it is difficult to argue that we can outbid other states as consistently and successfully as we have in defense and space R & D.

Given the present and expected changes in the mix in the Federal budget, it would seem reasonable to expect that the Federal government simply will not be as good a buyer of California's goods and services in the future as in the past, at least in terms of what we might call our share of the Federal government market. This is not to say that we should expect any significant absolute decline in Federal government expenditures in California. It does mean, however, that for the growth if not the maintenance of aggregate demand in the state we simply must look elsewhere.

To form some ideas about the probable growth of the components of aggregate demand in the United States over the next decade or so and about the significance of this growth for California, we can look at what is perhaps the most recent careful and detailed set of estimates now available. The Outdoor Recreation Resources Review Commission, assisted by the National Planning Association and the Department of Labor, prepared in 1962 estimates of the National Income Accounts and most of their components, along with

estimates of the regional distribution of employment.[15] Without delving into these findings in unnecessary detail, one can draw certain conclusions about the prospects for aggregate demand in California.

The ORRRC study does anticipate that the Federal government's expenditures on national security programs will decline from 9.4 per cent of the Gross National Product in 1959 to 6.5 per cent in 1976. Total Federal expenditures on goods and services as a percentage of the GNP are expected to drop from 11.1 per cent to 8.8 per cent over the same period. The percentage of the GNP represented by the state and local governments' purchases of goods and services, however, is projected as increasing from 9.1 per cent to 12.2 per cent. Since such a high proportion of state and local government expenditures goes for services performed within the jurisdiction involved, this relative shift of government demand away from the Federal government toward the state and local governments probably means a more even geographical distribution of total government demand. Thus California may suffer -- again in relative rather than absolute terms -- not only from the shifts in the mix of the Federal government programs but also from the shift in the mix of total government spending away from the Federal government and toward the state and local governments. The ORRRC expects the total of government spending on goods and services to increase only from 20.2 per cent of the GNP to 21.0 per cent between 1959 and 1976.

The only other aspect of the changing structure of demand which I would mention here concerns the widely noted shift in consumer demand

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15. Outdoor Recreation Resources Review Commission (ORRRC), Report #23, "Projections to the Years 1976 and 2000: Economic Growth, Population, Labor Force and Leisure, and Transportation" (Washington, D. C., 1962).

toward services. In 1947 we spent 31.1 per cent of our total personal consumption expenditures on services, but by 1963 this was up to 41.4 per cent. Since so many consumer services are performed where the consumer is, any continuation of this shift toward services would probably cause future economic growth to be distributed among the states more nearly in proportion to total personal income. This factor might dampen California's relative rate of growth. Consequently the growth in service expenditures is of real interest here.

Although the rapid postwar increase in expenditures on services is commonly recognized, rarely is it pointed out that this percentage has merely climbed back to about its pre-depression (1929) level, when 40.6 per cent of personal consumption expenditures went for services. In 1947 the percentage was unusually low because people were restocking on goods, both durable and nondurable. Under this pressure the percentage devoted to services was low, quite understandably. So the present 41.4 per cent is not unusually high, but rather the 31.1 per cent of 1947 was unusually low. The ORRRC forecast puts the services percentage in 1976 at about the same level as it was in 1929.

Since personal consumption expenditures account for roughly two-thirds of the GNP, it is worthwhile to take a closer look at the prospects for consumption expenditures and especially the expenditures for services, since this can no doubt affect the level of aggregate demand in California significantly. Table VIII shows the percentage distribution of personal consumption expenditures for 1929, 1939, 1947 and 1963. The marked drop in the percentage going to nondurables relative to durables is interesting. And several of the shifts in the detailed categories are noteworthy. (For example the huge increase in the percentage going for foreign travel between

Table VIII

Percentage Distribution of Personal Consumption Expenditures
1929, 1939, 1947 and 1963

	1929	1939	1947	1963
Durable Goods	11.67	9.87	12.45	13.89
Automobiles and parts	4.10	3.20	3.79	6.05
New and net used cars	3.28	2.48	2.77	5.16
Tires, tubes, accessories and parts	.82	.72	1.01	.89
Furniture and household equipment	6.03	5.22	6.63	5.71
Furniture	1.52	1.40	1.54	1.44
Kitchen and other household appliances	.97	1.15	1.92	1.36
China, glassware, etc.	.80	.70	.81	.66
Other durable housefurnishings	1.45	1.34	1.48	1.11
Radio and TV receivers, etc.	1.28	.62	.86	1.15
Other durable goods	1.54	1.45	2.04	2.13
Jewelry and watches	.71	.53	.88	.60
Opthalmic products and orthopedic appliances	.17	.25	.24	.38
Books and maps	.39	.33	.32	.47
Wheel goods, durable toys, etc.	.28	.34	.59	.68
Nondurable goods	47.72	51.99	56.46	44.68
Clothing and shoes	11.87	10.56	11.36	8.18
Shoes and other footwear	2.12	1.81	1.79	1.25
Clothing and accessories except footwear	(9.73)	(8.72)	(9.44)	(6.92)
Women's and children's	5.90	5.34	6.02	4.39
Men's and boys'	3.83	3.38	3.41	2.52
Standard clothing to military	.02	.02	.14	.02
Food and beverages	24.74	28.36	32.89	23.23
Food purchased for off-premises consumption	18.72	20.96	23.38	17.56
Purchased meals and beverages	3.69	5.38	7.22	5.06
Food furnished government and commercial employees	.33	.38	.62	.36
Food products and consumed on farms	2.01	1.65	1.67	.25

Nondurable Goods (continued)	1929	1939	1947	1963
Gasoline and oil	2.30	3.23	2.19	3.42
Semidurable housefurnisnings	.91	1.01	1.29	.95
Tobacco products	2.15	2.61	2.34	2.16
Other nondurable goods	5.76	6.22	6.38	6.73
Toilet articles and preparations	.75	.72	.75	.94
Cleaning and miscellaneous household supplies	.61	.75	.92	1.02
Stationery and writing supplies	.18	.22	.27	.34
Fuel and ice	2.04	2.07	1.78	1.04
Drug preparations and sundries	.77	.91	.79	1.16
Magazines, newspapers, etc.	.68	.82	.75	.74
Nondurable toys and sport supplies	.43	.42	.55	.77
Flowers, seeds and potted plants	.28	.28	.29	.31
Expenditures abroad by U. S. government personnel	.03	.03	.27	.40
Services	40.61	38.14	31.10	41.43
Household operation	5.11	5.60	4.46	6.05
Electricity	.78	1.26	.85	1.51
Gas	.69	.80	.52	.99
Water	.35	.51	.28	.39
Telephone, telegraph, etc.	.72	.85	.84	1.44
Domestic service	2.17	1.67	1.42	1.02
Other	.40	.51	.55	.70
Housing	14.50	13.34	9.41	13.05
Owner-occupied nonfarm dwellings--space-rental value	7.43	6.18	5.12	8.42
Tenant-occupied nonfarm dwellings--space rent	5.70	5.91	3.09	3.64
Rental value of farm houses	1.05	.92	.87	.56
Other	.32	.33	.32	.42
Personal services	2.27	2.12	2.24	1.90
Shoe cleaning and repair	.21	.17	.14	.08
Cleaning, dyeing, storage, etc.	.60	.59	.82)	.88
Laundering in establishments	.60	.46	.48)	
Other	.19	.14	.20	.16
Barber shops, beauty parlors	.66	.77	.61	.79

Services (continued)	1929	1939	1947	1963
Recreation	2.15	2.29	2.29	1.94
Radio and TV repair	.03	.04	.08	.27
Admission to spectator amusements	(1.16)	(1.21)	(1.21)	(.54)
Motion pictures	.91	.98	.96	.34
Legitimate theatres	.16	.09	.11	.12
Spectator sports	.08	.15	.13	.08
Clubs and fraternal organizations	.38	.29	.24	.22
Commercial participant amusements	.26	.27	.25	.33
Pari-mutuel net receipts	.01	.06	.15	.16
Other	.30	.41	.35	.42
Transportation	3.25	2.99	3.32	3.12
User-operated transportation	(1.15)	(1.16)	(1.47)	(2.12)
Auto repair, etc.	.98	.88	1.19	1.49
Bridge, tunnel, ferry tolls	.05	.07	.04	.09
Auto insurance--net premiums	.12	.21	.23	.54
Purchased local transportation	(1.41)	(1.30)	(1.21)	(.53)
Street and electric railway and bus	1.04	1.01	.80	.33
Taxicab	.28	.23	.37	.17
Railway (commutation)	.10	.06	.04	.03
Purchased intercity transportation	(.68)	(.53)	(.65)	(.46)
Railway (excluding commutation)	.52	.32	.36	.07
Intercity bus	.07	.15	.19	.09
Airline	a	.02	.07	.29
Other	.08	.05	.02	.01
Other services	13.34	11.80	9.38	15.37
Medical care and death expenses	(3.56)	(3.79)	(3.61)	(5.24)
Physicians	1.21	1.28	1.22	1.57
Dentists	.61	.57	.47	.64
Other professional services	.32	.25	.24	.29
Private hospitals and sanitariums	.51	.73	.84	1.76
Medical care and hospital insurance	.14	.23	.31	.50
Funeral and burial expenses	.77	.74	.52	.48
Personal business	(6.44)	(5.25)	(3.45)	(6.65)
Brokerage charges	2.16	.27	.15	.34
Bank service charges	.10	.20	.16	.27
Services furnished w/o pay	1.62	1.21	.93	1.66
Expense of handling life insurance	1.11	1.50	.94	1.42
Legal services	.51	.60	.40	.59
Interest on personal debt	.74	1.05	.55	2.07
Other	.21	.42	.33	.30
Private education and research	(.84)	(.93)	(.85)	(1.51)
Higher education	.28	.40	.39	.72
Elementary and secondary	.21	.29	.25	.53
Other	.36	.25	.21	.26

Table VIII (Continued)

Services (continued)	1929	1939	1947	1963
Other services (continued)				
Religious and welfare activities	1.51	1.39	1.23	1.45
Foreign travel and remittances	(.99)	(.44)	(.23)	(.53)
Foreign travel by U. S. residents	.80	.49	.36	.76
Personal cash remittances to foreign countries--net	.36	.16	.10	.04
Less: expenditures in U. S. by foreigners	.18	.21	.23	.28

[a]Less than 0.005

Source: U. S. Office of Business Economics, Survey of Current Business, for years shown.

1947 and 1963 is no surprise, but it is indeed curious that the 1963 percentage was still below 1929, when presumably a smaller percentage of Americans were going abroad, but apparently for longer stays and in a grander style.)

Table XI shows the expenditure data in a more useful way, for our purposes. The ratio shown is merely that of the total 1963 dollar expenditures for the given category to the 1929 dollar expenditures for that category without any correction for price changes because we are interested only in the ranking of the individual categories. The rank of each category based on the increase from 1947 to 1963 is also shown. The lack of correspondence between the two rankings is apparent. Given the unusual nature of demand in 1947, the changes between 1929 and 1963 can probably be more useful in exploring possible long-run developments lying ahead.

One way of examining the prospects for the demand for services relative to goods is simply to look at the 20 categories at the top of the array in Table IX with the 20 at the bottom. Of the top 20, four are associated with the changes in our transportation technology, three reflect the increased demand for medical care, and three the increased demand for education. (I am including among these three educational categories the expenditures on stationery and writing supplies, on the assumption that these expenditures reflect partly the substantial increase in the enrollment of school children.) Three more of the categories are part of the increased demand for recreation material. Two are associated with the ownership of durable goods, for example radio and TV repair.

Of the 20 items at the bottom of the array, 16 are services. There are only 14 services among the 20 at the top of the list. Again, several of these bottom 20 are associated with the change in the transportation

Table IX

Ratio of Personal Consumption Expenditures 1963 to 1929, by Detailed Category, Arranged in Descending Order of 1963-29 Ratio, and Rank of Each Category's 1963-1947 Ratio

	Ratio of 1963 to 1929 Expenditures	Rank 1963-1929	Rank 1963-1947
Airline transportation	363.00	1	1
Pari-mutuel--net receipts	77.00	2	46
Expenditures abroad by U.S. Government personnel	72.14	3	22
Radio and TV repair	38.77	4	3
Auto insurance premiums less claims paid	21.60	5	4
Medical care and hospital insurance	17.27	6	18
Privately controlled hospitals and sanitariums	16.38	7	8
Bank service charges, trust services, and safe-deposit box rental	13.30	8	16
Interest on personal debt	13.27	9	2
Higher education (private)	12.35	10	12
Elementary and secondary schools (private)	12.23	11	9
Wheel goods, durable toys, sport equipment, boats, and pleasure aircraft.	11.62	12	43
Ophthalmic products and orthopedic appliances	10.98	13	19
Telephone, telegraph, cable, and wireless	9.47	14	15
Electricity	9.21	15	14
Stationery and writing supplies	9.01	16	33
Nondurable toys and sport supplies	8.62	17	26
Miscellaneous household operation services	8.31	18	35
Bridge, tunnel, ferry, and road tolls	8.22	19	6-7
Cleaning and polishing preparations, and miscellaneous household supplies and paper products	7.89	20	44
New cars and net purchases of used cars	7.48	21	11
Automobile repair, greasing, washing, parking, storage, and rental	7.21	22	37-38
Drug preparations and sundries	7.18	23	24
Gasoline and oil	7.08	24	20
Other personal business services	6.87	25	53
Gas (household operation)	6.82	26	10
Intercity bus transportation	6.67	27	74
Kitchen and other household appliances	6.62	28	64
Other recreation	6.51	29-30	40
Purchased meals and beverages	6.51	29-30	65-66

	Ratio of 1963 to 1929 Expenditures	Rank 1963-1929	Rank 1963-1947
Other housing	6.32	31	31-32
Physicians	6.16	32	34
Expense of handling life insurance	6.08	33	21
Commercial participant amusements	5.99	34	30
Toilet articles and preparations	5.96	35	37-38
Books and maps	5.65	36	25
Barbershops, beauty parlors, and baths	5.64	37	31-32
Legal services	5.52	38	23
Owner-occupied nonfarm dwellings--space-rental value	5.38	39	17
Standard clothing issued to military personnel	5.25	40	82
Flowers, seeds, and potted plants	5.24	41	45
Water	5.23	42	27
Food furnished government (including military) and commercial employees	5.22	43	72
Magazines, newspapers, and sheet music	5.16	44	48
Tires, tubes, accessories, and parts	5.15	45	54
Semidurable house furnishings	4.99	46	60
Dentists	4.98	47	28
Services furnished without payment by financial intermediaries except insurance companies	4.88	48	13
Tobacco products	4.79	49	50-51
Spectator sports	4.56	50	70
Religious and welfare activities	4.54	51	41-42
Foreign travel by U. S. residents	4.51	52	6-7
Furniture, including mattresses and bedsprings	4.49	53	49
Food purchased for off-premise consumption	4.46	54	58-59
Other professional services (medical and death)	4.32	55	39
Radio and television receivers, records, and musical instruments	4.26	56	29
Jewelry and watches	4.04	57	67-68
China, glassware, tableware, and utensils	3.93	58	56
Other clothing, accessories, and jewelry	3.88	59	57
Other durable house furnishings	3.63	60	58-59
Women's and children's clothing and accessories except footwear	3.53	61	62
Cleaning, dyeing and laundering, pressing alteration, storage, and repair of garments including furs	3.48	62	67-68
Other private education and research	3.45	63	36
Legitimate theaters and opera, and entertainments of nonprofit institutions	3.41	64	47

Table IX (Continued)

	Ratio of 1963 to 1929 Expenditures	Rank 1963-1929	Rank 1963-1947
Men's and boys' clothing and accessories except footwear	3.13	65	61
Tenant-occupied nonfarm dwellings space rent	3.03	66	41-42
Funeral and burial expenses	2.95	67	52
Taxicab transportation	2.85	68	75
Shoes and other footwear	2.80	69	65-66
Clubs and fraternal organizations except insurance	2.77	70	50-51
Rental value of farmhouses	2.55	71	69
Other fuel and ice	2.42	72	71
Domestic service	2.24	73	63
Shoe cleaning and repair	1.77	74-75	73
Motion picture theaters	1.77	74-75	78
Railway (commutation) transportation	1.66	76	55
Street and electric railway and local bus transportation	1.51	77	77
Brokerage charges and interest, and investment	.75	78	5
Railway (excluding commutation) and sleeping and parlor car	.68	79	80
Food produced and consumed on farms	.60	80	81
Personal cash remittances to foreign countries less personal cash remittances to the U.S. by foreigners	.57	81	76
Other transportation (intercity)	.34	82	79

Source: Computed from U. S. Office of Business Economics, Survey of Current Business, selected issues.

complex. Notice that these bottom 20 categories include expenses for taxis, railway commutation, bus, streetcars, local transportation, intercity railway and other intercity transportation. Three categories are associated with the change in the public taste for entertainment, namely expenditures for legitimate theater, opera, motion pictures and for clubs and fraternal organizations. Three more relate to the slow growth in demand for men's and boys' clothing and for shoes. Two others are accounted for by the declining number and changing nature of the farms in the country, and the remaining categories have their own individual explanations.

An economist is inclined to think of the question of the long-term growth in demand for services in terms of the income elasticity of demand. But if we reflect on the changing mix of the demands for goods and services, it seems clear that much more is involved. Some of the changes in mix are attributable to a change in the way of life, e.g., the shift away from agriculture. Of more importance is the change in supply of goods and services. The pure income elasticity of the demand is therefore just one of several factors determining the changing mix of consumer expenditures.

Why should the demand for services rise as incomes increase in the United States during the next decade? In the past we have apparently wanted to use some of our increased income to hire others to perform services which we formerly performed ourselves. But the change has been more complex than that simple statement would suggest. Thus, the decrease in the household demand for coal oil and ice, and for domestic service, presumably is the counterpart of the increased demand for electricity and other utilities and for consumer appliances. Here increased incomes and the advancing technology of consumer goods have led to a substitution of one mix of goods and services for another; there has not been a clear and simple substitution of

services for goods. The development of our automobile and air age has also led to the substitution of one complex of goods and services for another, not just a substitution of services for goods or goods for services. We are spending relatively less on taxis, railroads and intercity bus fares and relatively more on personal automobiles, automobile insurance and bridge and highway tolls.

As real wages increase, those services with a high labor content are clearly subject to displacement by goods -- the substitution of household appliances for the domestic servant is perhaps the most obvious case in point. Goods or changes in the quality characteristics of goods are being substituted for services in other ways. Automobiles now require lubrication only every 30,000 miles or so and warranties on consumer applicances are lengthening. Do-it-yourself materials are shifting consumer demand toward these goods and away from the professional painters, carpenters and other craftsmen.

The demand for goods relative to services is also attributable in part, no doubt, to a substitution of goods not for purchased services but for the services of the housewife. The percentage of consumer expenditures going for food is higher than it would be were it not for the development of frozen foods, mixes and other products which have in essence moved some of the services from the homes to the factories.

The demand for services over the past two or three generations has increased largely because of growing specialization in the economy. The consumer typically would buy the basic goods and then apply his own services. With the expansion of the market and with the growth of income, specialization grew and increasingly services were performed by people other than the consumer. Some of this shift in services outside the home still showed up as demand

for goods, however, as when ready-made clothes were substituted for the cloth or when processed foods began their development. Presumably, the demand for these goods was greater because of the new services associated with them; thus the percentage of personal income expenditures accounted for by these goods was kept at a higher level than would otherwise have been the case.

In sum, as we look at the changing complex of demand for consumer goods and services, I fail to see any clear a priori reasons why the percentage of personal consumption expenditures going to services should continue to increase at anything like the same rate which we have seen since 1947. As we look back at the changes which we have experienced since 1929, it seems clear that the demand for services is not just a simple function of the level of income, but is dependent largely on what complex of goods and services is being offered the consumer. In other words, the long-term development of the pattern of consumer demand is in large part supply-determined. If producers offer goods which catch the public fancy and which also involve a lot of corollary services, then we can expect the role of services in the expenditure picture to expand further. The very marked increase in medical care expenditures, for example, presumably is attributable in part to the development of new drugs and medical techniques. But it may be that the goods we will be buying in the future will involve fewer corollary services than at present. I see no conclusive argument on either side of this case, although the percentage accounted for by certain services such as medical care and education will surely continue to edge upward in the coming years. On balance, however, the ORRRC expectation that the percentage of personal consumption expenditures going for services will now be more or less stable around the present percentage seems quite reasonable.

If this interpretation of the prospect for consumption expenditures is accurate, aggregate demand in California in the coming years may be favored. Since the production of consumer services is for the most part tied geographically to population and to personal income, the rapid postwar growth in service expenditures has presumably worked to distribute growth more in proportion to the geographical distribution of population and personal income. With a retardation in the rate of increase in service expenditures, this effect may be reduced, and growth may go to the states that have an advantage in the production of the goods consumers want. When one considers the size of the consumer goods market in the country, a small percentage increase in California's share of this market could offset the loss of the state's share of the Federal government market. Personal consumption expenditure for goods in 1963 in the U.S. amounted to $219.6 billion. If the Federal government were to reduce its spending in the state to the level of Federal government revenues from California, we would lose the $2 billion of annual stimulus mentioned earlier. The state could compensate for that loss if we could increase our share of the national consumer goods market by one per cent of that $219.6 billion.

V. Conclusions: The Role of Economic Policies of the State and Local Governments

This review of the setting of the aggregate demand problem in California seems to testify to the statement in the 1965 Economic Report of the Governor: ". . . it is generally agreed that the Federal Government must play the major role in raising aggregate demand. . ." Nevertheless, the state, and to a modest degree the local governments, can take (and in several ways are taking) steps which can be helpful.

The basic strategy for state and local government economic policies would seem to be to encourage, insofar as they are suited to the purpose, the development of the human, material and financial resources which can improve the state's competitive position in meeting the needs of the state, the national and the world market. This strategy should include the increased application of technology to the needs of the non-aerospace markets. In attempting to influence the level of aggregate demand in the state, we are fortunate in having a number of favorable factors at work. The level of technical, scientific and managerial knowledge in the state is very high. The complex of natural and human resources in the state are for the most part very attractive economically. The educational system and the other public services and facilities are highly regarded across the country.

The principal question is whether the state's economy is sufficiently resilient to meet the shift in the nature of the markets we have been supplying. Do we have the imagination and the initiative to devise new means of fulfilling the economic needs of the country and of the world? The role of state and local government economic policies in meeting this challenge may be quite limited in comparison with the policies of the Federal government, on the one hand, and the policies of the private sector on the other. But nevertheless state and local government economic policies should focus on providing an environment which encourages the proper adjustments in the state economy.

The economic policies of the local governments are by no means insignificant, if "economic" is broadly interpreted. Continuing emphasis on providing first-rate education is clearly called for if the state is to maintain and improve on the competitive advantage it has been enjoying in this field.

And efficiency in the provision of public services is, of course, a laudable objective which all local governments should pursue. If it is correct to say that people across the country are becoming increasingly concerned about the quality of life in urban centers, then local governments should redouble their efforts to improve on the amenities and the physical environment in the cities, and to find better solutions to the many social problems which are spawned in some sections of our cities.

As objectives of local economic policy these may be unquestionably desirable. But the continuing financial strain under which most cities and towns operate prevents action of a magnitude which most concerned citizens would consider as necessary.

The need for capital appears to be at least as great as for current operating funds. The rapid rate of increase in local debt in California has already been noted. In a few instances, local governments have tried to avoid the problems of further debt financing by entering into long-term leasing arrangements. In at least one case, this was apparently a major factor leading to a reduction in the financial rating of the town's bonds, since the payments under the lease would, of course, be a continuing charge against the town's revenues.

So much time and talent has been at work on the problems of local government financing that new feasible ideas are indeed scarce. One possibility, however, for encouraging the rebuilding of sections of our cities might be found in the device of public (local government) guarantees of the debt financing of such reconstruction projects. If a guarantee of this sort were to provide the extra incentive for rebuilding a section of a city, the improvement in the tax base might more than offset the unfavorable effect

which the guarantee itself would presumably have on the town's credit. I am not qualified to delve into the complexities of real estate financing, but I am told by some people far more knowledgeable on the subject than I that this might warrant exploration. In combination with the Federal legislation in this area of housing and urban renewal, perhaps some new devices might be conceived.

A policy such as this might, for example, permit a city to encourage the renovation of complete neighborhoods around express stops of a new rapid transit system. If the city, by going one step beyond this by participating on an equity basis in the development of such an area, not only would the tax rolls benefit but the city would also have some rental income (and eventually some capital gains?) as well. Perhaps we should explore the possibilities of using a modification of the Consat Corporation device, in combination with the Federal urban renewal program, not only to rebuild sections of the city but also to build attractive but dense modern housing at the express stops so that traffic on the rapid transit would be assured.

The economic policies of local governments might be improved upon if they were to take full advantage of the many Federal programs which have been devised to assist in meeting many local problems. It is said that local officials are often quite unaware of the availability of some types of Federal assistance. The number and complexities of Federal programs relating to the poverty problem are so great that Sargent Shriver has a small group in the Office of Economic Opportunity assembling and computerizing information on these programs so that they can answer quickly and accurately the many questions the office receives. This suggests that the state government should take similar steps so that local governments can readily learn where they can

find what types of assistance for the various problems they face. Although many people resist the idea of "running to Washington" (or to Sacramento) with their local problems, the need for solutions is so great that it would seem foolish not to use whatever help may be available.

In moving from the level of the local government to the state government, we should first restate the general conception of the problem as it has been developed in this paper. As the Economic Report of the Governor points out, ". . . it is generally agreed that the Federal government must play the major role in raising aggregate demand. . ." state economic policies cannot have any overwhelming impact on the level of aggregate demand in the state, but they are certainly not without influence. To be as effective as possible, it would seem that the state's economic policies should be designed to put California in the best possible position for meeting the needs of the changing markets of the state, the nation and the world. This means not only producing the goods and services presently in demand. It also means using our knowledge to devise new means of meeting both present and prospective needs. As the comparison of the 1929 and 1963 consumption expenditures shows, the role of technology in changing the pattern of consumer expenditures has been crucial. Although no comparable data have been given for intermediate goods, i.e., goods sold to producers rather than to final consumers, the role of technology would surely be equally clear for that portion of the total demand for goods in the country. In the history of California up to World War II, the development of the state was largely keyed to a comparative advantage based chiefly on its natural resources. More recently, the important comparative advantage appears to have been its competence as a "knowledge factory,"

which has in turn been based not only on the climate and other amenities, both natural and man-made (which have helped attract people of all occupations and income groups) but also on the quality of its educational system. The central challenge may now be to adapt this knowledge to the change in the structure of demand. Perhaps the development of this kind of comparative advantage should now become the central objective of state economic policies.

If this is an acceptable view of the problem, what should state economic policies be? I will take the liberty here of considering the term "economic policy" to be broad enough to include all state policies with a significant economic effect -- which I recognize may mean most state policies. (I will avoid, however, the policies to which the other papers prepared for this conference are directed.) One approach is to ask how California might make the most of the changing structure of demand.

Foremost in the minds of most of us is the change in the mix of Federal government expenditures. The leveling off of expenditures on defense and space programs and the shift toward the Great Society programs can only mean less concentration of Federal expenditures in California. The $2 billion worth of annual stimulus we have had from Washington will probably decline gradually over the coming years. The Federal programs which are growing will surely lead to a somewhat more even geographical distribution of Federal government expenditures. The aerospace years provided California with our own special version of the Great Society; now we must share with everyone else.

We should avoid undue pessimism on this score, however. The prognostication is that aerospace expenditures will simply level off rather than decline significantly. (I am ignoring here the possible long-run effect of the Viet Nam action.) Furthermore, the state may be in a position to do substantial research and experimental work on the Great Society programs. One of our questionable virtues is that we have about as big a problem with poverty (despite our high average income), with urban transit, with decaying central cities, with education, with medical care, with the destruction of natural beauty, and the like as does any state. And we have an advantage, or at least we like to think we have an advantage, in the expertise or potential expertise we have available to cope with these problems. But although we should do our best to maximize our advantage in competing for the Federal government research funds in these new or recently expanded programs, we must face the fact that most of the money will go to the states where the problems are, even if California gets much of the money spent to devise solutions.

As a step toward improving our competitive position in such work, the four aerospace contracts are an imaginative and praiseworthy, though modest, step in the right direction. Depending on the evaluation of this work when all four studies are complete, the state should consider expanding this effort as one means of encouraging the development of a stronger comparative advantage in the performance of this type of research for the Federal government.

Yet in terms of the level of aggregate demand in California, the basic problem remains. Even though the four contracts might demonstrate that "an industry which can orbit man in space and send a rocket to the moon can also suggest solutions to some of the critical problems on earth," as the Governor has said, the question is, even if the capability is available, where and how big is the market? Despite the urgency of the problems here on earth, our society is simply not yet ready to spend as much money on researching possible solutions to them as on the challenges of space.

The demand of state and local governments for goods and services is growing rapidly, but most of the services, if not the goods, are provided locally. Thus California's prospects for increasing its share of this market may be limited. Despite this, the state surely should capitalize further on the fact that the state and local governments in California as buyers of goods and services are themselves a substantial market. In 1963-64 the combined state and local governments' direct general expenditures amounted to $9.1 billion. If California firms can devise new means for the state and local governments to perform their various functions efficiently, the state might conceivably benefit in three ways: The improved efficiency of state and local governments would be welcomed; California firms might find new ways to employ their talents; and goods and services salable to other state and local governments might be developed.

The field of education is perhaps the biggest prospective area in which such an approach might be applied. The state and local governments' total expenditures on education in California in 1963-64 was no less than $3.6 billion, of which $2.9 billion was for expenditures other than capital outlays.[16]

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16. U. S. Bureau of the Census, Governmental Finances in 1963-1964, Table 17.

Recognizing the magnitude of the problem, Governor Brown has emphasized the great need for more educational research. The state might be wise to extend its role as a middleman, so to speak, between the educational institutions (of all varieties and at all levels) and those firms which might be particularly well-suited to applying their talents to the problem. The Federal government's research funds in the Health, Education, and Welfare budget and in the poverty program might be available to assist with such an effort.

In other areas the state might play the same catalytic role, as an extension of the experience with the four aerospace contracts, but working with firms in other industries as well. One wonders whether there might be a number of problems which bother individual towns and cities but which are being inadequately researched because no one jurisdiction can afford to launch a research project of its own. Despite the pressure on local government budgets, a pooled research fund might be considered, possibly supplemented with state and Federal aid. A version of this approach, though still in the field of education, is found in the recent report of the four school districts in California which, in the face of building programs, joined together for the design and materials purchased for the buildings. The result of the consolidated effort was that the building costs were substantially below what they would otherwise have been: maximum use of model units and the like permitted impressive economies while also providing the flexibility for the individual needs at the different locations. Common problems in police and fire protection and in other areas might lend themselves to a similar approach if the state were to extend the role of catalytic agent it is playing in the case of the four aerospace contracts. The prospect here for bringing together the representatives of the local governments not only

the aerospace firms but with others and with academic researchers as well as the appropriate Federal government representatives could be quite exciting.

Turning to the question of state economic policies and the prospective development of consumer demand, it has been argued above that the percentage of expenditures going for services is likely to stabilize at about the present figure, and that this would be a favorable development for California. Since the production of consumer services is population-oriented (more accurately, personal-income-oriented) the rapid growth of the services percentage since the end of World War II may have retarded growth in California a bit.

The state has several important factors in its favor as we look at the possibilities of taking advantage of this probable development. The consumer goods market in California is already large, which has already attracted consumer goods firms. Incomes are well above the national average. And in the field of consumer goods associated with recreation and leisure, for which national demand is expected to rise rapidly, the state should be in an especially good position.

It is important to notice, however, that such rapid-growth categories of consumer demand are promising for California because of the demand side, rather than the supply side, of the market. On the supply side, we can well ask whether we are applying enough of our technical knowledge to the development of new consumer goods. The bundle of talents required for the development, production, and marketing of a new consumer good is quite different from that required for the products of the aerospace industry. The marketing problems are especially different; the lack of experience in the aerospace industry with any customers other than the Federal government has often been noted.

All this suggests that state economic policies should be utilized, if possible, to shift the state's famous R & D capacity toward the consumer goods field itself and toward the goods and services which are bought by consumer goods producers. Within the Federal government it has been recognized that the country may be devoting too much of its scientific and technical personnel to the Federal defense and space programs and too few to civilian needs. In California we should be doubly concerned about this maldistribution of resources.

The reorientation of the state's R & D capacity to non-aerospace fields should concern not only consumer goods but capital equipment and intermediate goods, i.e., goods bought by firms and individuals other than final consumers or governments. Many of the electronic and electrical products firms in California already provide a wide spectrum of items used by manufacturers in several industries, and the prospects for the development of demand for these firms seem to be excellent. But full accommodation of the state's industry to the changes in the structure of demand would seem to call for more R & D talent to be devoted toward meeting the demands of the private sector.

The export market has been mentioned as another sector of total world demand to which California might give more attention.[17] The state already originates more exports than any other state, having recently surpassed New York. Members of the Regional Export Expansion Council say that virtually all manufacturers of any size in California are already exporting. Although this may well be true, one can ask whether we are doing everything we might to bring to bear on the problems of the rest of the world the technical knowledge which the state commands. The California-Chile project might be used, for example, as a vehicle for focussing more of the state's resources on the question of

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17. Economic Report of the Governor, 1965, especially p. xi.

devising manufacturing equipment which will produce economically on a scale appropriate to the small markets found in so many countries of the world.

The problem of shifting R & D resources from aerospace to the private sector, both domestic and foreign, has been given considerable attention in Washington. Various suggestions for altering Federal government policies to cope with the problem have been heard, such as more government awards for non-aerospace R & D, tax credits for commercial R & D, loans and loan guarantees for R & D, and add-ons to defense contracts to finance diversification by the contractor. There are serious objections to each of these but they need not be explored here. The Johnson Administration has introduced legislation which would encourage joint industry-government financing of non-aerospace R & D based primarily in the universities. If this program is enacted, California should take full advantage of it.

Even if this program should not materialize, a modest step might be taken by exploring means for generating in the research centers of the state's universities and colleges more interest in non-aerospace fields. The availability of Federal government research funds has no doubt put a premium on research on non-civilian problems in California's research establishments, thus drawing talent away from the problems to which we would like now to give more attention. Money for the support of research is of course at the heart of the matter. But even without money, certain modest steps might be taken. I have wondered, for example, whether the Schools of Business Administration and the Colleges of Engineering should not combine efforts to have joint student groups survey recent engineering developments with a view toward developing new economically feasible products, or versions of existing products, for sale both at home and abroad. This effort to improve on the process of searching for new products might be reinforced by formal cooperation from business groups in

the state. The students would benefit because, even though the yield of new products might be low on a percentage basis, it would give both the engineers and the business students experience in working with each other and in developing a greater sensitivity to the problem of matching technical developments with the needs of the market. At least one project of this sort has been under way long enough to suggest that it could be usefully expanded.

Beyond such efforts as those already discussed, it is difficult to see how state economic policies might be brought more fully to bear on the problem of shifting the state's resources more toward civilian needs. But we should be prepared to consider any and all ideas which might be useful in reaching this objective.

Beyond programs designed to improve the state's ability to meet the demands of each of the markets considered above, certain more general economic policies at the state level should be pursued. The use of program analysis to identify where possible the benefits and costs of state programs, along the lines recently ordered by President Johnson with respect to the Federal government, should be pressed. The state should continue to make maximum use of those Federal programs which can be brought to bear on the problems of California. Since so many of the problems we face are at the level of the local government, the state should help these jurisdictions in their attempts to find just what Federal programs might be of assistance to them.

The greater application of cost-benefit analysis to the state's capital investment projects should help in directing these as much as possible toward activities which will have the greatest pay-out for the state in terms of aggregate demand. It would be interesting to know, for example, whether the state financing of harbors has not affected favorably those local industries producing boats and related products and services. Similarly capital projects

which attract more tourists can increase the demand for all the goods and services associated with tourism. And if we are concerned about employment as such as well as the level of aggregate demand, we should give some extra consideration to those capital projects which can be efficiently carried out with a high proportion of labor input.

In closing, I should point out that no discussion of state economic policies and aggregate demand would be complete without a review of the level and structure of state and local government taxes. This subject has been avoided here, despite its great importance, because at least the critical portions of the subject I understand to be covered in Professor Somers' paper. I also apologize for not covering a number of present state economic policy issues relating to specific problems, but for purposes of promoting discussion of the whole range of issues, I have taken the view that it was more important to suggest a framework within which analysis of the detailed state economic policies might be conducted.

EMPLOYMENT AND UNEMPLOYMENT IN CALIFORNIA

by

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SUMMARY AND CONCLUSIONS

1. There is little question that the comparatively high unemployment rate that has prevailed in California in the last five years is attributable primarily to changes in the amount and composition of defense spending, which have resulted in a steady decline in aircraft employment since 1959 and, in the last few years, in declining employment in electrical machinery and equipment and, more recently, in ordnance. Even so, there is little evidence that the sagging behavior of employment in durable goods manufacturing has had a decelerating effect on other types of employment. In practically all nonagricultural sectors of California's economy, other than durable goods manufacturing, employment has been increasing at a more rapid rate than in the nation as a whole. In an environment of national economic expansion (spurred on by federal government fiscal policies), rapid population growth, high per capita income, and rising state and local government expenditures, a high rate of economic expansion has been maintained in California in the face of the adverse impact of changes in defense spending on employment in defense-related industries. Moreover, increasing American military involvement in South Vietnam is currently reversing the trend in defense spending, although this is scarcely the solution of the unemployment problem that most of us would prefer.

2. There are indications, also, that California employment is now somewhat less dependent on defense spending than was the case five or six years ago, and that postwar changes in the structure of manufacturing employment -- notably the spectacular development of the electrical machinery and equipment industry -- have been such as to create a broader base for

future expansion in nondefense-related employment.

3. At the same time, there is evidence that structural changes in nonagricultural employment have been proceeding at a more rapid rate in California than in the nation as a whole and that, as a result, there may be a relatively more severe problem of structural unemployment among workers who lack the qualifications to take advantage of rapidly expanding job opportunities in professional and other types of white-collar employment. The shift from production worker to nonproduction worker employment in manufacturing has been occurring at a substantially more pronounced rate in the state than in the nation, chiefly because of the rapidity of the shift in the predominant aerospace industries, in which more than half of all employees now consist of nonproduction workers. And, while the demand for teachers and other publicly employed professional workers has been increasing at a particularly rapid rate, 1960 Census data indicated that declining proportions of workers were self-employed or engaged in sales and service occupations.

4. Despite the indications that California's unemployment problem stems chiefly from changes occurring on the demand side of the labor market, the persistence of the problem may well be attributable in part to insufficient flexibility on the labor supply side. Although employment has been increasing somewhat more rapidly in the state than in the nation in the last five years, so, also, has the state's labor force, which has been expanding at about the same rate as employment.

5. California's high rate of growth over the decades has been dependent on augmentation of its labor supply through in-migration, and, while net in-migration has been quite sensitive to changes in relative

labor market conditions in California, the statistical record suggests that changes in net in-migration have tended to lag slightly behind changes in the rate of employment expansion and in the relationship of the state's unemployment rate to the national rate. Although net in-migration has declined in recent years, a more pronounced decline would probably have been required to bring about a decline in California's unemployment rate. Gross in-migration of professional and other white-collar workers has been needed to meet expanding demands for such workers and has undoubtedly been occurring, although we lack recent statistical evidence on this point. Moreover, there has probably been relatively little gross in-migration of blue-collar and service workers. But the labor market situation is such as to call, in all probability, for net out-migration of manual workers -- and, while there may have been some net out-migration of such workers, we have no way of knowing whether it has occurred on any substantial scale. The propensity to migrate to California clearly tends to be greater than the propensity to leave the state, and such scattered statistical evidence as we have on gross in- and out-migration suggests that it requires a higher adverse unemployment-rate differential than that of the last five years to induce gross out-migration on a scale approximating the volume of gross in-migration. Moreover, there is some evidence to suggest that Negroes, whose unemployment rates tend to be about double those of whites, are less likely to leave the state than are whites.

6. The pattern of unemployment rates which prevailed in the state at the time of the 1960 Census, the persistence of high unemployment rates for teen-agers in the nation as a whole, and the relatively rapid growth in the state's teen-age population all point to the likelihood that unemployment

rates for teen-agers, and particularly for nonwhite teen-agers, in the state may be well above nationwide rates at present.

7. California's relatively high wage rates, particularly for comparatively unskilled workers, probably tend to discourage to some extent the types of labor market shifts required by structural changes in employment. However, comparisons with nationwide averages give a somewhat exaggerated impression of both the extent and pattern of these differentials, since national average wage rates -- particularly for relatively unskilled workers -- are held down by low wage levels in the South.

8. Finally, my attempts to analyze the factors underlying California's unemployment problem have left me with a heightened appreciation of the urgent need for more adequate statistics on current changes in the age structure of the population, labor force participation, occupational changes, and the pattern of differentials in unemployment rates. At the very least, data on the characteristics of the insured unemployed could be made available in greater detail, along with data on the occupational and industrial distribution of employment, so that rates of insured unemployment by occupation and industry could be computed. A general population census every five years, instead of every ten years, would also help. But in a state as large and wealthy as California, there is really no good reason why a state-sponsored quarterly or monthly population survey, with the regular collection of labor force data as one of its major purposes, should not be initiated.

Introduction[1]

Throughout the period since the second quarter of 1960, the unemployment rate in California has been above the national rate (Chart 1). In other words, the California rate (seasonally adjusted) has been somewhat above the nationwide rate since approximately the onset of the 1960-61 recession, which began in June 1960.

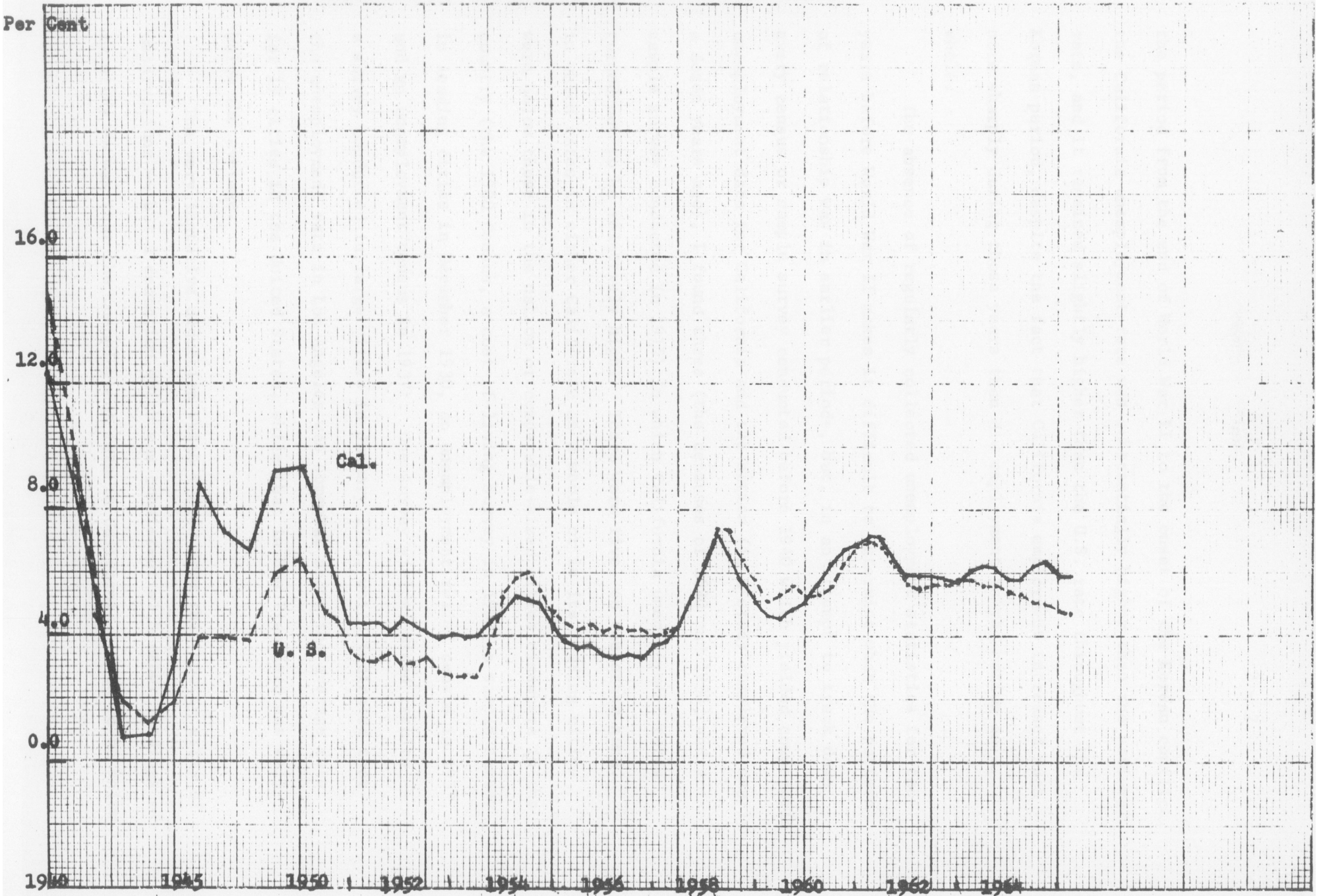
From 1960-II to 1963-I, the difference between the California and national rates was very slight. It was so slight, in fact, that it might easily have been attributable to the pronounced differences in methods of measuring the unemployment rate for the state and nation.[2] However, the insured unemployment rate in California -- which is comparable with the national insured rate with respect to method of computation, but not precisely comparable with respect to such matters as coverage and eligibility for unemployment insurance -- also moved above the national rate at about the same time and has fluctuated above the national rate in approximately the same manner as has the overall estimated rate in the last five years.

Since the first quarter of 1963, however, the difference between the California and national rates has widened and become a matter of greater concern. As Chart 1 clearly shows, what has happened is that California has not experienced the decline in its unemployment rate that has been occurring in the nation. Rather, California's rate has continued to hover in the neighborhood of six per cent, while the national rate has moved down to five per cent, and, in recent months, slightly below.

It has not been a new experience for California to have a somewhat more serious unemployment problem than the nation as a whole. Throughout

Chart 1

UNEMPLOYMENT RATE, CALIFORNIA AND UNITED STATES, Annually, 1940-49, and Quarterly (Seasonally Adjusted Data), 1950-65



the period from the end of World War II to the onset of the Korean conflict, the California unemployment rate was substantially higher than the national rate, and it remained slightly higher than the U.S. rate throughout the Korean period, despite the fact that California employment increased much more sharply during those years than did employment in the nation as a whole.

The absence of regularly collected unemployment statistics for the years before World War II makes it difficult to determine what the pattern of relationship was in earlier periods, but, in an attempt to track down every census or sample survey conducted before 1940 which yielded comparable unemployment data for California and the nation (in a study completed nearly a dozen years ago), I found three (the censuses of 1890 and 1930, and a sample survey conducted in 1915) in which California unemployment rates turned out to be relatively high.[3] There were five, on the other hand, in which rates in either California as a whole or in its leading cities were below those in the nation or comparable-sized cities elsewhere in the country (the 1900 Census, a cost-of-living survey in 1901, a sample survey in leading cities in December 1930, an unemployment relief census in 1933, and an unemployment census in 1937). One survey yielded mixed results -- a survey conducted in large cities in January 1931, which indicated that the unemployment rate in Los Angeles was somewhat above the average rate for 19 cities in the United States, while that in San Francisco was well below the average.

The very tentative deduction which I drew from this spotty array of observations -- but a deduction which was consistent with other findings of my study -- was that the unemployment rate in California tended to be below

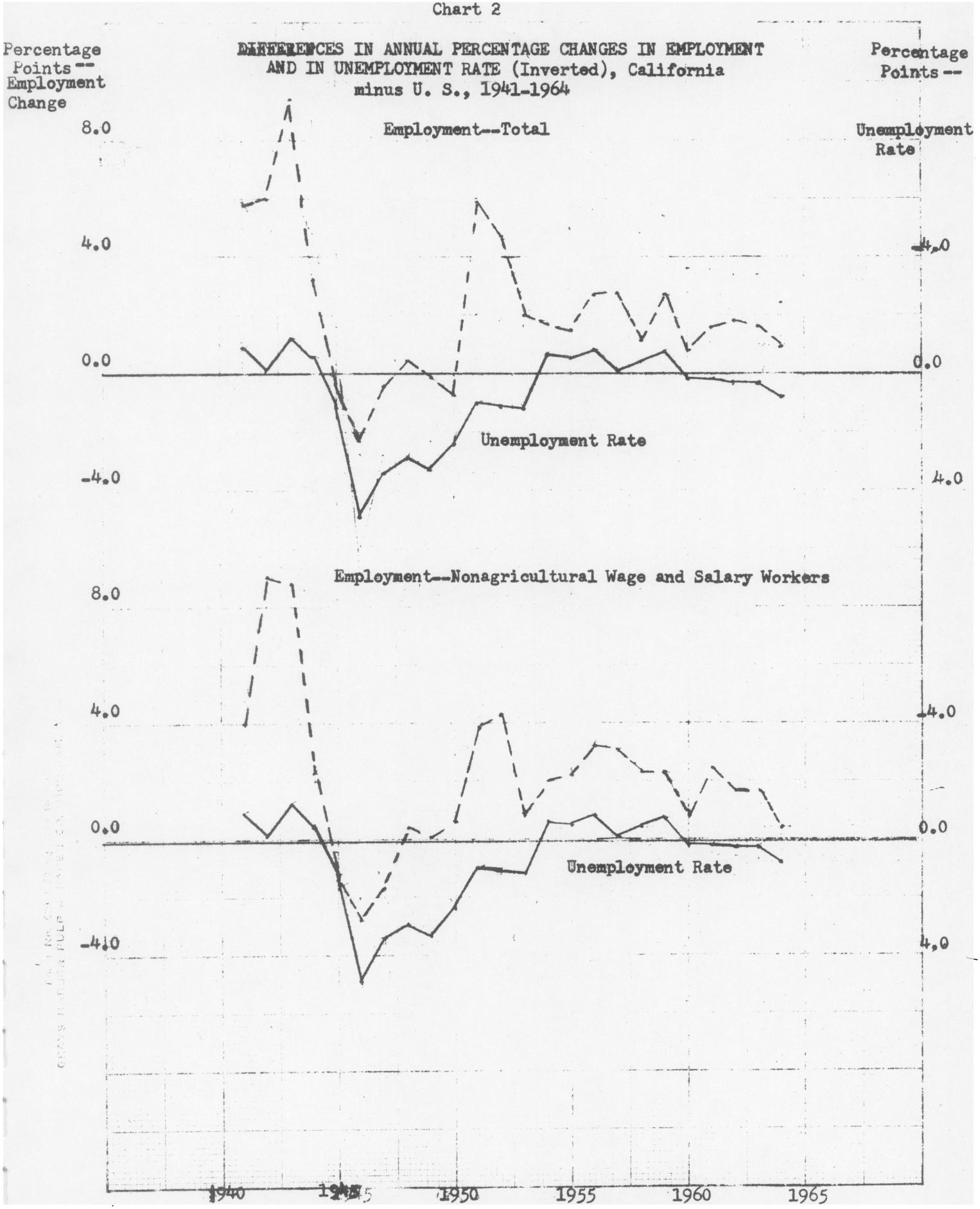
that in the nation in the upswings of the long waves which seem to have characterized the economic expansion of the state before World War II. There also appeared to be a tendency for the unemployment rate in the state to be above that in the nation in the downswings of these long waves, although the record for the Great Depression of the early 1930's is mixed.[4]

The long waves in California's economic development were very similar in timing and duration to the long swings, of about 20 years in duration, which have been identified by Simon Kuznets and others in the economic growth of the nation.[5] Whether these waves are actually self-generating cycles, but differing from the ordinary business cycle in duration, is a matter of debate, and one which will not be considered in this paper, largely because I am not at all certain that the long-swing hypothesis is as useful in interpreting postwar economic developments in California as it appears to have been for the prewar period.

Since the beginning of World War II, variations in the rate of economic expansion in California relative to that in the nation appear to have resulted chiefly from changes in the amount and composition of federal defense spending. It is for this reason, primarily, that I shall pay relatively little attention to the long-swing hypothesis in this paper.

During the postwar period, there has been a clear tendency for the difference between the unemployment rate in California and the nation to vary inversely with differences in the rate of employment expansion in the state and the nation (Chart 2). In other words, an increase in the differential rate of expansion of employment in California relative to

Chart 2


DIFFERENCES IN ANNUAL PERCENTAGE CHANGES IN EMPLOYMENT AND IN UNEMPLOYMENT RATE (Inverted), California minus U. S., 1941-1964
Percentage Points -- Employment Change
Percentage Points -- Unemployment Rate
Employment--Total
Unemployment Rate
8.0
4.0
0.0
-4.0
Employment--Nonagricultural Wage and Salary Workers
Unemployment Rate
1940
1945
1950
1955
1960
1965

that in the nation has tended to be accompanied by a decline in California's unemployment rate relative to that in the nation.

A number of different regression equations were computed in an attempt to explore this type of relationship. The results obtained were substantially more significant when the difference in the unemployment rate between California and the nation was related to the difference in the annual rate of change in nonagricultural employment than when it was related to relative changes in total employment. The relevant equations computed for the periods 1941-64 and 1947-64 are as follows:

1941-64

$$U_c - U_{us} = 1.549 - .393\ (P_c - P_{us})$$

where U_c = California unemployment rate

U_{us} = U.S. unemployment rate

P_c = annual percentage change in number of nonagricultural employees, California

P_{us} = annual percentage change in number of nonagricultural employees, U.S.

$R = .67$ $R^2 = .45$ F statistic = 18.3

1947-64

$$U_c - U_{us} = 1.834 - .607\ (P_c - P_{us})$$

$R = .66$ $R^2 = .44$ F statistic - 12.4

Although both regressions are significant at the 99 per cent level, only about 44-45 per cent of the variance is explained. This suggests that we must look for other factors accounting for a substantial part of the difference between the unemployment rate in the state and the nation. As will be indicated in later sections, certain structural changes in employment --

especially the particularly pronounced shift from blue-collar to white-collar employment in the manufacturing sector in California -- and particularly pronounced changes on the supply side of the labor market -- especially changes in the age distribution of the population -- appear to play significant explanatory roles.

The equations, as well as the chart, suggest that there may be a chronic tendency for California's unemployment rate to exceed that in the nation, except when the rate of employment expansion in the state exceeds that in the nation by a substantial margin. Any such inference should be drawn with great caution, particularly since the period for which annual unemployment statistics are available is limited and includes the major upheavals of World War II and its aftermath, as well as the period of the Korean conflict. Of particular interest, however, is the fact that California's unemployment rate has been above that in the nation in recent years, despite the more rapid expansion of both total and nonagricultural employment in the state. Further comment on the implications of this relationship will be deferred to the concluding section of the paper, in which the results of an analysis of changes on both the demand and supply sides of California's labor market will be summarized.

Part I

POSTWAR CHANGES IN THE DEMAND FOR LABOR

The Structure of Employment in California

Ever since 1870, the proportion of workers employed in the distributive and service, or tertiary, industries in California has been appreciably higher than in the nation as a whole. This difference has reflected the combined effect of influences tending to encourage employment in the tertiary industries and of forces tending to hold down employment in most of the primary and secondary industries, as compared with the nation.

Development of the tertiary industries has been encouraged by (1) a relatively high per capita income in the state, (2) a high rate of geographical mobility of the population, both into and out of the state and within the state, (3) the fact that California's two largest cities are the leading commercial, financial, foreign trade, and tourist centers of the West, (4) the relatively high proportion of adults and the disproportionately large percentage of men which has characterized the state's population until relatively recently, (5) the development of the movie industry, and (6) other factors.

The comparatively low proportion of workers employed in the primary and secondary industries has been influenced by (a) a number of special characteristics of California agriculture, including, particularly, the specialization in fruit and vegetable production, which tends to yield a very high value of output per employed worker, and (b) a combination of factors which held back the development of manufacturing for many decades, particularly the relatively small size of the Western market. On the other hand, with its comparatively high rate of population growth, California workers in the construction industry represented a somewhat larger proportion of total employment in the state than was the case in the nation as a whole.

Up to the time of the 1950 Census, there was no clear long-run tendency for these broad differences in the structure of employment between California and the nation to narrow, although the proportion employed in the distributive and service industries tended to increase in both state and nation.[6] Between the 1950 and 1960 decennial censuses, however, the difference in relative proportions employed in commodity production versus tertiary industries in the state and the nation narrowed considerably (Table 1). Comparisons are hampered because of the sizable "industry not reported" item in the 1960 data. If the difference between the percentage not reporting industry affiliation in 1950 and 1960 is distributed among 1960 industry groups on the assumption that those not reporting are distributed in the same manner as those reporting, the percentage employed in commodity producing industries in 1960 becomes 36.8 for California and 41.7 for the United States. The difference of 4.9 percentage points is substantially smaller than the difference of 10.3 in 1950. Similarly, California's 1960 proportion of distributive and service workers becomes 61.9 per cent, as compared with 56.7 per cent for the United States; and the difference of 5.2 percentage points is again appreciably smaller than the 1950 difference of 10.8.

This development reflects the combined effects of a number of changes: (1) the percentage of workers employed in agriculture declined in both state and nation from 1950 to 1960, but more sharply in percentage points in the country as a whole than in California; (2) the proportion of workers employed in manufacturing rose considerably more sharply in California than in the nation, reflecting the marked expansion of durable goods manufacturing in the state; (3) and the proportion of workers employed

Table 1

Percentage Distribution of Employed Workers by Major Industry Group, California and United States, 1930-1960

	California				United States			
Major industry group	1930	1940	1950	1960	1930	1940	1950	1960
Total employed workers (in thousands)	2,320	2,476	3,902	5,761	46,036	45,070	56,435	64,639
Per cent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Commodity producing industries	39.9	35.9	35.8	35.6	53.1	49.2	46.1	40.7
Agriculture	13.7	10.7	7.3	4.5	22.1	18.7	12.2	6.6
Forestry and fisheries	0.5	0.3	0.3	0.2	0.5	0.2	0.2	0.1
Mining	2.1	1.9	0.8	0.5	2.3	2.0	1.6	1.0
Construction	6.5	6.2	7.7	6.3	5.6	4.6	6.1	5.9
Manufacturing	17.0	17.0	19.7	24.1	22.6	23.7	26.0	27.1
Durable goods	n.a.	8.4	10.8	15.9	n.a.	11.4	13.7	15.2
Nondurable goods	n.a.	8.4	8.8	8.2	n.a.	12.2	12.3	11.9
Not specified	n.a.	0.2	0.1	----	n.a.	----	----	----
Distributive and service industries	57.6	62.6	63.1	59.8	44.7	48.9	52.3	55.3
Transportation, communication, and other public utilities	8.1	8.2	8.4	6.8	7.4	6.9	7.9	7.0
Trade	17.4	22.2	22.7	18.8	13.1	16.6	18.7	18.2
Finance, insurance, and real estate	5.2	4.8	4.6	5.1	3.0	3.3	3.4	4.2
Service industries	23.8	23.6	21.6	23.0	18.6	19.0	17.8	20.9
Public administration	3.1	3.8	6.3	6.1	2.6	3.1	4.5	5.0
Industry not reported	2.5	1.4	1.2	4.7	2.2	1.6	1.5	4.0

Sources: 15th Census of the United States: 1930, unemployment, Vol. I, pp. 53-55 and 145-46 (data adjusted by the author but are not precisely comparable with those for later census years); and U.S. Census of Population: 1960, Vol. PC(1)IC, p. 223 and Vol. PC(1)6C, p. 249.

in tertiary industries in California declined -- reversing the long-run trend -- whereas the proportion so employed in the country as a whole continued its long-run upward climb.

This latter difference reflects, in turn, a combination of influences which can be more fully interpreted on the basis of a more detailed breakdown (not shown) of the distributive and service section: (1) a slight decline in the percentages employed in both telecommunications and utilities in California, whereas these percentages remained unchanged in the nation; (2) a relatively pronounced decline in the proportions employed in both wholesale and retail trade in California; (3) a smaller increase in the percentage employed in finance, insurance, and real estate than in the nation; (4) a considerably sharper decline in the percentage employed in personal services than in the country as a whole; (5) a more pronounced decline in the proportion employed in entertainment and recreation in the state -- reflecting the decline in employment in the movie industry; (6) a somewhat less sharp increase in the percentage employed in professional and related services in California; and (7) a slight decline in the proportion employed in public administration in the state, whereas the percentage so employed in the nation increased.

Some of these differences probably reflect certain indirect effects of the much more vigorous expansion of manufacturing employment in California than in the nation. Displaced manufacturing workers in other parts of the country were doubtless shifting to the trade and service industries to a relatively greater extent than in California. On the other hand, as we shall see at a later point, this type of shifting may well have been occurring at a more rapid rate in California than in the nation as a whole in the last

few years.

The role of defense spending. In the past, California's relatively high percentage of employment in the tertiary industries has presumably been a factor making for somewhat less vulnerability to unemployment in the downswings of ordinary business cycles, although, as suggested earlier, the state may have been somewhat more susceptible to unemployment, as compared with the nation, in the downswings of long waves. The narrowing of the differences between the state and the nation in the relative proportions employed in commodity-producing and tertiary industries in 1950-60 -- along with the marked rise in the proportion of workers in durable goods manufacturing, the most cyclically sensitive industry group, in California -- may have increased the likelihood that cyclical fluctuations in unemployment in the state would more closely resemble those in the nation. However, the predominant importance of changes in the amount and composition of defense spending in determining changes in employment in California has tended to blur this effect, since changes in defense spending have been determined largely by noneconomic considerations and have not always been closely correlated with cyclical fluctuations.

How dependent is employment in California on defense spending, and how has the degree of dependence been changing? This is not an easy question to answer, since there are direct, indirect, and multiplier employment effects involved. The direct effect may perhaps best be defined as the impact on the number of workers directly engaged in work on defense contracts (whether their employers are contractors or sub-contractors). The indirect effect may be defined as the impact on the number of workers employed in the production of items which ultimately are purchased by the Department of Defense,

even though no contract or sub-contract is involved. The multiplier effect may be defined as the increase in employment in all sectors which is generated by the increased purchasing power attributable to the direct and indirect employment effects (as well as the increased profits of the firms involved in the direct and indirect effects).

In connection with all these effects there are leakages into and out of the state. For example, a primary contractor may order some parts from a firm in Connecticut, which may, in turn, order some parts from California.

The best estimates of the impact of defense spending on employment in California, so far as I have been able to determine, are those made by Hansen, Robson, and Tiebout in a report prepared for the now-defunct California Economic Development Agency.[7] The authors developed estimates of the amount of employment in 1959 which was attributable directly or indirectly to demand originating from seven sectors:

1. Exports (sales outside the state) to private industry and individuals.
2. Exports (sales) to the Federal Government -- largely attributable to defense spending.
3. Local consumption.
4. Local business investment.
5. Local investment in housing.
6. Current operations of state and local governments and some Federal Government operations, such as the post office, which are affected chiefly by changes in local demand.
7. Local investment by state and local governments and some investment by the Federal Government (e.g., construction of post offices).

Their results indicate that 11.7 per cent of all employment in California in 1959 was attributable directly or indirectly to exports to

the Federal Government, or to defense spending (Table 2). Not unexpectedly, by far the greatest percentage of such employment, by industrial sector, was in durable goods manufacturing, in which no less than 43.5 per cent was attributable to demand originating from the Federal Government. And within the durable goods sector, the industries with the largest proportions of such employment were transportation equipment (chiefly aircraft), instruments and ordnance, and electrical machinery. There was also a substantial proportion of employment in primary and fabricated metal products industries attributable to federal spending, but here -- unlike the situation in the leading defense-related industries -- more than half of this employment was attributable to indirect rather than direct effects of federal spending. This, of course, is precisely what we would expect, since the leading defense-related industries would be likely to purchase materials and parts on a substantial scale from California metal firms.

Estimates were also developed for the Los Angeles-Long Beach and San Francisco-Oakland Metropolitan Areas and for the rest of the state. No attempt will be made here to present these data in detail, but the chief variations, as might be expected are the differences among these three areas in the overall percentages of employment attributable to defense spending, as well as in durable goods manufacturing and the leading defense-related industries:[8]

Per cent of employment attributable to exports to the Federal Government, 1959

	Los Angeles-Long Beach	San Francisco-Oakland	Rest of state
Total employment	12.6	8.0	10.3
Durable manufactures	43.8	18.5	44.8
Metals	27.7	7.8	23.9
Electrical machinery	53.0	21.5	31.2
Transportation equipment	65.3	62.6	84.9
Instruments and ordnance	66.4	27.8	78.9
Government	12.6	44.0	22.6

Table 2

Percentage Distribution of Total Direct and Indirect Employment
Allocated to Demand Sectors, by Detailed Industry Group
California, 1959

Industry groups	Sectors from which demand originates							
	Exports--private	Exports--government	Local consumption	Investment business	Investment housing	Government current	Government investment	Total[a]
Durable manufactures	28.7	43.5	13.6	9.1	2.4	1.0	1.6	100.0
Primary and fabricated metals	32.9	26.8	20.2	7.6	6.4	2.5	3.6	100.0
Nonelectrical machinery	55.6	12.9	2.3	27.0	0.7	0.1	1.3	100.0
Electrical machinery	29.3	48.9	4.6	15.7	0.5	0.1	1.0	100.0
Transportation equipment	15.8	72.7	7.1	3.5	0.4	0.2	0.3	100.0
Instruments and ordnance	22.2	72.3	2.4	2.4	0.1	0.1	0.4	100.0
Clay, glass, and lumber	38.4	4.9	37.2	5.0	7.9	2.9	3.7	100.0
Furniture and miscellaneous	31.5	3.7	43.1	12.2	3.5	2.6	3.5	100.0
Nondurable manufactures	32.5	6.0	53.7	2.2	2.2	2.4	0.9	100.0
All manufacturing	30.0	31.3	26.7	6.8	2.3	1.5	1.4	100.0
Agriculture, forestry, etc.	46.4	2.4	47.9	0.8	1.1	1.0	0.5	100.0
Contract construction	----	1.6	----	25.3	51.1	----	22.0	100.0
Transportation and utilities	28.1	7.2	55.6	2.0	2.5	3.8	0.9	100.0
Wholesale trade	9.6	7.6	65.5	5.0	7.8	1.1	3.3	100.0
Retail trade	1.6	1.0	92.3	1.2	2.0	1.1	0.8	100.0
Finance, insurance, and real estate	13.3	2.6	54.0	5.4	22.5	1.0	1.1	100.0
Services	9.4	2.6	80.5	1.8	4.5	1.0	0.2	100.0
Government	----	18.8	----	----	----	79.6	1.6	100.0
Total employment	15.5	11.7	47.1	4.4	6.5	12.3	2.4	100.0

Source: Computed from data in Markets for California Products: An Analysis of the Sources of Demand, A Report Prepared for the California Economic Development Agency, by W. Lee Hansen, R. Thayne Robson, and Charles M. Tiebout (Sacramento: State Printing Office, 1961), pp. 58-59.

[a]Items do not always add to totals because of rounding.

Of interest is the relatively high percentage of employment in the electrical machinery industry in the Los Angeles-Long Beach area that is defense-related, as compared with the San Francisco-Oakland area and the rest of the state. It should also be pointed out that, although the proportion of defense-related employment in the transportation equipment industry in the San Francisco-Oakland area was high, the number of defense-related workers involved (8,700) was very much smaller than in the Los Angeles-Long Beach area (131,000). Total aircraft employment amounted to only 2,800 in the San Francisco area at the time, while the rest of the employment in the transportation equipment industry was almost equally divided between motor vehicles (largely nondefense-related) and shipbuilding (probably heavily defense-related).[9]

The surprisingly high proportions of defense-related employment in durable goods manufacturing and in transportation equipment in the "rest of the state" are probably explained largely by the heavy concentration of employment in the San Diego area in the aircraft industry, which accounted for 87 per cent of all wage and salary workers in manufacturing and 23 per cent of total wage and salary workers in the area in July 1959.[10]

There are several reasons for presuming that the proportion of California employment attributable to defense spending is smaller at present than in 1959. In the first place, manufacturing employment, and particularly durable goods employment, has not been increasing as rapidly as total employment in the years since 1959 -- in good part <u>because</u> of changes in the composition of defense spending and the recent cutbacks. By May 1965, manufacturing accounted for only 21.0 per cent of total employment, as compared with 22.7 per cent in May 1959.[11] Employees in durable goods manufacturing

represented only 16.4 per cent of all nonagricultural wage and salary workers in the first half of 1965, as compared with 18.6 per cent in the year 1959.[12]

Secondly, employment in the aircraft industry -- which is extraordinarily dependent on defense spending -- has been declining, while employment in electrical machinery -- less dependent on defense spending -- has, until very recently, been forging ahead, along with ordnance. Thus, there have been highly significant changes in the relative percentages of manufacturing employment in the four leading defense-related industries, even though their overall proportion of manufacturing employment has not changed greatly since 1959:[13]

	Per cent of all wage and salary workers in California manufacturing				
	1950	1953	1957	1960	1964
Ordnance	0.1	1.7	2.9	4.5	7.1
Aircraft	11.3	19.7	21.2	17.3	11.8
Electrical equipment	3.9	6.3	9.2	11.7	13.9
Instruments	2.0	1.7	1.6	1.7	2.0
All aerospace industries	17.3	29.4	34.9	35.3	34.8

If we assume that the percentages of defense-related employment in metals, electrical machinery, transportation equipment, and instruments and ordnance are the same at present as in 1959 (Table 2) -- not a safe assumption, but there are reasons for supposing that the percentages have not changed greatly -- we may estimate that defense-related employment of wage and salary workers in these four industries increased by only about 4,200 workers between 1959 and the first half of 1965 and declined as a percentage of the total number of nonagricultural wage and salary workers from 7.8 to 6.6 per cent.

There has also been another change of some significance in this connection since 1959. In the government sector, state and local government employment has been rising rapidly, while federal government employment has increased only slightly. Hansen and his colleagues estimated government employment in California attributable to sales to the Federal Government at 156,700, or 62.7 per cent of the total number of federal employees in California that year. If we apply this same percentage to the total number of federal employees in the state in the first half of 1965, we get an estimate of 168,300 federal employees whose employment is attributable to defense spending. This number represents 15.4 per cent of all government employees in the state and 3.0 per cent of all nonagricultural wage and salary workers. The corresponding percentages in 1959 were 18.8 and 3.3.

Although these estimates are admittedly crude, they suggest that defense-related employment in four leading manufacturing industries and in the government sector declined from an estimated 11.1 per cent of all nonagricultural wage and salary workers in 1959 to 9.6 per cent in the first half of 1965. If this development has been in considerable part responsible for California's worsening relative unemployment situation, it nonetheless suggests that total employment in the state would probably be relatively somewhat less affected by further cutbacks in defense spending than would have been the case as a result of equivalent cutbacks six years ago.

As I write these paragraphs in August 1965, I am acutely aware of the probability that developments in Vietnam will lead to an increase in federal procurement expenditures. This would probably result in an improvement in California's relative unemployment situation, though not for reasons which

would lead most of us to rejoice. In any case, the impact of such a reversal could well prove to be temporary. Thus, there is every reason for continuing analysis of the probable impact of a gradual long-run decline in defense spending in California.

Manufacturing employment and total employment. As I have shown in my earlier studies, spurts in California's rate of growth have been associated with the growth of the state's "export" industries, i.e., those industries that serve a national or international market rather than the local market. At the same time, of course, the rapid population growth of the state has encouraged a high secular rate of increase in goods and services which cater to local markets. There has been a chicken-and-egg relationship at work in which growth of the export industries has stimulated in-migration which in turn has stimulated growth of locally oriented industries, which in turn has attracted other in-migrants. But the timing of the periods of accelerated growth has been determined by the behavior of the export industries. And, among the nonagricultural export industries, the four defense-related industries have played an important role during the postwar period in terms of their impact on total employment. How has the growth of employment in export industries been related to the growth of total employment of nonagricultural wage and salary workers in the state in the postwar years?

Let us consider the relationship between the growth of employment in six export industries -- ordnance, primary metals, fabricated metals, electrical machinery, aircraft, and ship-building -- and total employment of nonagricultural employees in four postwar upswings -- on a peak-to-peak basis:[14]

	1948-53	1953-57	1957-60	1960-64
Percentage increase in employment				
(1) Defense-related industries	116.0	34.7	2.4	3.8
(2) All nonagricultural employees	22.7	16.6	8.2	14.1
Numerical increase in (2) as multiple of increase in (1)	2.2	4.3	27.3	30.7

Clearly, very rapid increases in total employment of wage and salary workers have tended to occur in periods when employment in the defense-related industries was increasing particularly sharply, but this is about the most that can be said. The actual ratios of the rate of increase of employment in the defense-related industries to that of all wage and salary workers have varied widely, as have the multiples shown in the third row of the table.

It should be noted that four other industries -- chemicals, rubber, nonelectrical machinery, and instruments -- could be classified as export industries on the basis of the Hansen-Robson-Tiebout study, but annual employment estimates are not available for employment in these industries for years before 1958. Moreover, I do not believe their inclusion would materially alter the relationships shown above.

Although California's overall rate of employment expansion has been greatly stimulated in periods when the export industries were expanding rapidly, it has, nevertheless, exceeded that in the nation in recent years despite the decelerated expansion of employment in the export industries. How long this could go on, however, is not clear. Continued cutbacks in defense spending could well lead to a situation resembling that of 1945-48, with relatively slow employment expansion in the state and an unemployment rate exceeding the national rate by a wider margin.

However, California's high per capita income and high secular rate of population growth are two factors which encourage the growth of employment in industries catering to the local market even when the growth of the export industries is lagging. We shall examine the behavior of employment in nonmanufacturing industries at a later point.

Changes in the structure of manufacturing employment. Postwar changes in the structure of manufacturing employment have in some respects conformed with long-run trends and in other respects have diverged from these trends. Probably the most important long-run tendency has been the decline in the relative importance of manufacturing sectors closely related to the extractive industries. In 1899 food processing and lumber accounted for 43 per cent of all employment of factory production workers (Table 3). By 1947, the share of these industries had declined to 24 per cent. Petroleum refining -- another sector closely related to the extractive industries -- had developed rapidly in the early decades of this century and accounted for 3.2 per cent of manufacturing employment in 1947.

Other industries which significantly increased their shares of factory employment between 1899 and 1947 were paper, rubber, furniture, stone, clay, and glass products, metal and metal products, motor vehicles, and shipbuilding. However, the most spectacular change had been the development of the aircraft industry, chiefly in the 1930's. By 1939, this industry accounted for 6.2 per cent of production worker employment in the state. Then, along with shipbuilding, it expanded enormously during the war. By 1947, after sharp cutbacks from wartime production levels, the aircraft industry accounted for 10.8 per cent of all manufacturing employees, but the share of shipbuilding -- even more sharply affected by cutbacks --

Table 3

Percentage Distribution of Production Workers in Manufacturing by Industry, California, Selected Years, 1899-39, and of Employed Workers, 1947-64

	Production workers			Employees		
Industry	1899	1929	1939	1947	1957	1964
Total number (in thousands)	72.0	263.1	271.3		1283.8	1392.1
Per cent	100.0	100.0	100.0	100.0	100.0	100.0
Nondurable goods	49.1	51.7	53.6	43.8	32.0	32.5
Food and kindred products	23.9	25.2	26.0	18.2	n.a.	12.0
Textile mill products	0.6	2.7	1.7	0.8	n.a.	0.5
Apparel and related products	7.1	6.0	8.2	6.5	4.5	4.6
Paper and allied products	0.4	1.6	2.0	1.8	1.9	2.2
Printing and publishing industries	7.1	6.5	5.9	6.3	5.0	5.5
Chemicals and allied products	4.1	3.0	3.6	4.1	n.a.	3.2
Petroleum refining, etc.	0.1	3.3	3.5	3.2	n.a.	2.1
Rubber products	----[a]	2.5	1.8	2.0	n.a.	1.9
Leather and leather products	5.7	0.9	0.9	0.9	0.5	0.4
Durable goods	39.8	46.2	44.1	54.0	68.0	65.8
Ordnance and accessories	----	----	----	----	2.9	7.1
Lumber and wood products	19.0	13.0	8.9	5.8	4.3	3.9
Furniture and fixtures	1.0	3.0	3.6	2.8	2.3	2.4
Stone, clay, and glass products	3.0	5.4	4.1	4.1	3.1	3.6
Metal and metal products	14.1	19.6	17.8	23.5		31.4
Primary metal industries			4.7	4.7	4.2	3.7
Fabricated metal products			7.0	8.2	6.7	6.9
Machinery, exc. electrical			4.7	7.9	n.a.	6.9
Electrical machinery	0.3	1.7	1.4	2.7	9.2	13.9
Iron and steel, foundry products nonferrous metal products, etc.	13.8	17.9				
Transportation equipment	2.7	5.2	9.7	16.9		15.4
Motor vehicles and equipment	----	2.9	2.3	2.5	2.7	2.3
Aircraft and parts	----	0.5	6.2	10.8	21.2	11.8
Shipbuilding and repair	1.2	1.6	1.5	2.8	0.9	0.7
Other	n.a.	n.a.	n.a.	n.a.		0.6
Instruments and related products				1.0	1.6	2.0
Miscellaneous	11.1	2.1	2.3	2.2		1.7

Sources: Margaret S. Gordon, Employment Expansion and Population Growth: The California Experience, 1900-1950 (Berkeley and Los Angeles: University of California Press, 1954), Tables 9 and A-18; and Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by Industry, California, Annual Averages, 1939-64, Division of Labor Statistics and Research, California Department of Industrial Relations (San Francisco: 1961).

[a]Less than 0.05 per cent.

had fallen to 2.8 per cent.

The postwar years have been characterized by a very substantial expansion of employment in durable goods manufacturing, as we have already observed in connection with the 1950-60 changes; and, within the durable goods sector, it has been the electrical machinery industry which has made the most spectacular relative gains. Employment in the ordnance industry (chiefly missiles) has also expanded markedly as a percentage of total employment, while the aircraft and parts industry increased its share of employment very sharply between 1947 and 1957 but then fell back.

California may be said to be specialized in those manufacturing industries in which the percentage of all manufacturing employment in the state exceeds that in the nation. On this basis, there have been some rather pronounced changes in the degree of specialization in the postwar period. Among the nondurable goods industries, the proportion of employment in food and kindred products and petroleum refining was comparatively high in the state in 1947. The food industry has lost a good deal of ground in this respect, while the ratio has also declined somewhat in petroleum refining (Table 4).

However, it must be kept in mind that the entire nondurable goods sector has lost out relatively in California, in large part because the durable goods sector has forged ahead so spectacularly. Another factor has been the fairly long-established tendency in some of the nondurable goods industries, e.g., petroleum, for employment to decline in the face of substantial increases in production, because of high rates of increase in productivity. All the California nondurable goods industries have made some progress in the postwar period in the sense of increasing their share

Table 4

Ratio of Percentage of Manufacturing Workers in Each Industry in California to That in United States, Selected Years, 1899-64

Industry	Production workers			Employed workers		
	1899	1929	1939	1947	1957	1964
Total	1.00	1.00	1.00	1.00	1.00	1.00
Nondurable goods	1.04	1.10	1.03	0.98	0.75	0.75
Food and kindred products	2.99	2.86	2.52	1.80		1.20
Textile mill products	0.04	0.19	0.12	0.09		0.10
Apparel and related products	1.01	0.91	0.85	0.86	0.50	0.61
Paper and allied products	0.18	0.55	0.57	0.58	0.58	0.61
Printing and publishing industries	1.54	1.51	1.44	1.26	0.98	1.00
Chemicals and allied products	1.71	0.91	1.03	0.93		0.63
Petroleum refining, etc.	0.14	2.54	2.50	2.13		1.91
Rubber products	----	1.39	1.20	1.11		0.76
Leather and leather products	1.02	0.24	0.21	0.33	0.23	0.20
Durable goods	0.84	0.94	1.03	1.06	1.18	1.20
Ordnance and accessories	----	----	----	----	3.63	4.73
Lumber and wood products	1.27	1.55	1.65	1.32	1.13	1.11
Furniture and fixtures			1.50	1.22	1.05	1.05
Stone, clay, and glass products	0.57	1.32	1.21	1.28	0.89	1.00
Metal and metal products	0.64	0.71	0.73	0.75		0.98
Primary metal industries			0.55	0.58	0.53	0.52
Fabricated metal products			1.21	1.21	0.99	1.00
Machinery, exc. electrical			0.68	0.73		0.74
Electrical machinery	0.33	0.44	0.44	0.48	1.18	1.56
Iron and steel, foundry products, nonferrous metal products, etc.	0.65	0.76				
Transportation equipment	0.61	0.74	1.39	2.04		1.64
Motor vehicles and equipment	----	0.54	0.45	0.51	0.60	0.52
Aircraft and parts	----	2.50	10.33	7.20	4.08	3.37
Shipbuilding and repair	1.20	2.29	1.67	2.80	1.00	0.88[a]
Other						
Instruments and related products				0.62	0.80	0.95
Miscellaneous	2.09	0.51	0.43	0.55		0.74

Sources: Margaret S. Gordon, Employment Expansion and Population Growth: The California Experience, 1900-1950 (Berkeley and Los Angeles: University of California Press, 1954), Table A-20; Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by Industry, California, Annual Averages, 1939-64, Division of Labor Statistics and Research, California Department of Industrial Relations (San Francisco: 1961); Manpower Report of the President, March 1965, p. 233; and Employment and Earnings.

[a]Data relate to April 1964.

of total U.S. employment in the industry, but the rate of increase by this measure has varied greatly from industry to industry (Table 5).

In the durable goods sector, California is now less specialized in lumber, furniture, stone, clay, and glass products, and in primary and fabricated metal products than in 1947. There is also considerably less specialization in aircraft. On the other hand, ordnance and electrical machinery have forged ahead as areas of specialization.

Again, however, we find that almost every industry in the durable goods sector has increased its share of total U.S. employment. The exception is the aircraft industry, which has lost ground by this measure to a significant extent.

The shift to nonproduction workers. There is one respect in which structural changes in employment have proceeded at a substantially more rapid pace in California than in the nation. Because of California's high degree of concentration in manufacturing industries in which the nonproduction worker component has been increasing at a relatively rapid pace and is now extraordinarily high, factory production workers have lost ground relatively more than in the nation as a whole.

> The three main aerospace industries -- missiles, aircraft, and electronics, in that order -- lead the list of those California manufacturing industries with the largest share of nonproduction workers.[15] Half or more of all employees in these industries (more than 60 per cent in the case of missiles) are white-collar workers, in part an indication of the heavy concentration of scientific and other technical personnel needed to

Table 5

California's Share of Total U.S. Employees in Manufacturing, by Industry, Selected Years, 1947-64

(per cent)

Industry	1947	1953	1957	1960	1964
Total manufacturing	4.6	6.0	7.5	7.8	8.0
Nondurable goods	4.5	4.9	5.6	5.9	6.1
Food products	8.4			9.2	9.6
Textile mill products	0.4			0.7	0.8
Apparel, etc.	4.0	4.4	4.7	4.8	4.9
Paper, etc.	2.7	3.5	4.3	4.5	4.8
Printing, etc.	5.9	6.6	7.4	7.8	8.1
Chemicals	4.3			4.9	5.1
Petroleum refining, etc.	10.1			14.8	15.7
Rubber and miscellaneous plastics	5.0			6.6	6.3
Leather	1.5	1.6	1.7	1.5	1.6
Durable goods	4.9	6.9	8.9	9.4	9.5
Ordnance, etc.	--	7.8	26.8	34.1	38.6
Lumber	6.1	7.6	8.4	8.8	9.1
Furniture	5.7	6.9	8.0	8.1	8.2
Stone, clay, and glass	5.9	6.5	6.7	7.2	8.1
Primary metal industries	2.7	3.4	4.0	4.2	4.3
Fabricated metal products	5.6	6.6	7.3	8.0	8.1
Machinery, exc. electrical	3.4			5.8	6.0
Electrical machinery	2.2	5.0	8.8	11.9	12.5
Transportation equipment	9.5			15.2	13.2
Motor vehicles	2.3	3.3	4.5	4.2	4.2
Aircraft and parts	32.7	26.2	30.4	30.0	27.0
Shipbuilding	12.2	8.5	7.5	8.9	7.1[a]
Instruments	2.9	5.3	6.0	6.7	7.6
Miscellaneous	2.6			5.0	5.8

Sources: 1947 data are from U.S. Bureau of the Census, Census of Manufactures: 1947, Vol. III, pp. 22, 28, 92-93, and 96. Data for later years are from Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by Industry, California, Annual Averages, 1939-64, Division of Labor Statistics and Research, California Department of Industrial Relations (San Francisco: 1965); Manpower Report of the President, March 1965, p. 233; and Employment and Earnings.

[a]Data are for April 1964.

support those industries in the forefront of modern science.

At the other end of the scale out of every 100 workers in such mature industries as lumber, leather, apparel, and shipbuilding, fewer than 15 are in nonproduction activities.

Listed below are California manufacturing industries ranked according to their proportion of nonproduction workers in 1963:

50 per cent or more	25 to 49 per cent	16 to 24 per cent	15 per cent or fewer
Ordnance (missiles)	Chemicals	Primary metals	Shipbuilding and repair
Aircraft and parts	Printing and publishing	Rubber	Apparel
Electrical equipment (electronics)	Machinery	Paper	Leather
Petroleum refining	Instruments	Motor vehicles	Lumber
	Food products (excluding canning)	Stone-clay-glass	
		Furniture and fixtures	
		Fruit and vegetable canning	
		Textiles	

The shift in California occurred at a particularly rapid rate between 1954 and 1957, but it has continued to take pace at a fairly steady, though somewhat less pronounced, rate since then, whereas the shift in the nation as a whole has slowed down markedly:[16]

	Percentage of nonproduction workers in manufacturing	
	California	United States
1954	16.9	21.4
1957	30.1	23.2
1960	33.8	25.1
1964	36.8	26.0

In the 1954-57 period, the shift occurred in a manner which was probably generally painless for production workers, at least in California, since the number of production workers was occurring at a rapid rate despite the shift. Not so in 1957-60, when the number of production workers actually declined, though less sharply than in the nation. And in 1960-64, the number of production workers has increased only slightly in California -- by a somewhat smaller percentage than in the nation -- while the number of nonproduction workers has continued to increase quite rapidly:

Percentage increases in number of production and nonproduction workers

	Production workers		Nonproduction workers	
	California	United States	California	United States
1954-57	16.3	2.9	39.4	14.0
1957-60	- 2.8	-4.6	15.1	5.6
1960-64	1.0	1.7	14.9	6.8

Moreover, what the figures do not show is that the employment of production workers in California declined somewhat in 1962-63 and again, very slightly, in 1963-64. Employment of nonproduction workers, on the other hand, continued to increase in 1962-63 but declined in 1963-64. In the country as a whole, employment of both production and nonproduction workers increased in these years.

The revival of employment of production workers in manufacturing has played an important role in bringing down the unemployment rates of blue-collar workers in the nation in recent years. Unfortunately, there are no regularly collected data on unemployment rates by occupation for California, but there is a distinct probability that unemployment rates for blue-collar

workers are considerably higher than the corresponding U.S. rates at present, although the fact that employment in construction has been moving ahead more rapidly in the state than in the nation in recent years may be a partially offsetting influence. The generally more rapid expansion of employment in the trade and service industries in the state would also be expected to encourage shifts of displaced blue-collar workers into these industries on a relatively larger scale than in the nation as a whole.

Underlying the particularly pronounced increase in the relative importance of nonproduction worker employment in California in recent years, of course, has been a change in the composition of defense spending. With the shift from aircraft production to much greater emphasis on missiles and the space program, a dollar of defense expenditure creates considerably less employment -- particularly of blue-collar workers -- than was the case in the mid-fifties. So far as the direct effects on total employment are concerned, data compiled by the Department of Defense are of considerable interest (Table 6), although they are not thoroughly satisfactory, because the expenditure categories are not completely comparable with the employment categories. Between 1955 and 1957, for example, expenditures on the selected categories increased 5.6 per cent, while employment increased 15.8 per cent. On the other hand, between 1961 and 1963, expenditures increased 26.2 per cent, whereas employment increased only 5.5 per cent.

The trend toward types of defense expenditures which will result in the employment of a relatively large component of highly trained scientists, engineers, and technicians has been expected to continue. Expenditures for space programs are likely to increase substantially between 1965 and 1970, while expenditures for both aircraft and missiles are expected to

Table 6

Defense Expenditures for Selected Equipment, and Employment in Corresponding Industries, Annually, 1954-1963

Item	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
Department of Defense average monthly expenditures (millions of dollars)[a]	1,116	925	876	977	1,061	1,084	957	945	1,074	1,193
Aircraft and missiles	737	730	693	839	932	929	775	739	820	844
Ships	91	84	75	75	96	128	145	150	159	210
Ordnance, vehicles, and related equipment	288	111	108	63	33	27	37	56	95	139
Average monthly										
Employment (thousands)	1,076	1,027	1,109	1,189	1,076	1,072	989	996	1,044	1,051
Aircraft and parts	783	761	837	896	784	748	646	619	634	635
Ship and boat building and repairing	130	125	133	153	147	147	141	142	141	142
Ordnance	163	141	139	140	145	177	202	235	269	274

Source: Statistical Abstract of the United States, 1960, p. 241 and 1964, p. 256; employment data have been revised on the basis of statistics supplied by the U.S. Bureau of Labor Statistics. Data relating to expenditures on electronics and communications and to employment in the communications equipment industry have been excluded from the table, because revised employment data for recent years are not comparable with those for years before 1958.

[a]The data exclude the military assistance program and are not completely comparable with the employment categories.

decline. It is probable that the nonproduction worker component is even higher in space programs than in aircraft and missile production. Moreover, expenditures for research and development activities, which cut across other categories, are expected to continue to increase in relative importance.[17] These trends could, of course, be reversed to some extent as a result of expansion of military activities in Vietnam or elsewhere.

Changes in Occupation. California's occupational structure has tended to differ from that in the country as a whole in a number of significant ways (Table 7). The variations are explained in part by differences in the state's industrial structure, but they have also evidently been related to differences in wage structure. Although wages have been relatively high in California ever since the days of the Gold Rush -- with differentials showing some tendency toward a long-run decline -- the differences from the national average have tended to be wider at the bottom of the occupational ladder than at the top.[18] Moreover, they have been very much wider for farmers and farm laborers than for urban occupation groups, reflecting the relatively high value of output per worker in California agriculture.

In 1940, the proportion of white-collar workers was distinctly higher in California than in the nation, while the percentage employed in blue-collar work was slightly lower. (However, there were relatively more skilled craftsmen in California than in the nation, reflecting, at least in part, the higher proportion of workers employed in the construction industry, where the percentage of skilled workers tends to be high.) The proportion of service workers was somewhat larger in California than in the nation, but there were relatively few private household workers and comparatively more workers in other types of service work. And the proportion of

Table 7

Percentage Distribution of Employed Workers by Major Occupation Group, California and United States, 1940-1960

Occupation group	California			United States		
	1940	1950	1960	1940	1950	1960
Total employed workers (in thousands)	2,475	3,902	5,761	45,070	56,436	64,639
Per cent	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	42.9	45.0	47.4	32.5	36.8	41.2
Professional, technical, and kindred workers	10.6	11.0	13.7	7.9	8.7	11.2
Managers, officials, and proprietors, exc. farm	10.7	11.3	9.6	8.1	8.9	8.4
Clerical and kindred workers	11.5	14.2	16.3	9.7	12.3	14.4
Sales workers	9.1	8.5	7.8	6.8	6.9	7.2
Blue-collar workers	34.5	36.2	33.2	36.4	39.7	36.7
Craftsmen, foremen, and kindred workers	13.2	15.2	14.0	11.5	13.8	13.5
Operatives and kindred workers	15.0	15.4	14.9	17.9	19.8	18.4
Laborers, exc. farm and mine	6.3	5.6	4.3	7.0	6.1	4.8
Service workers	12.8	10.9	10.4	11.7	10.1	11.1
Private household	3.5	2.1	2.1	4.6	2.5	2.7
Other	9.3	8.8	8.3	7.1	7.6	8.4
Farm workers	9.9	6.7	3.8	18.4	11.9	8.7
Farmers and farm managers	4.1	2.8	1.4	11.4	7.6	3.9
Farm laborers and foremen	5.8	3.9	2.4	7.0	4.3	4.8
Occupation not reported	0.9	1.0	5.4	0.9	1.3	4.9

Sources: U.S. Census of Population: 1960, Volume PC(1)6C, p. 245, and Volume PC(1)1C, p. 219.

farm workers was decidedly lower in the state than in the nation.

In some respects, these differences tended to narrow somewhat between 1940 and 1960, largely because changes in the nation as a whole, which were generally consistent with long-run trends, were bringing the national occupational structure closer to that of California. Thus, the proportion of white-collar workers rose more sharply over the 20-year period in the country as a whole than in California, while the percentage of farm workers dropped more sharply (in percentage points).

However, the narrowing of the differences also resulted from certain changes in California's occupational structure which were inconsistent with national long-run trends. For example, the proportion of sales workers declined substantially in California but rose somewhat in the nation, with the result that the percentage of workers in this occupation in the state exceeded that in the nation by a narrower margin than in 1940. Similarly, the proportion of service workers, other than private household, declined in California but rose in the nation. It may well be that the distinctly greater degree of union organization and higher relative wages in these occupations in California have induced employers to adopt labor-saving innovations to a relatively great extent. This question will be more fully explored later on in other contexts.

One of the most striking phenomena revealed by Table 7 is the failure of the operatives (semi-skilled) group in California to rise in relative importance, despite the very substantial increase in the percentage of workers in durable goods manufacturing shown in Table 1. The fact that so much of the increase in durable goods employment was in the nonproduction worker category undoubtedly provides the main explanation. More than half

of the total gain in manufacturing employment, according to the classification used in the decennial census, occurred in fabricated metal products, electrical machinery and equipment, and aircraft and parts. Operatives lost ground in the first two of these three industries, and in all three a shift from blue-collar workers to white-collar workers occurred on a substantial scale (Table 8). It was chiefly the professional and technical group that gained in relative importance (and within this group the engineers), but the percentage of clerical workers also increased, while the proportions of managerial and sales workers fell off, except in aircraft. Another striking development in the aircraft industry was the sharp drop in the percentage of skilled craftsmen.

It should be noted that the fabricated metal products industry, as classified by the Census Bureau, includes types of employment which would be included under other categories in the employment statistics regularly published by the California Department of Industrial Relations. Among military procurement items included in this category by the Census Bureau are nuclear reactors, aircraft armament, incendiary bombs, firearms, guided missiles (completely assembled), and guns.

Table 9 sheds further light on the relatively high proportion of white-collar workers in California and on some of the significant developments between 1950 and 1960.

In 1950, there were comparatively large percentages of California men employed as engineers, medical and health workers, and "other" professional workers. This continued to be true in 1960, and in the case of engineers the margin between the percentage so employed in the state and the nation had widened -- undoubtedly reflecting chiefly the rapid growth of employment

Table 8

Occupational Distribution of Employed Workers in Fabricated Metal Products, Electrical Machinery, and Aircraft and Parts Industries, California, 1950 and 1960

	Fabricated metal products		Electrical machinery		Aircraft and parts	
Major occupation group	1950	1960	1950	1960	1950	1960
Total employed workers (in thousands)	52.2	178.6	25.0	147.0	82.5	182.8
Per cent[a]	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	26.2	44.0	38.6	48.8	36.0	43.9
Professional, technical, and kindred workers	4.7	20.6	13.2	24.5	17.9	21.9
Managers, officials, and proprietors	8.1	5.8	7.3	6.9	2.1	3.3
Clerical and kindred workers	10.4	16.0	14.2	15.4	15.6	18.2
Sales workers	3.0	1.6	3.9	2.0	0.4	0.5
Blue-collar workers	72.6	53.3	59.7	48.9	61.9	53.2
Craftsmen, foremen, and kindred workers	25.9	23.0	21.1	15.5	33.6	23.5
Operatives and kindred workers	41.3	28.3	36.1	32.5	27.6	29.2
Laborers	5.4	2.0	2.5	0.9	0.7	0.5
Service workers	1.2	1.3	1.4	1.0	1.6	1.4
Occupation not reported	0.2	1.4	0.2	1.3	0.4	1.4

Sources: Computed from data in U.S. Census of Population: 1950, Vol. II, Part 5, pp. 423-24, and U.S. Census of Population: 1960, Vol. PC(1), 6D, pp. 791-92.

[a]Items do not always add to totals because of rounding.

Table 9

Percentage Distribution of Employed Workers by Occupation Group and Sex, California and United States, 1940-1960

Occupation group	California			United States		
	1940	1950	1960	1940	1950	1960
Total employed men (in thousands)	1,841	2,753	3,859	33,892	40,662	43,467
Per cent	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	36.9	38.0	40.1	28.4	30.8	34.8
Professional, technical, and kindred workers	8.8	9.7	13.5	6.1	7.3	10.3
Engineers, technical	1.2	1.8	3.2	0.8	1.3	2.0
Medical and other health workers	7.6	1.4	1.4	5.3	1.1	1.2
Teachers, elementary and secondary schools		0.5	1.1		0.5	1.0
Other		6.0	7.7		4.4	6.2
Managers, officials, and proprietors, exc. farm	12.3	13.4	11.9	9.6	10.7	10.7
Salaried		6.3	7.5		5.3	6.7
Self-employed		7.1	4.4		5.4	4.0
Clerical and kindred workers	6.6	6.7	7.0	6.0	6.5	6.9
Sales workers	9.2	8.2	7.7	6.7	6.3	6.9
Retail trade		3.7	3.0		3.1	2.9
Other		4.5	4.7		3.2	4.0
Blue-collar workers	41.7	45.5	42.9	41.8	46.8	46.3
Craftsmen, foremen, and kindred workers	17.4	21.0	20.2	14.9	18.6	19.5
Foremen	1.3	1.7	2.4	1.4	1.9	2.5
Mechanics and repairmen	3.5	5.2	5.4	2.4	4.2	5.1
Metal craftsmen, exc. mechanics	2.5	2.6	2.7	2.8	2.7	2.5
Construction craftsmen	10.2	7.1	5.8	8.3	5.8	5.5
Other craftsmen		4.4	4.0		4.0	3.9
Operatives and kindred workers	16.1	16.3	16.5	17.9	20.1	19.9
Drivers and deliverymen	4.5	4.5	4.5	4.4	4.7	5.2
Other	11.6	11.8	11.9	13.5	15.4	14.6
Durable goods manufacturing			5.4			6.3
Nondurable goods manufacturing			2.0			3.7
Nonmanufacturing industries			4.5			4.6

Table 9 (cont.)

Occupation group	California			United States		
	1940	1950	1960	1940	1950	1960
Laborers, exc. farm and mine	8.2	7.7	6.2	9.0	8.1	6.9
Construction			1.3			
Manufacturing			1.3			
Other industries			3.6			
Service workers	8.0	7.2	6.5	6.1	6.0	6.1
Private household	0.4	0.2	0.1	0.3	0.2	0.1
Other	7.6	7.0	6.4	5.8	5.8	6.0
Protective service workers	1.5	1.7	1.6	1.3	1.4	1.3
Waiters, bartenders, cooks, and counter workers	2.2	1.8	1.5	1.3	1.3	1.2
Other	4.0	3.5	3.4	3.2	3.1	3.3
Farm workers	12.6	8.8	5.5	23.0	15.3	8.3
Farmers and farm managers	5.2	3.8	2.0	14.7	10.4	5.5
Farm laborers and foremen	7.4	5.0	3.3	8.3	4.9	2.8
Occupation not reported	0.7	0.9	5.2	0.7	1.1	4.6
Total employed women (in thousands)	634	1,148	1,903	11,178	15,773	21,172
Per cent	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	56.5	61.7	61.9	45.3	52.5	54.2
Professional, technical, and kindred workers	15.8	14.1	14.0	13.4	12.4	13.0
Medical and other health workers		4.5	4.3		3.6	3.7
Teachers, elementary and secondary schools		4.7	4.5		5.2	5.2
Other		5.0	5.2		3.6	4.1
Managers, officials, and proprietors, exc. farm	6.3	6.3	4.9	3.5	4.3	3.7
Salaried		3.1	3.1		2.2	2.3
Self-employed		3.2	1.8		2.1	1.4
Clerical and kindred workers	25.5	32.1	35.0	21.1	27.3	29.7
Secretaries, stenographers, and typists	11.2	11.2	11.9	8.8	9.6	10.3
Other	14.3	20.9	23.1	12.3	17.7	19.4
Sales workers	8.9	9.2	8.0	7.3	8.5	7.8
Retail trade		7.7	6.5		7.6	6.8
Other		1.5	1.5		0.9	1.0

Table 9 (cont.)

Occupation group	California			United States		
	1940	1950	1960	1940	1950	1960
Blue-collar workers	13.5	15.2	13.4	20.2	21.4	17.1
Craftsmen, foremen, and kindred workers	1.0	1.4	1.2	1.1	1.5	1.2
Operatives and kindred workers	11.9	13.2	11.6	18.1	19.2	15.4
Durable goods manufacturing		2.2	3.8		4.2	4.0
Nondurable goods manufacturing		5.8	4.4		10.8	8.2
Nonmanufacturing		5.1	3.5		4.2	3.1
Laborers, exc. farm and mine	0.6	0.6	0.3	1.0	0.7	0.5
Service workers	26.5	20.0	18.1	28.7	20.7	21.3
Private household	12.4	6.7	6.1	17.7	8.5	7.9
Other	14.1	13.3	12.0	11.0	12.2	13.4
Waiters, bartenders, cooks, and counter workers	5.9	5.6	5.4	4.3	5.0	5.7
Other	8.3	7.6	6.6	6.7	7.2	7.7
Farm workers	2.0	1.9	1.0	2.4	3.6	1.7
Farmers and farm managers	0.8	0.6	0.3	1.4	0.7	0.6
Farm laborers and foremen	1.2	1.3	0.7	1.0	2.9	1.1
Occupation not reported	1.4	1.3	5.8	1.5	1.8	5.7

Sources: U.S. Census of Population: 1960, Vol. PC(1)1C, p. 219, and Vol. PC(1)6C, p. 245.

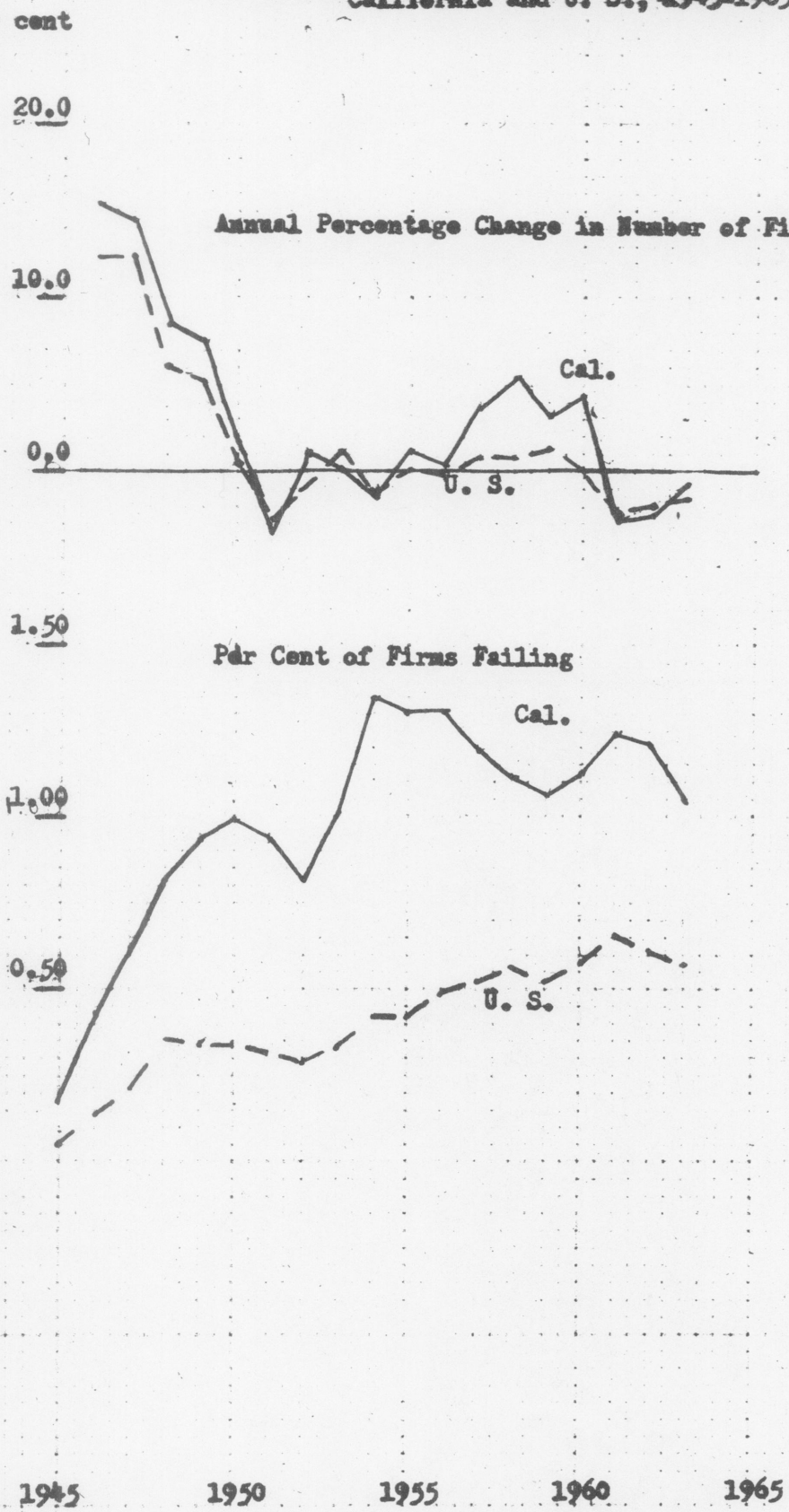
of engineers in the aerospace industries. The difference between the state and the nation narrowed, however, in the cases of medical and health workers and "other" professional workers.

California also has had a relatively high proportion of men in the managerial group, but the 1950 data indicate that the difference between the state and the nation was particularly wide for the self-employed -- and it was this difference that showed an especially marked decline between 1950 and 1960. There was also a decline in the percentage of self-employed women. Although data are not available in sufficient detail to permit a satisfactory analysis of this phenomenon, it is likely that small "ma and pa" stores and other types of tiny enterprises were losing ground to a relatively greater extent in California than in the country as a whole, with the rapid growth of supermarkets, the spread of department stores to the suburbs, the growth of large-scale dry cleaning establishments, and other similar developments.

In both California and the nation, the number of commercial and industrial firms mushroomed immediately after the war -- stimulated by veterans' loans and a backlog of unmet need -- but the rate of increase dropped quite sharply between 1946 and the early 1950's (Chart 3). California also experienced a second wave of substantial increases in the late 1950's -- shared only to a modest extent over the nation as a whole. Meanwhile, the failure rate tended to vary inversely with the rate of increase in the number of firms, and -- as has been the case historically[19] -- the failure rate in California substantially exceeded that in the country as a whole. This is scarcely surprising in an area of rapid growth. It seems probable, moreover, in view of the postwar boom in the establishment of new enterprises, that the number of self-employed persons in the state was abnormally high in 1950

Chart 3

ANNUAL PERCENTAGE CHANGES IN NUMBER OF COMMERCIAL AND INDUSTRIAL FIRMS, AND PER CENT OF FIRMS FAILING, California and U. S., 1945-1963



in the light of long-run trends. Class-of-worker data indicate that the total number of nonagricultural self-employed persons in the state increased by nearly 40 per cent between 1940 and 1950, but only by 11 per cent in the following decade.[20]

Certain other details revealed by Table 9 are worthy of special comment: (1) the relatively sharp decline in the proportion of construction craftsmen in California between 1950 and 1960, bringing the state's percentage of workers in this group of occupations much closer to the nationwide average; and (2) the failure of the proportion of drivers and deliverymen to increase in the state in a period when the percentage in this occupation was rising in the nation.

All in all, in terms of the nine Census major nonagricultural occupation groups, California's occupational structure changed to a greater extent than that in the nation as a whole between 1950 and 1960. The sum of the changes in the percentage of male employed workers in each of these nine groups, disregarding sign, amounted to 9.3 percentage points for California, as compared with 6.6 for the nation (Table 9). (If farmers and farm laborers are included, the total is slightly larger for the nation than the state, because of the much sharper drop in the percentage of farm workers in the country as a whole.) In terms of the more detailed occupational categories shown in Table 9, the shift amounted to 13.7 percentage points for men in nonagricultural occupations in California and 12.4 percentage points in the nation.

For women, the picture was mixed. In terms of the nine major occupation groups, the changes totalled only 9.6 percentage points in California, as compared with 10.4 in the nation. On the other hand, in terms of the more

detailed groups the shifts amounted to 13.2 percentage points in the state and to 10.9 in the country as a whole.

In view of the more rapid growth of employment in California throughout the greater part of the decade, adaptation to these occupational changes may have occurred without undue strain in the state, at least until close to the end of the decade. Further discussion of this point will be deferred until Part II, where the structure of unemployment in California at the time of the 1960 Census will be considered.

Employment Expansion in Cyclical Upswings

Thus far we have been concerned primarily with structural changes. But to consider in greater detail the developments responsible for the relatively unfavorable unemployment situation since 1960, we need to analyze the pattern of employment expansion in the current upswing compared with previous upswings -- and in relation to what has been happening in the nation as a whole. For this purpose, data have been assembled showing changes in annual average employment of nonagricultural workers by sector on a peak-to-peak basis (Tables 10 and 11). The year 1939 was not a cyclical peak year but is the first year for which reasonably comparable data for California and the United States are available. Similarly, 1964 was not a peak year but the most recent year for which annual data are available.

The data indicate, as would be expected on the basis of some of our previous discussion, that the key to the changing relationships between unemployment rates in California and the nation -- so far as it is to be found on the demand side of the labor market -- lies in what has been

Table 10

Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by Major Industry Division, and Percentage Changes, California and United States, Selected Years, 1939-64

Major industry division	Number of workers (in thousands)							Percentage change					
	1939	1945	1948	1953	1957	1960	1964	1939-45	1945-48	1948-53	1953-57	1957-60	1960-64
						California							
Total	1,812	2,961	3,163	3,881	4,525	4,896	5,573	63.4	6.8	22.7	16.6	8.2	13.8
Mineral extraction	40	31	36	37	37	31	30	-22.5	16.1	2.8	----	-16.2	- 3.2
Contract construction	79	139	233	262	288	295	348	75.9	67.6	12.4	9.9	2.4	18.0
Manufacturing	384	861	734	1,061	1,284	1,317	1,392	124.2	-14.8	44.6	21.0	2.5	5.7
Transportation, communication, and utilities	185	280	318	347	373	357	372	51.4	13.6	9.1	7.5	- 4.3	4.2
Trade	505	654	791	881	987	1,068	1,220	29.5	20.9	11.4	12.0	8.2	14.2
Finance, insurance, and real estate	94	98	132	167	204	243	297	4.3	34.7	26.5	22.2	19.1	22.2
Service	275	366	419	480	593	712	883	33.1	14.5	14.6	23.5	20.1	24.0
Government	250	534	501	646	761	874	1,045	113.6	- 6.2	28.9	17.8	14.8	19.6

/Table continues next page/

Table 10 (cont.)

Major industry division	Number of workers (in thousands)							Percentage change					
	1939	1945	1948	1953	1957	1960	1964	1939-45	1945-48	1948-53	1953-57	1957-60	1960-64
	United States												
Total	30,618	40,394	44,891	50,232	52,894	54,203	58,178	31.9	11.1	11.9	5.3	2.5	7.3
Mineral extraction	854	836	994	866	828	712	636	- 2.1	18.9	-12.9	- 4.4	-14.0	-10.7
Contract construction	1,150	1,132	2,169	2,623	2,923	2,885	3,105	- 1.6	91.6	20.9	11.4	- 1.3	7.6
Manufacturing	10,278	15,524	15,582	17,549	17,174	16,796	17,301	51.0	0.4	12.6	- 2.1	- 2.2	3.0
Transportation, communication, and utilities	2,936	3,906	4,189	4,290	4,241	4,004	3,974	33.0	7.2	2.4	- 1.1	- 5.6	- 0.7
Trade	6,426	7,314	9,272	10,247	10,886	11,391	12,184	13.8	26.8	10.5	6.2	4.6	7.0
Finance, insurance, and real estate	1,462	1,497	1,829	2,146	2,477	2,669	2,945	2.4	22.2	17.3	15.4	7.8	10.3
Service	3,517	4,241	5,206	5,867	6,749	7,392	8,532	20.6	22.8	12.7	15.0	9.5	15.4
Government	3,995	5,944	5,650	6,645	7,616	8,353	9,503	48.8	- 4.9	17.6	14.6	9.7	13.8

Sources: Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by Industry, California, Annual Averages, 1939-64 (San Francisco: Division of Labor Statistics and Research, California Department of Industrial Relations, 1965), and Manpower Report of the President, March 1965, p. 233.

Table 11

Difference Between Percentage Changes in Number of Wage and Salary Workers, by Major Industry Division, California and United States, Selected Years, 1939-64

Major industry division	1939-45	1945-48	1948-53	1953-57	1957-60	1960-64
Total	31.5	- 4.3	10.8	11.3	5.7	6.5
Mineral extraction	-20.4	- 2.8	15.7	4.4	-11.8	7.5
Contract construction	77.5	-24.0	- 8.5	1.5	- 9.0	10.4
Manufacturing	73.2	-15.2	32.0	23.1	4.6	2.7
Transportation, communication, and utilities	18.4	6.4	6.7	8.6	- 3.2	4.9
Trade	15.7	- 5.9	0.9	5.8	2.0	7.2
Finance, insurance, and real estate	1.9	12.5	9.2	6.8	3.7	11.9
Service	12.5	- 8.3	1.9	8.5	5.1	8.6
Government	64.8	- 1.3	11.3	3.2	0.2	5.8

Source: Computed from data in Table 10.

happening in the manufacturing sector. In 1939-45, 1948-53, and 1953-57, employment expansion was considerably more pronounced in California than in the nation, but the difference was particularly large in manufacturing. (The difference was also very large in the construction sector in 1939-45, but, since this is a much smaller sector than manufacturing, its impact on other employment is relatively less important.) In these three periods, the unemployment rate in California was either below that in the nation, or (in 1948-53) fell more sharply than in the country as a whole.

In 1945-48, on the other hand, there can be little question that it was the sharp cutbacks in manufacturing employment that were primarily responsible for the considerably smaller percentage increase in employment of nonagricultural wage and salary workers in California than in the nation as a whole. As I have previously commented in an article which dealt with the Pacific Northwest as well as California:[21]

> The 5 years following the war represented a period of readjustment on the Pacific Coast. Although, to a casual observer, labor market conditions were not noticeably depressed and there was a marked expansion of employment in industries serving the consumer, unemployment rates tended to be substantially higher throughout this period than in the Nation as a whole. Whereas many eastern and midwestern factories reconverted to peacetime production shortly after the war, there were relatively few opportunities for reconversion on the Pacific Coast. This was largely attributable to the relatively limited development of heavy industry on the Pacific Coast before the war.

> Wartime expansion, which was highly concentrated in aircraft production, shipbuilding, port activities, and Government installations, did not take the form, to any appreciable extent, of conversion from civilian to wartime production. Thus, the postwar period was characterized by sharp cutbacks in war-related employment, rather than by reconversion.

In 1957-60, the impetus from the manufacturing sector in California was far weaker than it had been in the two preceding periods. Manufacturing employment increased only 2.5 per cent in California, while total employment was increasing 8.2 per cent. However, manufacturing employment declined 2.2 per cent in the nation, and thus California's experience appeared to be relatively favorable.

Not only was overall expansion of California manufacturing employment much less pronounced in 1957-60 than in 1953-57, but the pattern of expansion was much more spotty (Tables 12 to 14). Employment in ordnance and in electrical machinery continued to forge ahead at fairly spectacular rates of increase, but there was a sharp decline in aircraft employment and something of a decline in employment in motor vehicles, primary metals, lumber, and leather. Given the size of the aircraft industry, and its role as a purchaser of metal products, the decline in aircraft employment was clearly the main factor holding back the increase in durable goods employment, which was considerably smaller in percentage terms than the increase in the nondurable goods sector. Moreover, it is interesting to note that the unemployment rate in California began to increase between the third and fourth quarters of 1959 (Chart 1), and that this increase was uninterrupted in the first quarter of 1960, whereas the national unemployment rate fell in

Table 12

Estimated Number of Wage and Salary Workers in Manufacturing, by Industry, California, Selected Years, 1953-64

Industry	Number of workers (000)				Percentage change		
	1953	1957	1960	1964	1953-57	1957-60	1960-64
Total manufacturing	1,060.8	1,283.8	1,317.2	1,392.1	21.0	2.6	5.7
Nondurable goods	367.3	410.9	432.1	452.7	11.9	5.2	4.8
Food and kindred products	n.a.	n.a.	165.4	166.6			0.7
Textile mill products	n.a.	n.a.	6.1	7.1			16.4
Apparel, etc.	55.4	57.2	59.5	64.6	3.2	4.0	8.6
Paper, etc.	18.3	24.7	27.2	30.5	35.0	10.1	12.1
Printing, etc.	52.8	64.8	71.3	77.1	22.7	10.0	8.1
Chemicals	n.a.	n.a.	40.6	45.1			11.1
Petroleum refining	n.a.	n.a.	31.3	29.3			- 6.4
Rubber and plastics	n.a.	n.a.	25.2	26.9			6.7
Leather	6.2	6.4	5.5	5.5	3.2	-14.1	----
Durable goods	693.5	872.9	885.1	939.4	25.9	1.4	6.1
Ordnance and accessories	18.3	37.6	68.9	99.4	105.5	83.2	44.3
Lumber	58.4	55.3	54.9	54.3	- 5.3	- 0.7	- 1.1
Furniture	25.7	29.8	31.2	32.9	16.0	4.7	5.4
Stone, clay, and glass	38.0	39.9	43.6	50.3	5.0	9.3	15.4
Primary metal industries	46.4	53.6	51.2	52.2	15.5	- 4.5	2.0
Fabricated metal products	76.4	85.4	91.3	96.4	11.8	6.9	5.6
Machinery, exc. electrical	n.a.	n.a.	85.4	96.2			12.6
Electrical machinery and equipment	66.6	117.8	174.1	192.9	76.9	47.8	10.8
Transportation equipment	n.a.	n.a.	241.3	213.8			-11.4
Motor vehicles	29.9	34.6	30.5	32.1	15.7	-11.8	5.2
Aircraft and parts	208.8	272.5	194.0	163.7	30.5	-28.8	-15.6
Other	n.a.	n.a.	16.8	18.0			7.1
Instruments and related products	17.8	20.5	23.8	27.9	15.2	16.1	17.2
Miscellaneous	n.a.	n.a.	19.4	23.1			19.1

Source: Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by Industry, California, Annual Averages, 1939-64 (San Francisco: Division of Labor Statistics and Research, California Department of Industrial Relations, 1965).

Table 13

Estimated Number of Wage and Salary Workers in Manufacturing, by Industry, United States, Selected Years, 1953-64

Industry	Number of workers (000)				Percentage change		
	1953	1957	1960	1964[b]	1953-57	1957-60	1960-64
Total manufacturing	17,549	17,174	16,796	17,302	- 2.1	- 2.2	3.0
Nondurable goods[a]	7,438	7,319	7,336	7,455	- 1.6	0.2	1.6
Food and kindred products	1,839	1,805	1,790	1,730	- 1.8	- 0.8	- 3.4
Textile mill products	1,155	981	924	897	-15.1	- 5.8	- 2.9
Apparel, etc.	1,248	1,210	1,233	1,311	- 3.0	1.9	6.3
Paper, etc.	530	571	601	630	7.7	5.3	4.8
Printing, etc.	803	870	911	962	8.3	4.7	5.6
Chemicals	768	810	828	877	5.5	2.2	5.9
Petroleum refining	241	232	212	187	- 3.7	- 8.6	-11.8
Rubber and plastics	361	372	379	430	3.0	1.9	13.5
Leather	389	373	363	354	- 4.1	- 2.7	- 2.5
Durable goods	10,110	9,856	9,459	9,845	- 2.5	- 4.0	4.1
Ordnance and accessories	234	140	202	258	-40.2	44.3	27.7
Lumber	771	655	627	597	-15.0	- 6.3	- 4.8
Furniture	370	374	383	402	1.1	2.4	5.0
Stone, clay, and glass	581	595	604	616	2.4	1.5	2.0
Primary metal industries	1,383	1,355	1,231	1,227	- 2.0	- 9.2	- 0.3
Fabricated metal products	1,156	1,167	1,135	1,197	1.0	- 2.7	5.5
Machinery, exc. electrical	1,554	1,586	1,479	1,612	2.1	- 6.7	9.0
Electrical machinery and equipment	1,333	1,343	1,467	1,549	0.8	9.2	5.6
Transportation equipment	1,969	1,909	1,587	1,621	- 3.0	-16.9	2.1
Motor vehicles	917	769	724	769	-16.1	- 5.9	6.2
Aircraft and parts	796	896	646	606	12.6	-27.9	- 6.2
Other							
Instruments and related products	337	342	354	369	1.5	3.5	4.2
Miscellaneous	421	387	390	400	- 8.1	0.8	2.6

Source: Manpower Report of the President, March 1965, p. 233.

[a]Tobacco products are omitted; therefore, items do not add to total.

[b]Preliminary.

Table 14

Differences Between Percentage Changes in Number of Wage and Salary Workers in Manufacturing, by Industry, California and United States, Selected Years, 1953-64

(Percentage change in California minus percentage change in United States)

Industry	1953-57	1957-60	1960-64
Total manufacturing	23.2	4.8	2.7
Nondurable goods	13.5	5.0	3.2
Food and kindred products			4.1
Textile mill products			19.3
Apparel, etc.	6.2	2.1	2.3
Paper, etc.	27.3	4.8	7.3
Printing, etc.	14.4	5.3	2.5
Chemicals			5.2
Petroleum refining			5.4
Rubber and plastics			- 6.8
Leather	7.3	-11.4	2.5
Durable goods	28.4	5.4	2.0
Ordnance and accessories	145.7	38.9	16.6
Lumber	9.7	5.6	3.7
Furniture	14.9	2.3	0.4
Stone, clay, and glass	2.6	7.8	13.4
Primary metal industries	17.5	4.7	2.3
Fabricated metal products	10.8	9.6	0.1
Machinery, exc. electrical			3.6
Electrical machinery and equipment	76.1	38.6	5.2
Transportation equipment			-13.5
Motor vehicles	31.8	- 5.9	- 1.0
Aircraft and parts	17.9	- 0.9	- 9.4
Other			
Instruments and related products	13.7	12.6	13.0
Miscellaneous			16.5

Source: Computed from Tables 12 and 13.

the first quarter of 1960. It is from this period that the deterioration in California's relative unemployment situation can be dated, and the trouble quite clearly stemmed from the aircraft industry. On an annual basis aircraft employment declined fairly sharply between 1959 and 1960, whereas employment was increasing in most other industries in California (Charts 4 to 9). On a quarterly basis, the decline got under way in the fourth quarter of 1959 (Table 15), although there had been, of course, an earlier decline in 1957-58.

The impact was most pronounced in the San Diego area, where 23 per cent of all nonagricultural wage and salary workers were employed in the aircraft industry in July 1959. The unemployment rate in San Diego County rose sharply, from 3.6 per cent in the third quarter of 1959 to 7.0 per cent in the third quarter of 1960 (Chart 10). In the Los Angeles-Long Beach area, where the total number of aircraft workers (176,900) at the time was considerably higher than in San Diego (56,800), the impact on the unemployment rate was somewhat less severe, because of the greater diversification of employment, with the aircraft industry representing less than eight per cent of total nonagricultural wage and salary employment. Moreover the unemployment rate in the Los Angeles-Long Beach area fell much more sharply following the 1960-61 recession.

In the 1960-64 period, total employment of nonagricultural wage and salary workers has increased considerably more rapidly in California than in the nation, but the difference has been much more pronounced in nonmanufacturing sectors than in manufacturing, where it has amounted to only 2.7 percentage points. Again, the key to the situation is to be found chiefly in the aircraft industry, in which employment has continued to decline fairly

Chart 4

Calif. Scale (000)

WAGE AND SALARY WORKERS IN SELECTED INDUSTRY GROUPS, Annual Averages, California and U. S., 1940-1964

U. S. Scale (000)

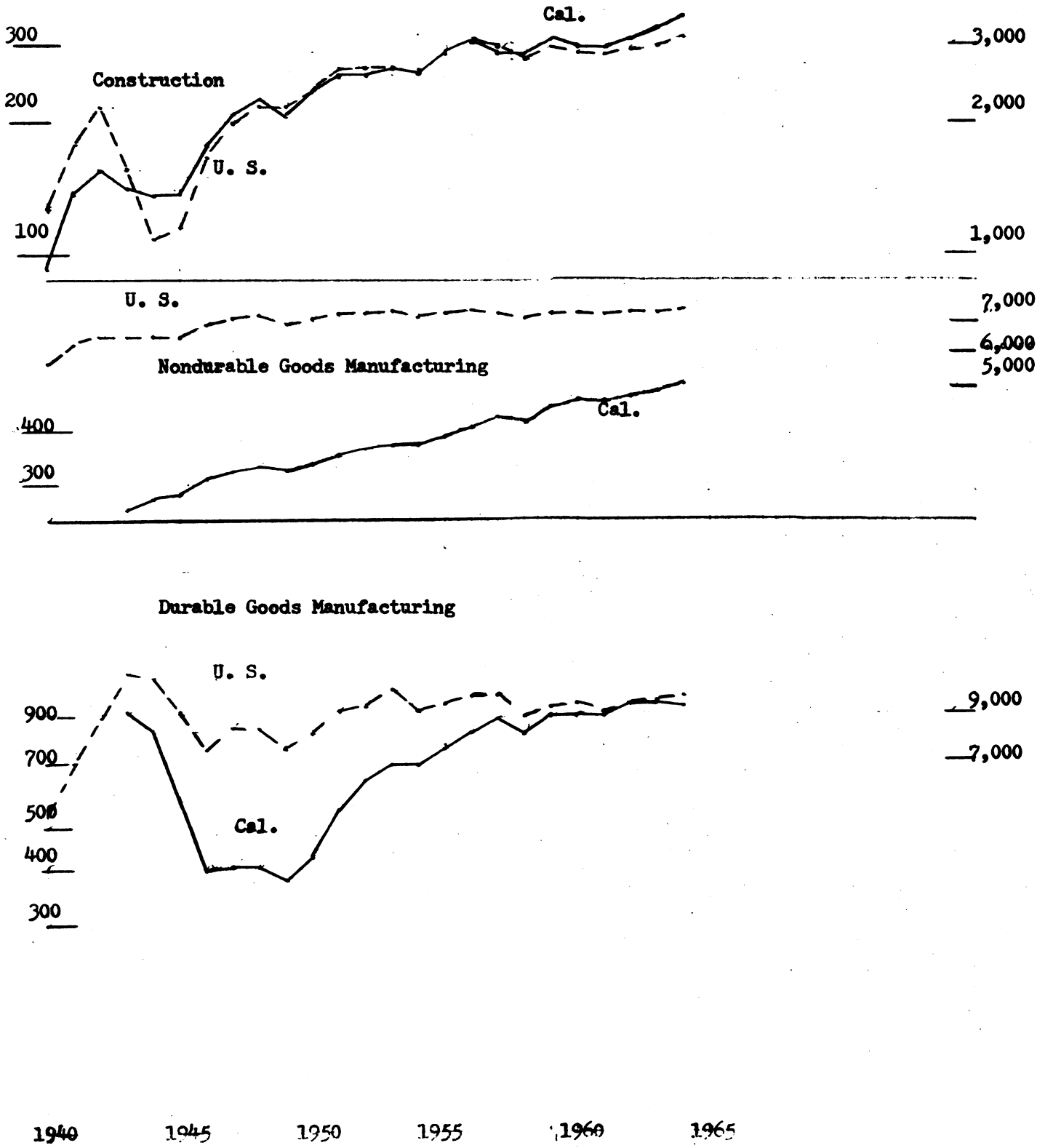


Chart 5

Calif. Scale (000)

WAGE AND SALARY WORKERS IN SELECTED INDUSTRY GROUPS, Annual Averages, California and U. S., 1940-1964

U. S. Scale (000)

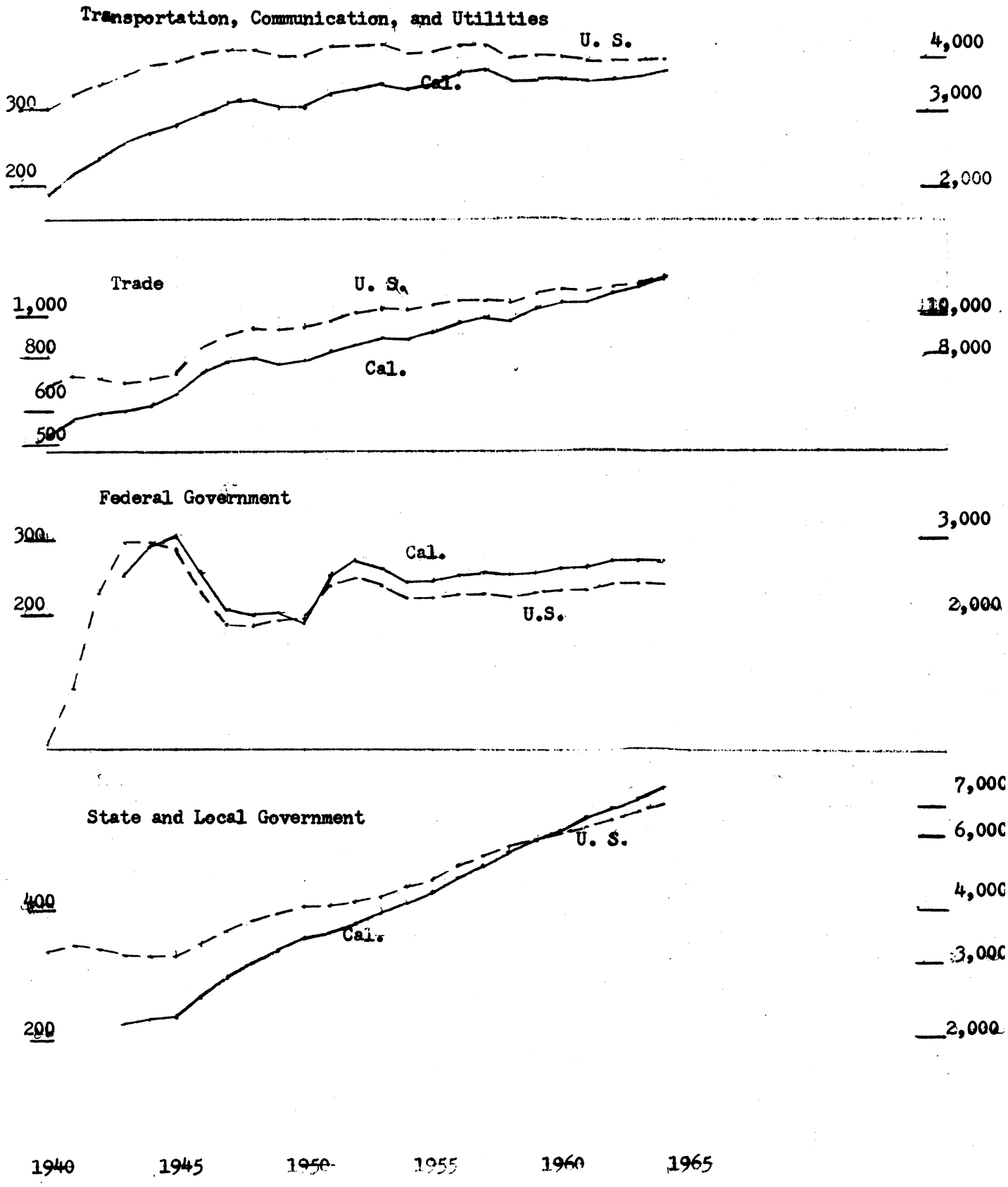


Chart 6

WAGE AND SALARY WORKERS IN SELECTED MANUFACTURING INDUSTRIES, Annual Averages, California and U. S., 1940-64

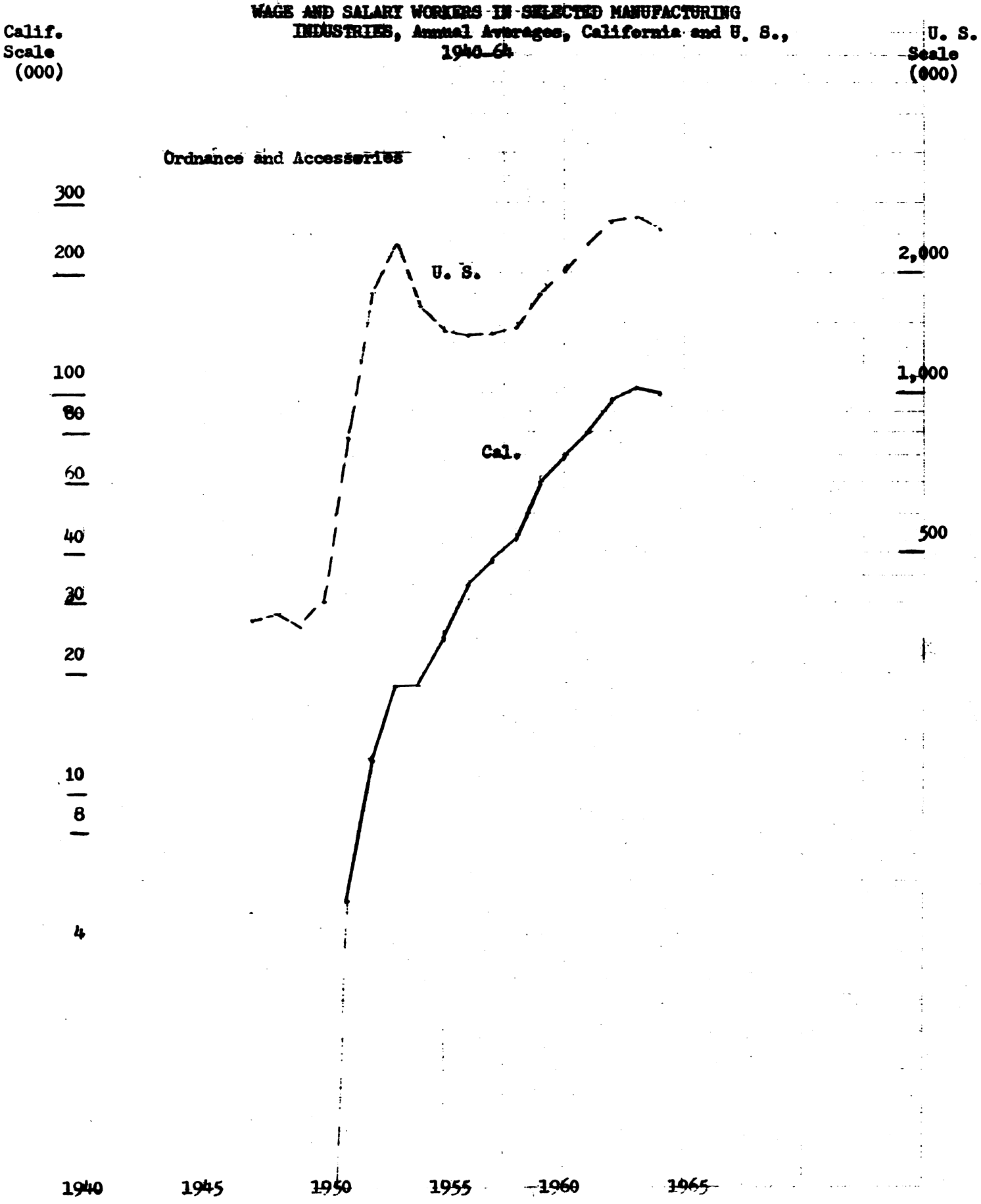


Chart 7

Calif. Scale (000)

U. S. Scale (000)

WAGE AND SALARY WORKERS IN SELECTED MANUFACTURING INDUSTRIES, Annual Averages, California and U. S., 1940-64

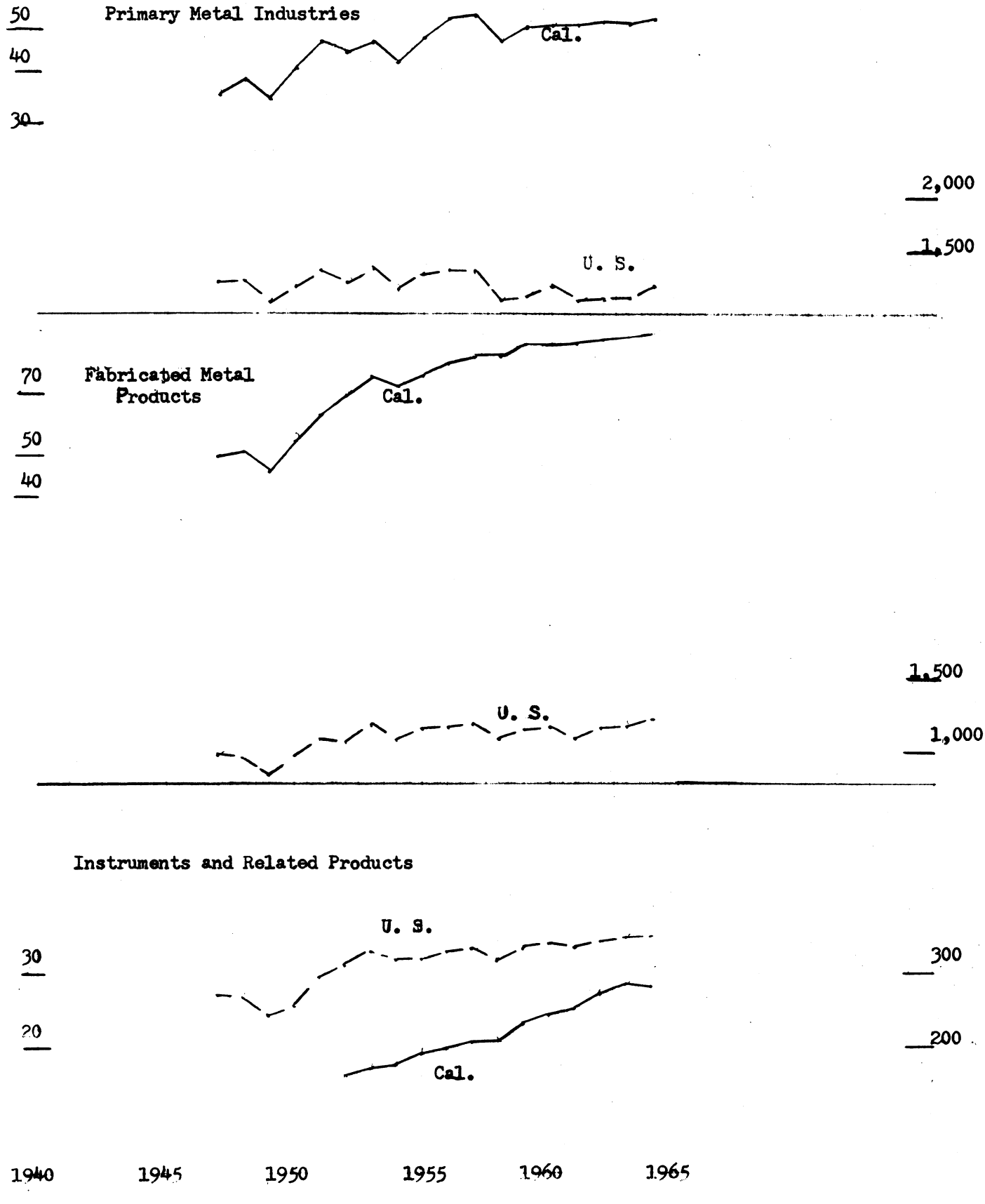


Chart 8

Calif. Scale (000)

U. S. Scale (000)

WAGE AND SALARY WORKERS IN SELECTED MANUFACTURING INDUSTRIES, Annual Averages, California and U. S., 1940-64

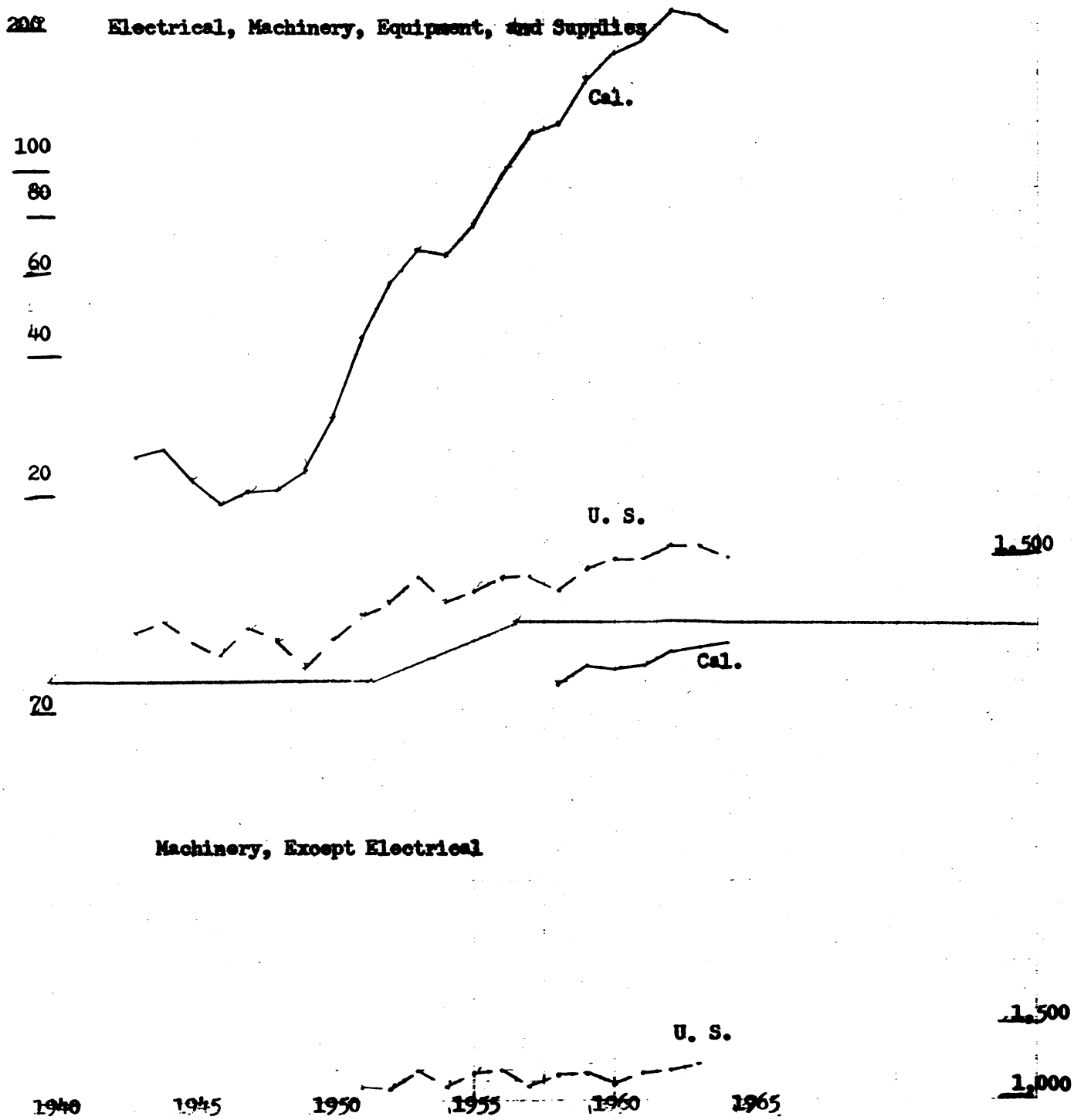


Chart 9

Calif. Scale (000)

U. S. Scale (000)

WAGE AND SALARY WORKERS IN SELECTED MANUFACTURING INDUSTRIES, Annual Averages, California and U. S., 1940-64

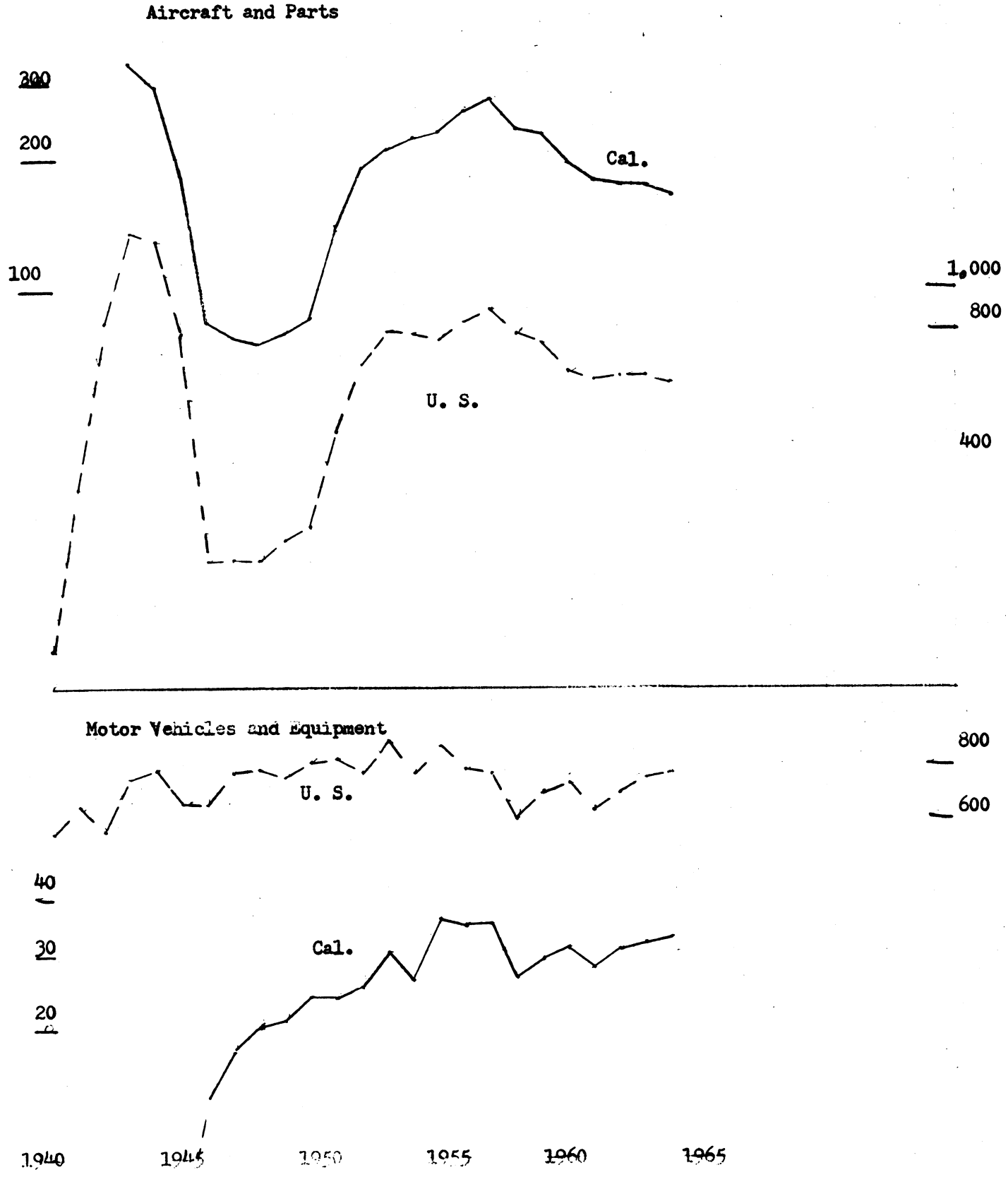


Chart 10

QUARTERLY UNEMPLOYMENT RATES, SEASONALLY ADJUSTED

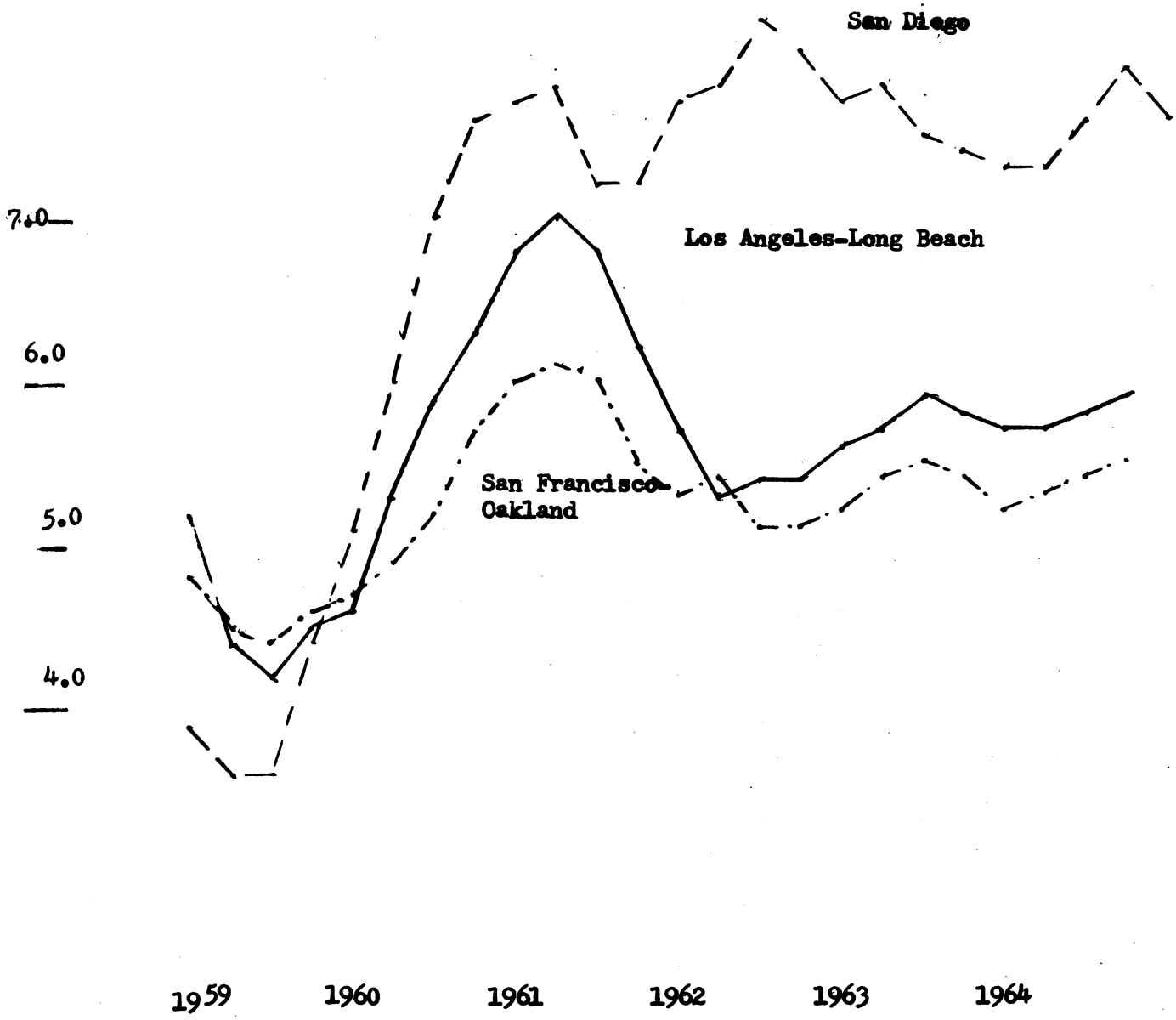


Table 15

Employment of Wage and Salary Workers in Selected Defense-Related Industries, California, Quarterly, 1959-60 and 1963-64, and First Half, 1965

Quarter	Ordnance and accessories	Electrical machinery and equipment	Aircraft and parts	Instruments	Total
1959					
I	48.4	130.5	243.2	21.1	443.2
II	51.0	134.9	243.3	21.4	450.6
III	54.9	144.3	246.6	22.3	468.1
IV	57.4	150.1	238.3	22.6	468.4
1960					
I	58.4	151.0	227.1	22.9	459.4
II	59.8	150.2	212.3	23.2	445.5
III	60.2	158.1	205.3	23.5	447.1
IV	62.6	171.7	203.2	24.3	461.8
1963					
I	106.2	221.5	174.8	27.2	529.7
II	103.8	216.6	172.0	27.8	520.2
III	107.5	213.5	173.1	28.1	522.2
IV	111.3	209.0	173.9	28.3	522.5
1964					
I	105.2	197.6	167.9	27.4	498.1
II	102.3	192.3	163.6	27.9	486.1
III	96.6	190.9	158.8	28.1	474.4
IV	93.5	190.8	161.0	28.4	473.7
1965					
First half	91.1	189.2	161.0	28.8	470.1

Sources: California Labor Statistics Bulletin; and data for the first half of 1965 supplied by Division of Labor Statistics and Research, California Department of Industrial Relations.

sharply -- and the decline has been considerably greater in percentage terms in California than in the nation, whereas this was true only to a very slight extent in 1957-60. It will be recalled that Table 5 showed a drop in California's share of total U.S. aircraft employment between 1960 and 1964.

In the last few years, moreover, there has been a decline in employment in two other manufacturing sectors that are also heavily influenced by defense spending -- ordnance and electrical machinery (Charts 6 and 8 and Table 15). The drop in the number of wage and salary workers in electrical machinery has been occurring quite steadily since the beginning of 1963, while in ordnance and accessories, the decline did not get under way until 1964. The Los Angeles-Long Beach area, with 167,000 workers in the electrical machinery industry and 52,000 workers in ordnance in early 1963, has been particularly affected, but so have the San Francisco-Oakland and San Jose areas, where there are substantial amounts of employment in these industries. The estimated average annual unemployment rate in the San Jose area in 1964 was 6.1 per cent, as compared with 5.8 per cent in Los Angeles-Long Beach, 6.1 per cent in San Bernardino-Riverside-Ontario, 7.6 per cent in San Diego, and 5.3 per cent in San Francisco-Oakland.[22]

That the changes in employment in these defense-related industries were associated largely with changes in the amount and composition of defense spending is generally accepted. Annual data relating to the value of military prime contract awards in California show a drop between fiscal 1959 and 1960, an increase from fiscal 1960 to 1962, and a decline from fiscal 1962 to 1964, with California's share of the U.S. total falling off quite appreciably in 1962-64:[23]

Year ending June 30	Military prime contract awards in California: Amount (in millions)	Per cent of all states
1959	$5,282.7	24.0
1960	4,839.3	23.7
1961	5,276.8	23.9
1962	5,993.2	23.9
1963	5,835.7	23.1
1964	5,110.7	21.0

Whether and to what extent developments in Vietnam or elsewhere may reverse these recent tendencies is not yet clear.

What is most interesting and significant about the 1960-65 period, however, is that the sagging behavior of employment in durable goods manufacturing appears to have had little, if any, decelerating effect on employment in other industries. Even after 1963, when total employment in durable goods manufacturing was declining, employment in all other industry groups -- except mining, with its long-run downward trend, and federal government -- expanded at a fairly brisk pace (Table 16), and at rates generally exceeding national rates of expansion. Evidently, the combined effect of California's continued rapid population growth, the sustained expansion in the nation as a whole (spurred on by federal government fiscal policies), and California's relatively high per capita income created a sufficient basis for substantial expansion, despite the cutbacks in durable goods manufacturing. Even in San Diego County employment in the trade and service industries has been expanding at rates not greatly below those for the state as a whole in the last few years.

Thus, although the timing of the rise in California's unemployment rate to a level above that in the nation can be traced to the cutback in aircraft employment, the persistence of a high unemployment rate in the

Table 16

Annual Percentage Increase in Number of Nonagricultural Wage and Salary Workers, by Major Industry Group, California, 1960-64 and First Half 1964 to First Half 1965

Major industry group	1960-61	1961-62	1962-63	1963-64	1964 (1st half)-1965 (1st half)
Total wage and salary workers	2.0	4.4	3.6	3.4	3.2
Mineral extraction	-1.0	-0.3	-1.7	1.0	-1.0
Construction	-0.1	4.5	6.9	5.7	5.3
Manufacturing	0.1	4.9	1.0	-0.3	-0.3
Nondurable goods	---	1.6	1.1	2.1	2.0
Durable goods	0.1	6.6	0.9	-1.4	-1.4
Transportation, communication, and utilities	-1.6	1.7	0.9	3.1	3.5
Trade	1.2	3.8	4.3	4.4	4.1
Finance, insurance, and real estate	4.0	4.9	5.9	5.7	4.7
Services	5.1	5.7	5.8	5.5	5.5
Government	5.3	4.6	4.1	4.3	5.3
Federal	2.1	2.6	0.4	---	1.7
State and local	6.6	5.4	5.5	5.9	6.6

Sources: Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by Industry, California, Annual Averages, 1939-64 (San Francisco: Division of Labor Statistics and Research, California Department of Industrial Relations, 1965); and data for the first half of 1964 and of 1965 supplied by Division of Labor Statistics and Research.

face of the generally buoyant behavior of employment in nondefense-related sectors of California's economy in recent years suggests that at least part of the trouble may lie on the supply side of the labor market, to which we now turn.

Part II

CHANGES IN THE SUPPLY OF LABOR

The Role of In-Migration

In view of the predominant role played by net in-migration in the growth of the state's labor force, there is a natural inclination to assume that the persistence of a higher unemployment rate in California may be at least partly attributable to the fact that in-migration has continued on a substantial scale despite the slowing down in the rate of employment expansion in recent years. Is it true that in-migration has continued at an unabated pace in the face of adverse labor market conditions? Or is part of the explanation to be found in the fact that in-migrants typically do not possess the skills or educational qualifications required to meet the changing pattern of labor demand? Let us consider these questions in the light of both long-run trends and short-run fluctuations in in-migration.

Net in-migration accounted for the greater part of California's population growth throughout the latter part of the nineteenth century, and for more than 80 per cent of the state's growth in the first four decades of the present century. More recently, however, although the number of in-migrants has continued to be high, the relative contribution of net in-migration to the total population growth of the state has fallen to about 60 per cent (Table 17). This reflects the combined influence of a decline in the rate of net in-migration as a percentage of the state's population and of a substantial acceleration of the rate of natural increase in California from about 1942 on, when the birth rate in the state rose sharply and began to fluctuate very close to the nationwide rate -- departing from its historical tendency to lie well below the national rate.[24] But both the rate of natural increase and the rate of net in-migration have declined since the mid-fifties, with the result that

Table 17

Population Growth of California by Natural Increase and Net In-Migration (Estimated), 1900-1964

Period	Total increase (in thousands)	Natural increase			Net in-migration			
		Number (in thousands)	Per cent of total increase	Per cent of population at beginning of period	Number (in thousands)	Per cent of total increase	Per cent of population at beginning of period	Per cent of nation's population at beginning of period
1900-10	890	115	12.9	7.7	775	87.1	52.0	1.0
1910-20	1,051	170	16.2	7.1	881	83.8	37.0	1.0
1920-30	2,253	371	16.4	10.8	1,882	83.6	54.8	1.8
1930-40	1,228	178	14.5	3.1	1,050	85.5	18.5	0.9
1940-50	3,679	1,021	27.8	14.8	2,658	72.2	38.5	2.0
1950-60	5,131	1,989	38.8	18.8	3,142	61.2	29.7	2.1
1950-55	2,546	929	36.5	8.8	1,617	63.5	15.3	1.1
1955-60	2,584	1,060	41.0	8.1	1,525	59.0	11.6	0.9
1960-64	2,345[a]	952	40.6	6.1	1,427	60.9	9.1	0.8

Sources: Margaret S. Gordon, Employment Expansion and Population Growth: The California Experience, 1900-1950, p. 6; Current Population Reports: Population Estimates, U.S. Bureau of the Census, Series P-25, No. 304, April 8, 1965; and California Population - 1964 (Sacramento: California Department of Finance, 1964), p. 8.

[a]Increase in civilian population; includes net loss to military, not shown separately in the table.

California's rate of total population growth has fallen off, as has the ratio of California's rate of growth to the nationwide rate of growth (Table 18).

As suggested in the introduction, net in-migration has been quite sensitive to changes in the rate of economic expansion in the state. In the years since 1940-41, it has tended to rise, usually with a slight lag, when there has been a sharp increase in employment and has tended to decline -- again usually with a lag -- when the annual increase in the amount of employment has declined (Chart 11). Moreover, its fluctuations have corresponded fairly closely with changes in the relationship between the unemployment rate in California and in the country as a whole. This tendency shows up quite clearly when the difference between California's unemployment rate and the U.S. rate, inverted, is plotted against annual changes in net in-migration.

Nevertheless, net in-migration has remained positive throughout the years covered by the chart, including the periods when California's unemployment rate has exceeded the nationwide rate. Part of the explanation probably lies in the fact that a portion of the stream of in-migration -- albeit a relatively small portion -- consists of persons, particularly the retired, whose propensity to migrate to California is not affected by the state of the labor market. And perhaps the main explanation lies in the fact that the pattern of labor demand has been such that employers -- including boards of education, with their heavy demand for teachers -- have had to recruit outside the state to meet their needs for workers with the professional and technical qualifications for jobs in the most rapidly expanding sectors of the labor market.

Chart 11

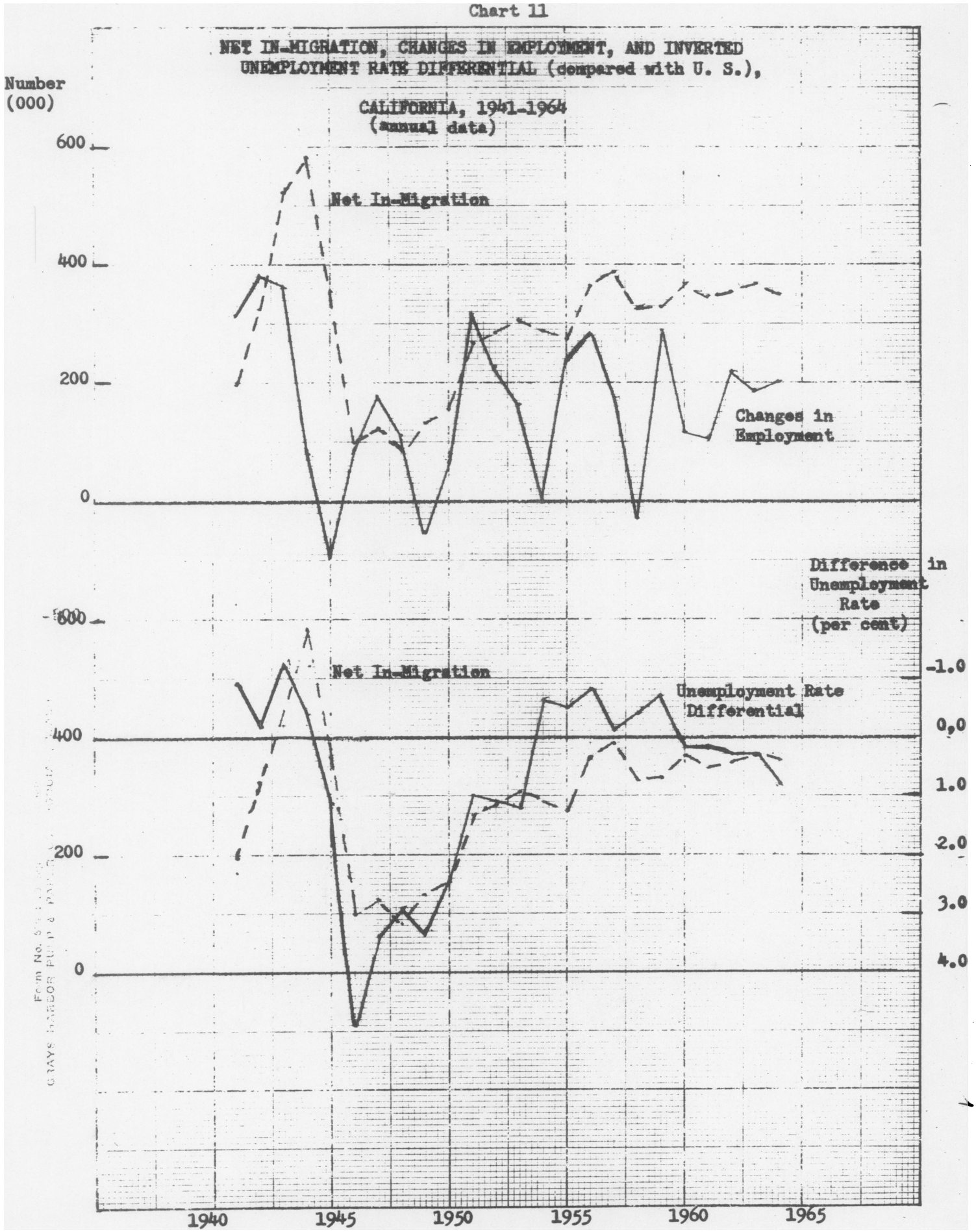

NET IN-MIGRATION, CHANGES IN EMPLOYMENT, AND INVERTED UNEMPLOYMENT RATE DIFFERENTIAL (compared with U. S.),
CALIFORNIA, 1941-1964
(annual data)
Number (000)
600
400
200
0
Net In-Migration
Changes in Employment
Difference in Unemployment Rate (per cent)
-1.0
0.0
1.0
2.0
3.0
4.0
Net In-Migration
Unemployment Rate Differential
1940
1945
1950
1955
1960
1965

Table 18

Population Growth of California and the United States, 1900-1965

Year	California			United States			Ratio of California's rate of growth to U.S. rate
	Population (in thousands)	Increase		Population (in thousands)	Increase		
		Number	Per cent		Number	Per cent	
Census date							
1900	1,485			75,995			
1910	2,378	892	60.1	91,972	15,978	21.0	2.9
1920	3,427	1,049	44.1	105,711	13,738	14.9	3.0
1930	5,677	2,250	65.7	122,775	17,064	16.1	4.1
1940	6,907	1,230	21.7	131,669	8,894	7.2	3.0
1950	10,586	3,679	53.3	150,697	19,028	14.5	3.7
1960	15,717	5,131	48.5	179,323	27,997	18.5	2.6
July 1							
1950	10,643			151,868			
1955	13,004	2,361	22.2	165,069	13,201	8.7	2.6
1960	15,863	2,854	22.0	179,992	14,923	9.0	2.4
1965	18,602	2,739	17.3	194,570[a]	14,578	8.1	2.1

Sources: Statistical Abstract of the United States: 1952, p. 12; California Population - 1964, California Department of Finance (1964), pp. 3-4; and San Francisco Chronicle, September 2, 1965.

[a]Estimated on the basis of published estimates for the first six months of 1965 in Current Population Reports: Population Estimates, U.S. Bureau of the Census, Series P-25, No. 312, July 13, 1965.

Net in-migration, of course, represents the net effects of movements into and out of the state. Although statistical data, unfortunately, do not permit us to trace fluctuations in these movements as fully as one might desire, there are indications that, in periods when employment opportunities are expanding rapidly in California, gross in-migration exceeds gross out-migration by a very substantial margin -- as in the 1935-40 period.[25] In the latter half of the 1950's, when job opportunities in California were relatively favorable throughout most of the period, gross in-migration (2,148,300) was more than twice as large as gross out-migration (938,500).[26] On the other hand, when employment conditions in California were relatively adverse, i.e., in the year from April 1949 to April 1950, to which migration data in the 1950 Census applied, gross out-migration (305,175) was almost as high as gross in-migration (340,135).[27]

There are also indications that a good many of the out-migrants from California are persons who are returning to the place from which they came. This is suggested by the fact that migration data from the three most recent decennial censuses indicate that the states which are leading sources of migration to California also tend to be leading destinations for out-migrants. Further support for this presumption is provided by a recent nationwide survey of geographical mobility, which indicated that 24 per cent of all moves made between 1950 and 1962 took the form of a return to a place where the family head had lived or visited previously.[28]

In general, however, it is clear that the propensity to migrate to California tends to exceed the propensity to leave the state, and there is much evidence to suggest that relatively high wage levels and California's mild climate are the chief factors responsible for this long-run trend.

But the timing of moves to the state is strongly influenced by the state of the labor market, and if there is a tendency for California's unemployment rate to exceed that in the nation except when employment is expanding at an unusually rapid rate in the state, as suggested in the introduction, the explanation probably lies in the fact that the propensity to leave the state when labor market conditions become relatively unfavorable is not as great as would be required to restore the unemployment rate to the national level. Relatively high wage rates, particularly at the bottom of the occupational ladder, comparatively high unemployment insurance benefit levels and public assistance standards, and the state's great distance from other leading industrial states probably all play a role.[29]

It should be emphasized, however, that it is unlikely that there has been very much net in-migration of manual workers in recent years in the face of the relatively unfavorable labor market situation.

Characteristics of In-Migrants

Age. The most important distinguishing characteristic of migrants to California is that they are predominantly youthful -- contrary to the longstanding and persistent myth that they are mostly retired, Iowa farmers (Table 19). Out-migrants are also chiefly youthful, but the net effect of migration has been to augment the young, adult population. In recent decades, moreover, a good many of the migrants have been families with young children. In 1955-60, 70 per cent of the additions to the population through net migration consisted of persons under 35 years of age (Table 19), while only 4.4 per cent were aged 65 or more.

However, California's population has not been unusually youthful,

Table 19

Age Distribution of In-Migrants, Out-Migrants, and Net Migrants, California, 1955-60

Age	In-migrants			Out-migrants			Net migrants		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Total (in thousands)[a]	1,123.5	1,024.7	2,148.3	498.7	439.8	938.5	624.9	584.9	1,209.8
Per cent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0 to 14 years	28.9	30.7	29.8	32.3	35.0	33.6	26.3	27.5	26.9
15 to 19 years	9.9	6.9	8.4	6.7	6.4	6.5	12.4	7.3	9.9
20 to 24 years	13.4	11.8	12.6	11.4	9.1	10.3	15.0	13.8	14.4
25 to 29 years	11.3	11.2	11.2	13.9	11.9	13.0	9.2	10.6	9.9
30 to 34 years	9.2	9.1	9.2	9.4	9.4	9.4	9.2	8.9	9.0
35 to 44 years	13.5	13.5	13.5	13.8	13.4	13.6	13.2	13.5	13.4
45 to 54 years	6.8	7.2	7.0	6.5	6.4	6.5	7.0	7.9	7.5
55 to 64 years	3.5	4.9	4.2	3.2	4.1	3.6	3.8	5.5	4.6
65 and older	3.4	4.7	4.0	2.9	4.2	3.5	3.9	5.1	4.4

Source: Computed from data in California Migration: 1955-1960, California Department of Finance (Sacramento: 1964), p. 7. The data are from the 1960 decennial census.

[a]Excludes all international moves.

despite the preponderance of young people among the migrants, because of its low birth rate. In fact, until 1940, the proportion of the state's population in the under-25 bracket was considerably smaller than that in the nation, and this was especially true for the under-15 age group. As a result of the higher birth rates that have prevailed since World War II, California's youthful population has grown rapidly, and by 1960 differences in age distribution between California and the nation as a whole were very slight (Table 20). However, between 1960 and 1964, the 14-19 age group gained ground relatively more rapidly in California than in the nation, increasing from 8.1 to 10.0 per cent of the total population, as compared with an increase from 9.0 to 10.3 per cent in the country as a whole. With California's generally higher rate of population increase, the difference in terms of the percentage rate of growth of this segment of the population was very substantial -- a 43.3 per cent increase in the number in this age group in California, as compared with a 21.9 per cent gain in the nation as a whole.

What has been happening, evidently, is that for the first time in California's history, the native-born teen-age population has been increasing rapidly, along with substantial in-migration in this age bracket. As the bulge in the teen-age population tapers off between now and 1970, the differences in the rates of growth in this age group between California and the country as a whole are not likely to be quite as pronounced. The expected increase in the 14-19 age group in the state between 1964 and 1970 is estimated at 28.3 per cent, as compared with a 16.1 per cent increase in the nation. However, in this six-year period it will be the 20-24 age group which will be increasing at a particularly rapid rate in both state

Table 20

Age Distribution of the Population, California and United States, 1890-1960, and Estimated, 1964 and 1970

Age	California						United States					
	1890	1920	1940	1960	1964	1970	1890	1920	1940	1960	1964	1970
Under 15 years	27.2	23.8	19.8	30.3	28.8[a]	27.5[a]	35.5	31.9	25.0	31.1	29.1[a]	29.2[a]
15 to 19 years	9.2	7.1	7.9	7.0	10.0[b]	10.8[b]	10.5	8.9	9.4	7.4	10.3[b]	10.8[b]
20 to 24 years	10.2	8.0	8.3	6.3	6.0	7.8	9.9	8.8	8.8	6.0	6.8	8.1
25 to 34 years	18.9	17.9	17.3	13.6	12.7	12.8	15.6	16.2	16.2	12.8	24.5	22.8
35 to 44 years	14.0	16.7	15.6	14.5	13.9	12.5	11.3	13.4	13.9	13.5		
45 to 54 years	9.9	12.5	13.4	11.4	11.6	11.8	8.1	10.0	11.8	11.5	20.0	19.8
55 to 64 years	6.5	7.9	9.6	8.2	8.3	8.4	5.0	6.2	8.0	8.7		
65 and older	4.0	6.2	8.0	8.8	8.6	8.6	4.2	4.8	6.8	9.2	9.4	9.3

Sources: U.S. Census of Population: 1960, Vol. PC(1)1B, p. 153 and Vol. PC(1)6B, p. 64; California Population - 1963 (Sacramento: California Department of Finance, 1963), pp. 14-15; and Sophia Cooper and Denis Johnston, "Labor Force Projections for 1970-80," Monthly Labor Review, LXXXVIII (February, 1965), 130.

[a]Under 14 years.

[b]14 to 19 years.

and nation, but with California's rate of increase greatly exceeding that in the country as a whole. These changes in the rates of increase by age group reflect the postwar pattern of changes in the birth rate in both state and nation, with the peak of the baby boom having been reached in 1947.

It should be noted that the available estimates of changes in the age structure of California's population should be regarded as only approximately reliable, chiefly because of the difficulty of projecting changes in the volume and age distribution of net migration. Changes in the birth rate are also not easy to predict but do not affect projections of the population in the late teen-age and early-twenties groups for years between now and 1970.

Race. Until World War II, relatively few Negroes migrated to California. Less than two per cent of the population consisted of Negroes in 1940, while 2.7 per cent consisted of other nonwhites (chiefly Japanese and Chinese). In the following two decades, the influx of Negroes was sizable. By 1950 they accounted for 4.4 per cent of the population, and, by 1960, for 5.6 per cent, while the proportion of other nonwhites did not change appreciably.[30]

Despite the considerable growth in the relative importance of the Negro population, Negroes have not accounted for a large proportion of in-migrants. Data from the California Health Survey of 1954-55 indicate that about 14 per cent of those living in the state at that time who had migrated here in 1940-44 consisted of Negroes. Proportions of Negroes among 1945-49 and 1950-54 migrants were considerably smaller.[31]

Among the in-migrants of the 1955-60 period, nonwhites accounted for

7.7 per cent. These were probably chiefly Negroes. Interestingly, moreover, nonwhites represented only 4.5 per cent of the out-migrants from California during this period. Thus, nonwhites accounted for 10.2 per cent of net in-migration.[32]

The data suggest that Negro in-migration, like that of whites, is somewhat sensitive to the state of the labor market in California. But there is also an indication that, once Negroes have moved to California, they are relatively unlikely to leave. This is scarcely surprising to anyone who has had much contact with Negroes in California. Even though their housing and employment conditions are generally inferior, they are highly conscious of the fact that their rights as citizens and voters are far superior to what they were "back there," as are the schools available to their children. For these reasons, they are not very likely to move back to the South, and, of course, the high cost of moving to the Middle West or the East is a substantial deterrent in the case of unemployed Negroes.

In relation to the current unemployment problem, it is also pertinent to point out that nonwhite in-migrants include a comparatively large percentage of persons in their early twenties -- an age bracket in which unemployment rates are relatively high, though not as high as for teenagers. Among the nonwhites who moved to California in 1955-60, 16.5 per cent were aged 20 to 24, as compared with 12.6 per cent of all in-migrants. Net migration of nonwhites contributed 17.7 per cent in this age bracket, but only 14.4 per cent in the case of all net migration.

Occupation. Although migrants have contributed to the growth of the labor force at all levels of skill, the occupational distribution of workers

who have moved to California in recent decades has tended to vary in accordance with the labor market conditions that prevailed at the time they entered the state. This can be demonstrated on the basis of several sets of statistics, including data from the California Health Survey of 1954-55 (Table 21). Among the male migrants of recent decades, those who moved to the state during the World War II and Korean conflict periods, when the demand for manual workers rose sharply, were considerably more likely to be employed in blue-collar jobs in 1954-55 than the migrants of the 1930's or the late 1940's. Among the women, the proportions of white-collar workers are relatively high for all groups of migrants, but not quite as high for those who entered the state in 1940-44 as among the other groups. In view of the somewhat larger proportion of Negroes among the World War II migrants than among earlier or later groups of arrivals, the comparatively high proportion of women in the 1940-44 group who were engaged in service work in 1954-55 is not surprising.

Unfortunately, published data from the 1960 Census do not include tables relating to the occupational distribution of in-migrants from other states, but only for male in-migrants to cities and metropolitan areas, some of whom moved from other parts of California. However, 90 per cent of the migrants to the Los Angeles-Long Beach metropolitan area and 64 per cent of those to the San Francisco-Oakland area came from out of state. Thus, data relating to the occupational characteristics of male migrants to those areas probably provide a good indication of the occupational distribution of male migrants from other states, particularly in the case of the Los Angeles area.

So far as the white male migrants to the central cities in these two

Table 21

Occupational Distribution of Employed Workers in California, by Year of In-Migration, and Sex, 1954-55[a]

Major occupation group and sex	Total	Year of in-migration[b]					
		Have not lived outside State	1900-29	1930-39	1940-44	1945-49	1950-54
Men[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	38.6	41.7	41.4	37.5	33.0	42.6	32.7
Professional, technical, and kindred workers	11.1	11.0	10.3	10.6	7.9	13.6	12.4
Managers, officials, and proprietors, exc. farm	13.9	15.4	19.7	14.8	10.7	13.3	7.7
Clerical and kindred workers	6.4	7.2	5.0	4.6	7.3	7.6	6.6
Sales workers	7.2	8.1	6.4	7.5	7.1	8.1	6.0
Blue-collar workers	48.4	44.5	41.7	49.1	56.2	47.2	56.8
Craftsmen, foremen, and kindred workers	24.5	21.1	20.7	24.7	28.7	23.1	32.3
Operatives and kindred workers	16.7	16.2	15.3	18.3	17.5	16.0	17.6
Laborers, exc. farm and mine	7.2	7.2	5.7	6.1	10.0	8.1	6.9
Service workers	6.3	4.8	8.9	7.7	6.1	6.3	4.2
Farm workers	6.7	9.2	8.1	5.8	4.8	4.0	6.4
Women[c]	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	65.2	75.2	67.2	66.0	55.3	63.2	62.6
Professional, technical, and kindred workers	14.9	16.1	15.8	13.9	9.1	15.8	17.0
Managers, officials, and proprietors, exc. farm	7.9	7.0	11.6	11.3	6.2	8.1	4.3
Clerical and kindred workers	35.2	45.1	29.9	31.9	33.8	33.6	35.3
Sales workers	7.2	7.0	9.9	8.9	6.2	5.7	6.0
Blue-collar workers	17.3	13.2	15.8	16.9	19.4	18.8	20.1
Craftsmen, foremen, and kindred workers	1.8	1.9	.5	2.2	2.5	1.5	2.3
Operatives and kindred workers	14.8	11.0	13.9	14.5	16.7	15.6	17.5
Laborers, exc. farm and mine	.7	.3	1.4	.2	.2	1.7	.3
Service workers	15.9	9.1	15.3	15.6	24.4	16.3	16.3
Farm workers	1.6	2.4	1.6	1.5	0.9	1.8	1.1

Source: California Health Survey (special tabulation arranged through the courtesy of Dr. Lester A. Breslow, Chief, Division of Preventive Medical Services, California State Department of Public Health). For description of sample, see Health in California (Sacramento: California Department of Public Health, 1957).

[a]Excludes pre-1900 migrants and persons whose occupation or year of in-migration was not reported.

[b]Year of the most recent move to California.

[c]Items may not add to totals because of rounding.

areas are concerned, the majority of those who came from other metropolitan areas were white-collar workers. The proportion of white-collar workers among these migrants to the central cities in the Los Angeles-Long Beach area was significantly higher than among all employed male workers in these cities and distinctly higher in the case of the central cities in the San Francisco area. Within the white-collar group the proportion of professional workers was particularly high (Table 22).

Among the white male migrants who came from nonmetropolitan areas, the proportion of white-collar workers was lower, as might be expected. Nevertheless, in the case of the San Francisco central cities it was higher than among all employed white males. The percentage of professional workers was also relatively high among the migrants from nonmetropolitan areas to the central cities of both the San Francisco and Los Angeles areas, though not as high as among the migrants from metropolitan areas.

The pattern of differences in the case of nonwhite males was somewhat similar, interestingly enough, although among all the groups of nonwhite males represented in the table, the percentage of white-collar workers was much smaller than in the case of whites, as would be expected. Moreover, the proportion of white-collar workers was particularly low among migrants from nonmetropolitan areas to the central cities in the San Francisco-Oakland area.

An interesting detail reflected in these tables is the very small proportion of sales workers represented among all groups of nonwhite males in both areas. One cannot help suspecting that discrimination in employment played a role here. In view of the vigor of the activity by CORE and other organizations to break down barriers to employment of minority groups

Table 22

Occupational Distribution of Male Employed Workers in Central Cities, Total and 1955-60 In-Migrants from Other Areas, by Color, Los Angeles-Long Beach and San Francisco-Oakland Areas, 1960

Major occupation group and color	Los Angeles-Long Beach			San Francisco-Oakland		
	Total	In-migrants from other metropolitan areas	In-migrants from nonmetropolitan areas	Total	In-migrants from other metropolitan areas	In-migrants from nonmetropolitan areas
White male employed workers (in thousands)	224.0	74.0	20.8	235.4	20.6	8.0
Per cent[a]	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	48.0	55.0	46.8	44.9	61.8	50.9
Professional, technical, and kindred workers	16.9	23.2	20.8	12.4	23.2	17.5
Managers, officials, and proprietors, exc. farm	13.5	11.5	7.6	12.4	12.3	8.5
Clerical and kindred workers	8.0	9.9	10.6	10.9	14.3	15.8
Sales workers	9.6	10.4	7.8	9.2	12.0	9.1
Blue-collar workers						
Craftsmen, foremen, and kindred workers	18.8	16.3	17.6	18.1	11.9	15.5
Operatives and kindred workers	15.7	14.9	19.6	14.2	10.8	14.4
Laborers, exc. farm and mine	4.5	3.6	5.8	6.1	3.2	5.6
Service workers	6.3	6.3	5.5	9.1	7.2	7.0
Farm workers	0.6	0.3	0.8	0.4	0.2	0.5
Occupation not reported	6.2	3.7	4.0	7.3	4.7	5.6
Nonwhite male employed workers (in thousands)	102.4	13.4	5.1	53.0	3.4	1.5
Per cent[a]	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	24.3	32.8	23.1	24.2	30.2	17.4
Professional, technical, and kindred workers	8.1	13.2	8.3	6.2	10.6	5.4
Managers, officials, and proprietors, exc. farm	4.0	3.1	1.5	5.0	3.6	2.0
Clerical and kindred workers	9.0	13.7	10.7	9.5	12.2	8.6
Sales workers	3.2	2.8	2.6	3.5	3.8	1.4
Blue-collar workers						
Craftsmen, foremen, and kindred workers	12.6	13.0	13.5	10.3	10.1	11.3
Operatives and kindred workers	20.9	19.6	24.1	16.0	19.4	20.4
Laborers, exc. farm and mine	11.1	8.8	13.4	15.3	12.2	18.5
Service workers	16.5	18.5	18.3	22.1	20.2	21.8
Farm workers	3.6	1.4	1.3	1.0	0.7	1.5
Occupation not reported	11.1	5.9	6.4	11.2	7.2	9.2

Source: U.S. Census of Population: 1960, Vol. PC(2)2C, Table 4.

[a]Items may not add to totals because of rounding.

in retail establishments in the last few years, the picture might well be somewhat different today.

The data in Table 22 suggest, as have conversations with personnel directors, that professional workers have had to be recruited from outside the state to a considerable extent. In the absence of more recent data on the occupational characteristics of in-migrants, one cannot be certain about the situation in the years since 1960, but my guess is that the proportion of white-collar workers -- and particularly of professional workers -- has been even higher than in the 1955-60 period. In view of the comparatively high unemployment rate in California during this period, I should also guess that there has been relatively little net in-migration of blue-collar and service workers, but obviously this is only a (slightly) informed guess.

Changes in the Labor Force

In the absence of monthly surveys at the state level, comparable to the nationwide Monthly Labor Force Survey, estimates of current changes in California's labor force are much less reliable than those available for the nation as a whole. Current estimates are based on employment and unemployment insurance data, supplemented by estimates of types of employment and unemployment not regularly covered by these data. Longer-range projections are based on estimates of changes in the population by age and sex, which are prepared by the California Department of Finance, and on estimates of changes in labor force participation rates, which are prepared by the Departments of Industrial Relations and Employment.

Currently published estimates indicate that the civilian labor force

in California increased at approximately the same rate (12.2 per cent) as civilian employment (12.1 per cent) between 1960 and 1964. In the nation as a whole, employment increased slightly more rapidly (5.5 per cent) than the civilian labor force (5.1 per cent) in this same period. These relationships would, of course, be expected, in view of the fact that California's average annual unemployment rate has remained nearly constant -- at around six per cent (except for 1961, when it rose to 6.9 per cent) -- over this period, whereas the annual average unemployment rate in the nation as a whole fell from 5.6 per cent in 1960 to 5.2 per cent in 1964.

Labor force participation rates are higher for both men and women in California than in the country as a whole (Table 23). Among men, however, it is in the youngest age brackets that the percentage in the labor force exceeds the nationwide rate by a substantial margin, whereas, in the middle-aged and older age brackets, labor force participation drops off more rapidly in California than in the nation, and the California rate is below the nationwide rate from age 55 on. This is probably chiefly attributable to the tendency for disabled and retired men in these older age brackets to move to California.[33] Female labor force rates exceed those in the nation in all age groups from 25 to 64, but not in younger or older age brackets.

The higher female labor force participation rate in California -- explained partly by the state's relatively high degree of urbanization and partly by the predominance of employment in the distributive and service industries -- has prevailed since 1940, and probably earlier. But the higher rates for relatively young men are a phenomenon of relatively recent years. Labor force participation rates of California men were somewhat below nationwide rates in all age brackets in 1940 and in all age groups

Table 23

Per Cent of Population in the Labor Force, by Age, Color, and Sex, California and United States, 1960

Age and sex	California		United States	
	Total	Nonwhite	Total	Nonwhite
Men, 14 years and over	79.5	78.2	77.4	72.1
14-19 years	43.9	32.1	38.1	31.5
20-24 years	89.1	83.6	86.2	82.0
25-29 years	94.1	89.1	93.9	87.7
30-34 years	95.9	90.3	95.8	89.3
35-39 years	96.3	91.4	95.8	89.8
40-44 years	96.0	91.9	95.4	89.8
45-49 years	94.9	90.7	94.4	88.9
50-54 years	92.6	89.3	92.2	86.0
55-59 years	87.5	85.8	87.7	80.8
60-64 years	76.3	74.9	77.6	68.9
65-69 years	42.4	44.7	43.8	40.6
70-74 years	25.6	31.9	28.7	27.3
75-79 years	16.5	21.2	19.5	19.2
80-84 years	9.0	12.6	11.5	12.1
85 and older	5.6	10.5	7.0	8.0
Women, 14 years and over	36.1	44.1	34.5	41.8
14-19 years	22.8	16.4	23.8	17.3
20-24 years	44.4	47.2	44.8	45.5
25-29 years	36.5	44.9	35.1	46.9
30-34 years	37.5	46.4	35.5	50.2
35-39 years	42.7	53.4	40.3	54.7
40-44 years	48.2	58.6	45.3	57.1
45-49 years	50.2	59.6	47.4	56.5
50-54 years	48.2	55.8	45.8	52.5
55-59 years	42.1	48.8	39.7	44.7
60-64 years	31.8	39.0	29.5	34.1
65-69 years	16.6	20.1	16.6	19.5
70-74 years	8.9	10.2	9.6	11.5
75-79 years	5.1	6.6	5.6	7.0
80-84 years	2.7	2.7	3.0	4.0
85 and older	2.2	5.0	2.0	3.1

Sources: U.S. Census of Population: 1960, Vol. PC(1)1D, pp. 487 and 489, and Vol. PC(1)6D, pp. 601-602.

except the 18 to 24 group in 1950.[34]

Why has this change come about? It seems surprising, in view of California's relatively high level of education[35] and the extensive system of publicly supported higher education in the state. In fact, however, the proportion of persons enrolled in school in California at ages 18 to 20 was lower in 1960 than in the country as a whole, although the rate of school enrollment in the state had exceeded that in the nation at all ages from 5 through 24 at the time of earlier decennial censuses.[36] The lower school enrollment rates at ages 18 to 20 were confined to males, and it seems likely that the higher percentage of 1955-60 in-migrants in the young adult male population -- 19.8 per cent of those aged 15 to 19 and 31.5 per cent of those aged 20 to 24 -- largely explains the relatively low percentage of males aged 18 to 20 enrolled in school, since in-migrants in this age group are undoubtedly more likely to come in search of work than of higher education. Although there are a good many students from out of state enrolled in California colleges, their numbers are rather small in relation to the total young male in-migrant population.[37]

In addition, labor force participation rates of youthful males in California are higher at all relatively young ages than in the nation, <u>whether or not</u> they are enrolled in school.[38]

Interestingly, current estimates of the California labor force indicate that it did not increase as much between 1960 and 1965 as a relatively recent projection based on estimates of the population by age and sex and on long-term trends in labor force participation rates would have suggested.[39] The reasons are not entirely clear, but it seems likely, in the light of recent research findings on the sensitivity of labor force participation to

the state of the labor market,[40] that labor force participation rates in the state may have been somewhat depressed in relation to long-run trends as a result of the relatively high unemployment rate in recent years. It would also appear, in the light of the recently announced estimate of the state's population on July 1, 1965, that net in-migration must have dropped off quite sharply in 1964-65. The total population was estimated at 18,602,000,[41] or more than 200,000 less than a projection of the 1965 population published a year earlier.[42] This implies a total increase of 368,000 over the estimated population of 18,234,000 on July 1, 1964. But natural increase alone has been running at around 235,000 a year, which would mean that net in-migration amounted to only about 133,000, or far fewer than the projected figure of 345,000 for 1964-65.[43]

Unemployment Rates

Unfortunately, the most recent data available on unemployment rates by age, sex, and other characteristics at the state level are from the 1960 Census, although there are current data on certain characteristics of the insured unemployed.

The 1960 data reveal significant departures of California unemployment rates from nationwide patterns of variation. Ratios of state to national rates, for example, were particularly wide for older men, middle-aged women, young male nonwhites, and some of the older age groups of nonwhite adults (Table 24). Although we do not know what these differentials are at present, we do know that unemployment rates of teen-agers, and particularly of nonwhite youth, have remained ominously high in the country as a whole in recent years and that unemployment rates for adult women have not fallen as

Table 24

Per Cent of the Civilian Labor Force Unemployed, by Age, Color, and Sex, California and United States, 1960

Age and Sex	Per cent of civilian labor force unemployed				Ratio of California rate to U.S. rate	
	California		United States			
	Total	Nonwhite	Total	Nonwhite	Total	Nonwhite
Men, 14 years and older	5.8	10.1	5.0	8.8	1.16	1.15
14-19 years	12.8	22.2	11.0	15.6	1.16	1.42
20-24 years	8.8	16.1	8.0	12.3	1.10	1.31
25-29 years	5.3	9.8	4.8	8.7	1.10	1.13
30-34 years	4.3	9.0	3.9	8.1	1.10	1.11
35-39 years	4.0	7.8	3.7	7.7	1.08	1.01
40-44 years	4.3	8.1	3.8	7.4	1.13	1.09
45-49 years	4.9	8.0	4.1	7.2	1.20	1.11
50-54 years	5.6	9.5	4.3	7.3	1.30	1.30
55-59 years	6.3	9.2	4.8	7.6	1.31	1.21
60-64 years	7.0	10.7	5.1	7.9	1.37	1.35
65-69 years	8.6	12.6	5.9	8.4	1.46	1.50
70-74 years	7.5	8.3	5.2	7.1	1.44	1.17
75-79 years	7.4	10.7	4.8	7.1	1.54	1.51
80-84 years	6.3	5.1	3.7	7.0	1.70	0.73
85 and older	4.8	--	3.9	6.8	1.23	--
Women, 14 years and older	6.6	9.8	5.4	8.5	1.22	1.15
14-19 years	11.0	19.4	9.6	19.1	1.15	1.02
20-24 years	8.3	15.1	6.8	13.2	1.22	1.14
25-29 years	7.1	10.5	6.1	9.7	1.16	1.08
30-34 years	6.7	9.8	5.7	8.5	1.18	1.15
35-39 years	6.0	8.5	5.1	7.4	1.18	1.15
40-44 years	5.9	8.3	4.7	6.7	1.26	1.24
45-49 years	5.7	7.2	4.4	6.1	1.30	1.18
50-54 years	5.6	7.3	4.1	5.8	1.37	1.26
55-59 years	5.5	7.6	4.1	5.6	1.34	1.36
60-64 years	5.4	7.2	4.0	5.6	1.35	1.29
65-69 years	5.9	6.7	4.5	5.7	1.31	1.18
70-74 years	4.8	5.4	4.2	5.5	1.14	0.98
75-79 years	4.7	10.1	4.0	5.3	1.18	1.91
80-84 years	3.5	--	4.3	4.7	0.81	--
85 and older	7.2	--	5.3	10.4	1.36	--

Source: See source reference to Table 23.

for adult men:[44]

Quarterly Average Unemployment Rates, U.S.
(seasonally adjusted)

	1960 1st quarter	1965 1st quarter
Male, total	5.0	4.2
14 to 19 years	13.2	12.9
White	11.8	11.5
Nonwhite	23.5	22.4
20 to 24 years	8.6	6.8
25 and older	3.9	3.1
Female, total	5.6	6.0
14 to 19 years	13.2	16.7
White	12.2	14.8
Nonwhite	23.1	32.6
20 to 24 years	7.7	7.7
25 and older	4.4	4.2

If state unemployment rate differentials follow the same pattern today as at the time of the 1960 Census, the implication is that unemployment rates for teen-agers in California are above national rates, and those for nonwhite teen-agers very substantially above. Although we do not know whether this is the case, it seems reasonable to suppose that it may be. Despite the fact that the percentage of young people in California's labor force is not higher at present than in the nation -- even the recent rapid growth of the teen-age population and the higher labor force participation rates of young men have not apparently entirely overcome the former deficiency of teen-agers -- the very factor of rapid growth may have made it relatively difficult for the labor market to absorb such a large influx of inexperienced workers.

Whether or not the unemployment rate of women in California continues to exceed that of men by a higher margin than in the nation is not clear. The only data which throw any light on this question relate to the insured unemployed. In January and April of 1965, men represented a larger proportion of the insured unemployed in the state than in the country as a whole,

although the reverse pattern had prevailed in previous years.[45] Cutbacks in employment in defense industries were probably responsible for this change. The fact that women represented a slightly larger percentage (33.2 per cent) of the civilian labor force in California than in the nation (32.8 per cent) in 1960 -- along with the higher unemployment rates that have generally prevailed for women -- might be a small factor contributing to a tendency toward higher unemployment in the state, but the difference was so small as to be almost negligible.

It seems unlikely that differential unemployment rates for older men in California are as large now as in 1960. Persons 45 years of age and older made up a substantially smaller percentage of the insured unemployed in the state than in the nation in January and April of 1965, whereas the opposite relationship had prevailed in 1960.[46]

Unemployment rates for California men were relatively high in white-collar, farm, and service occupations in 1960 (Table 25). Rates for blue-collar workers exceeded nationwide rates by smaller-than-average margins, except for operatives, who probably had been particularly hard hit by the recent cutbacks in aircraft employment at the time. The high differentials for farm workers were probably at least partly attributable to differences in seasonal patterns of variation in agricultural employment in California and the country as a whole. The higher differentials in white-collar occupations may very well have been associated with relatively high rates of in-migration in these occupations. Evidence that 1955-60 in-migrants included a comparatively large proportion of white-collar workers was discussed above. There is also substantial evidence that in-migrants tend to have higher unemployment rates than persons who have resided in the state over a longer

Table 25

Per Cent of the Experienced Civilian Labor Force Unemployed, by Major Occupation Group and Sex, California and United States, 1960

Major occupation group	Men			Women		
	California (1)	United States (2)	Ratio (1)÷(2)	California (1)	United States (2)	Ratio (1)÷(2)
Experienced civilian labor force	5.7	4.9	1.16	6.3	5.1	1.24
Professional, technical, and kindred workers	2.5	1.4	1.79	2.6	1.4	1.86
Farmers and farm managers	1.5	0.8	1.88	1.2	1.4	0.86
Managers, officials, and proprietors, exc. farm	1.9	1.4	1.36	2.5	1.8	1.39
Clerical and kindred workers	4.4	3.4	1.29	4.2	3.2	1.31
Sales workers	3.3	2.5	1.32	6.2	4.9	1.27
Craftsmen, foremen, and kindred workers	6.1	5.4	1.13	8.0	5.9	1.36
Operatives and kindred workers	7.6	6.4	1.19	13.8	9.9	1.39
Private household workers	6.6	6.1	1.08	6.1	5.4	1.13
Service workers, exc. private household	6.7	5.3	1.26	7.7	5.8	1.33
Farm laborers and farm foremen	9.0	6.8	1.32	17.9	9.9	1.81
Laborers, exc. farm and mine	12.6	12.0	1.05	14.2	12.2	1.16
Occupation not reported	8.6	7.8	1.10	8.9	7.8	1.14

Sources: Computed from data in U.S. Census of Population: 1960, Vol. PC(1)1D, pp. 544-46, and Vol. PC(1)6D, pp. 660-65.

period -- both from the 1960 Census and earlier censuses. This is scarcely surprising, since there is likely to be a lag between arrival and finding a job among those who did not have a job lined up before coming,[47] and there is also evidence of a relatively high rate of job-shifting among migrants following arrival in the state.[48] In fact, migrants tend to go through a floundering period after arrival, similar to that of new entrants into the labor force.

Among males 14 years of age and older in the civilian labor force in the central cities of the Los Angeles-Long Beach and San Francisco-Oakland areas, those who had migrated from other areas since 1955 had relatively high unemployment rates in April 1960:[49]

	White	Nonwhite
Los Angeles-Long Beach		
All men in the civilian labor force	5.9	9.8
In-migrants from other metropolitan areas	7.7	12.5
In-migrants from non-metropolitan areas	6.6	12.5
San Francisco-Oakland		
All men in the civilian labor force	6.1	11.3
In-migrants from other metropolitan areas	7.8	19.1
In-migrants from non-metropolitan areas	9.3	18.6

Patterns of differences in female unemployment rates in California and the nation were somewhat similar to those for men, although there were some differences in detail (Table 25).

In the case of men, the occupational structure of employment evidently played a slight role in explaining the higher overall unemployment rate for California men, although it is not clear that this would have been true except for the very high differential for farm laborers and its reflection

of differences in seasonal patterns. When we applied California's male unemployment rates by major occupation group to the occupational distribution of male workers in the country as a whole, we came out with a somewhat lower unemployment rate -- a reduction from 5.7 to 5.4 per cent.

The opposite result was obtained in the case of women -- the California female unemployment rate would have been raised from 6.3 to 6.7 per cent if the occupational distribution of experienced female workers were identical with that in the nation -- indicating that California's relatively high unemployment rate for women could not be blamed on the occupational pattern of female employment in the state. This is scarcely surprising, in view of the high proportion of white-collar workers among experienced female workers in the state.

Differences in unemployment rates by major industry group (not shown) were consistent with differences by major occupation group. Ratios of California rates to nationwide rates were relatively small in durable goods manufacturing, transportation and utilities, and public administration while California rates were below national rates in mining and construction. Ratios were relatively high, on the other hand, in agriculture, nondurable goods manufacturing, trade, and services. Differences in seasonal patterns probably helped to explain some of these variations. When California unemployment rates were applied to the industrial distribution of employment in the nation as a whole, they were scarcely changed for either men or women.

On the whole, then, there is little evidence that differences in the characteristics of California's labor force or in the occupational or industrial distribution of employment in the state are such as to contribute

to a chronically high unemployment rate. In fact, to some extent the reverse is true.

The characteristic of California's economy which may well account for a chronically high unemployment rate, except when expansion is proceeding at a particularly rapid pace, is the high secular rate of growth. This tends to be accompanied by (1) a high rate of in-migration and perhaps insufficient sensitivity of streams of gross in-migration and out-migration to changes in relative labor market conditions in the state, even though the degree of sensitivity is substantial, (3) chronically higher unemployment rates among newcomers to the state, as they seek their first jobs and engage in relatively frequent job shifts before finding satisfactory employment, (3) relatively high labor mobility rates, which are associated with the high rate of in-migration but may not be entirely explained by this factor,[50] and (4) a chronically high rate of business failure, which again is associated with rapid growth.

Part III

INTERACTION BETWEEN DEMAND AND SUPPLY:

THE STRUCTURE OF WAGE RATES

Although a detailed analysis of California's wage structure is beyond the scope of this paper, a brief discussion of wage differentials and their possible relationship to the unemployment problem seems in order.

The fact that wage rates are relatively high in California is well known, as is the long-run tendency for wage differentials between the state and nation to decline. During the postwar period, however, differentials have, if anything, increased, at least as indicated by ratios of average hourly earnings in selected industry groups in California to those in the nation in 1950 and 1963:[51]

	1950	1963
Mining (petroleum)	1.11	1.12
Contract construction	1.19	1.32
Manufacturing	1.15	1.17
Durable goods	1.10	1.12
Nondurable goods	1.09	1.13
Electric, gas, and sanitary services	n.a.	1.10
Wholesale trade	1.07	1.16
Retail trade	1.34	1.35

However, comparisons with national averages create a somewhat exaggerated impression of wage differences, since national averages are held down by the particularly low rates in the South. If average hourly earnings of production workers in manufacturing in California in 1963 are divided by the simple arithmetic average of earnings in the nine largest states outside the South (other than California), the resulting ratio is 1.10[52] -- substantially smaller than the ratio to the national average of 1.17, shown above.

Historically, wage differences between California and the nation have been wider at the bottom of the occupational ladder than at the top, and this difference continues to prevail to a certain extent. Here again, however, low wages in unskilled occupations in the South exert a strong

influence on comparisons with national averages. If annual earnings for selected occupation groups from the 1960 Census are used as a basis for comparison between California and the six other largest states, the pattern of inverse variations by skill level in nonagricultural occupations fails to show up in comparisons with Illinois, New York, Ohio, or Pennsylvania (Table 26). On the other hand, it shows up very clearly in comparisons with Texas and the U.S. as a whole. The pattern in relation to Michigan is mixed. And earnings of California farmers and farm laborers are exceptionally high in relation to those of their counterparts in most of these states and in the country as a whole, even though farm wage rates in California have been very low in relation to those in other occupations.

Ratios of California female earnings to those elsewhere tend to be higher than those for men, but the limited representation of female occupation groups makes it difficult to speculate as to the reasons for this. More complete data from the 1950 Census, however, show relatively high ratios for female sales and service workers -- occupation groups which are more likely to be unionized in California than in other parts of the country.[53]

Comparisons based on occupational wage data for selected metropolitan areas in 1964-65 yield somewhat similar results -- with certain modifications (Table 27). (Occupations have been arranged in descending order of compensation in the Chicago area in 1951-52.) Although the San Francisco-Oakland area is one of the highest-wage metropolitan areas in the nation, the Detroit area has frequently turned up as the highest wage area in these BLS surveys over the years, and its rates exceeded those of the San Francisco area in 7 of the 11 occupations represented in Table 27. Rates

Table 26

Median Earnings in 1959 of Persons in the Experienced Civilian Labor Force With Earnings, by Selected Occupation Groups and Sex: Ratios of California Earnings to Those in Selected States and the United States, 1960

Major occupation group and sex	Ratio of California earnings to those in						
	Illinois	Michigan	New York	Ohio	Pennsylvania	Texas	U.S.
Male, total	1.04	1.05	1.09	1.07	1.19	1.38	1.20
Professional, managerial, and kindred workers	1.03	1.04	1.07	1.08	1.14	1.21	1.13
Craftsmen, foremen, and kindred workers	1.01	1.03	1.11	1.07	1.18	1.31	1.15
Operatives and kindred workers	1.02	1.04	1.14	1.02	1.17	1.41	1.18
Laborers, exc. farm and mine	0.96	1.15	0.99	1.08	1.10	1.76	1.30
Farmers and farm managers	1.44	1.75	1.51	1.79	1.63	1.74	1.87
Farm laborers	1.25	2.22	1.27	2.00	1.45	1.75	1.75
Female, total	1.05	1.16	1.03	1.19	1.24	1.60	1.25
Clerical and kindred workers	1.06	1.09	1.04	1.13	1.15	1.24	1.13
Operatives and kindred workers	0.89	0.82	1.01	0.85	1.06	1.45	1.05

Source: Computed from data in U.S. Census of Population: 1960, Vol. PC(1)1C, p. 291

Table 27

Ratio of Median Weekly or Hourly Earnings in the San Francisco-Oakland Area to Earnings in Five Other Areas, by Occupation and Sex, 1964-65

Occupation and sex	Chicago	Detroit	Los Angeles-Long Beach	New Orleans	Philadelphia
Men					
Draftsmen, Class A	0.99	0.86	1.01	n.a.	0.99
Tool-and-die makers	1.07	1.06	1.15	n.a.	1.16
Electricians, maintenance	0.99	0.96	0.97	1.06	1.10
Truck drivers	1.05	1.09	1.06	1.66	1.07
Clerks, accounting, Class A	1.02	0.90	1.03	1.14	1.18
Janitors, porters, and cleaners	1.10	0.94	1.13	1.98	1.22
Office boys	0.99	0.99	0.88	1.23	1.12
Women					
Nurses, industrial (registered)	1.00	1.00	0.95	1.14	1.11
Secretaries	1.01	0.89	0.94	1.13	1.09
Key-punch operators, Class A	1.01	0.90	0.94	1.20	1.09
Office girls	1.08	1.04	1.02	1.26	1.23

Source: Occupational Wage Survey, 1964-65, U.S. Bureau of Labor Statistics, Bulletin No. 1430, selected issues (Washington, D.C.: U.S. Government Printing Office, 1964 and 1965).

in the Chicago area were generally only slightly below those in the San Francisco area and in a few cases slightly above. Differentials with the Los Angeles area followed a mixed pattern and were mostly quite small. Only in comparison with the New Orleans and Philadelphia areas was there any appreciable tendency for wage differentials to vary inversely with occupational level, and even in these cases the pattern was not entirely consistent. Philadephia's wage structure resembles a modified version of the Southern pattern, probably as a result of the impact of a high rate of Negro in-migration from the South over a long period of years.

Finally, similar computations for the same occupations and areas for 1951-52 (not shown) reveal only minor differences from patterns of differentials in 1964-65.

To the extent that ratios of California wages to wages elsewhere do vary inversely with occupational level -- and this is true, as we have seen, chiefly in relation to the South -- the wage structure can be expected to act as a deterrent to the types of labor shifts required by the structural changes in employment that have been occurring in recent years. Employment of professional and technical workers has been increasing particularly rapidly, and such workers apparently must be recruited from outside the state in a good many instances. Yet earnings differentials for such workers in relation to those in other states are not, on the whole, very high. At the other end of the scale, wage differentials are probably something of a deterrent to out-migration, particularly to the South and South Central states, whence more than a fourth of the migrants to California came in 1955-60, and roughly a third in the 1940's.

Footnotes

1. I am indebted to Lewis J. Perl for assistance in the research on this paper, and, in particular, for the regression analyses reported on p. 4.

2. Nationally, the unemployment rate is measured on the basis of the monthly labor force survey, which is part of the Current Population Survey, a sample survey in which information is obtained from a scientifically selected sample of about 35,000 households in 357 areas throughout the country. California and other states do not have any such periodic household survey. Estimates of the unemployment rate must be developed from data on insured unemployment, estimates of the number of unemployed who are not receiving insurance because they are in uncovered industries, are ineligible, or have exhausted their benefit rights, and projections of the labor force from decennial census data.

3. Margaret S. Gordon, Employment Expansion and Population Growth: The California Experience, 1900-1950 (Berkeley and Los Angeles: University of California Press, 1954), pp. 122-23.

4. However, the results of the unemployment relief census of 1933 may have been misleading, since the particular "unemployment rate" which it measured was the number of persons in families on relief as a percentage of the total population. In a state which at that time had had a relatively low birth rate and low average family size for decades, California could very well have had comparatively few persons in families on relief, while the proportion of families on relief might have been relatively higher. Moreover, interstate and interarea differences in conditions of eligibility for relief undoubtedly affected the results.

5. For a convenient and recent list of references to the literature on long swings, see Irma Adelman, "Long Cycles--Fact of Artifact?", American Economic Review, LV (June, 1965), 444-63.

6. See Gordon, Employment Expansion and Population Growth, Tables 6A and 6B.

7. Markets for California Products: An Analysis of the Sources of Demand, A Report Prepared for the California Economic Development Agency, by W. Lee Hansen, R. Thayne Robson, and Charles M. Tiebout (Sacramento: State Printing Office, 1961).

8. Computed from data in ibid., pp. 52-59. It should be noted that the data apply to civilian employment.

9. Data cited are from California Labor Statistics Bulletin: Area Supplement, July 1959.

10. Ibid.

11. Employment and Unemployment in California, May 1965, and Estimated Civilian Employment in California, 1940-60, Division of Labor Statistics and Research, California Department of Industrial Relations (San Francisco: mimeographed report, 1961).

12. Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, 1939-64, Division of Labor Statistics and Research, California Department of Industrial Relations (San Francisco: Mimeographed report, 1965); data for the first half of 1965 have kindly been supplied to me by Miss Ruth Krause of the Division.

13. Computed from data supplied by Division of Labor Statistics and Research, California Department of Industrial Relations.

14. Computed from data in Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, 1939-64.

15. The quoted material is from California Labor Statistics Bulletin, May 1964, p. 1.

16. California data were supplied by the Division of Labor Statistics and Research, California Department of Industrial Relations; U.S. data are from Manpower Report of the President, March 1965, p. 235.

17. See National Defense and Southern California: 1961-70, A Statement of Policy by the Southern California CED Associates, Together With a Research Report by George A. Steiner (Los Angeles: 1961), especially Table III.

18. See Gordon, Employment Expansion and Population Growth, Chapter V.

19. Ibid.

20. Computed from data in U.S. Census of Population: 1960, Vol. PC(1)6C, p. 242.

21. Margaret S. Gordon, "Inmigration and Its Effect on Labor Force Characteristics," Monthly Labor Review, LXXXII (May, 1959), p. 496.

22. Manpower Report of the President, March 1965, p. 243.

23. Data compiled by California Department of Finance.

24. For a discussion of the reasons for California's low birth rate in earlier decades and the shift since World War II, see Gordon, Employment Expansion and Population Growth, pp. 19-25.

25. In 1935-40, there were 876,829 in-migrants from other states and 211,963 out-migrants to other states, 16th Census of the United States: 1940, Population, Internal Migration: 1935 to 1940, Color and Sex of Migrants, p. 18.

26. For the source of these data, see the source reference to Table 19.

27. U.S. Census of Population: 1950, Special Report P-E, No. 4B, p. 32.

28. John B. Lansing and others, The Geographic Mobility of Labor: A First Report (Ann Arbor, Michigan: Survey Research Center, University of Michigan, mimeographed, 1963), Table II-17.

29. Some of these factors are being investigated in a research project being conducted at the Institute of Industrial Relations (Berkeley) by George Johnson and Stephen Welch.

30. U.S. Census of Population: 1960, Vol. PC(1)6B, p. 58.

31. These data are based on special tabulations from the California Health Survey, prepared for me through the courtesy of Dr. Lester A. Breslow, Chief, Division of Preventive Medical Services, California Department of Public Health.

32. California Migration: 1955-60, pp. 7-8.

33. See Margaret S. Gordon, Statement before U.S. Senate Special Committee on Aging, in Problems of Aging, Hearings Before the Subcommittee on Federal and State Activities of the Special Committee on Aging, United States Senate, 87th Cong., 1st sess., October 24, 1961 (Washington, D.C.: U.S. Government Printing Office, 1962), pp. 455-461.

34. See U.S. Census of Population: 1960, Vol. PC(1)1C, p. 214, and Vol. PC(1)6C, p. 241, for tables showing labor force participation rates for 1940, 1950, and 1960.

35. Median years of school completed by persons aged 25 and over in California in 1960 were 12.1, compared with 10.6 for the country as a whole.

36. See U.S. Census of Population: 1960, Vol. PC(1)1C, p. 206; Vol. PC(1)6C, p. 234; Vol. PC(1)1D, p. 507; and Vol. PC(1)6D, p. 630.

37. See ibid., Vol. PC(2)2B, p. 85, and Vol. PC(1)6D, p. 498.

38. Ibid., Vol. PC(1)1D, p. 507, and Vol. PC(1)6D, p. 630.

39. Maurice I. Gershenson, California Labor Force Projections, 1960-1980: Overview and Problems (San Francisco: Division of Labor Statistics and Research, California Department of Industrial Relations, mimeographed, 1965), pp. 4-6.

40. For an excellent summary of this recent research, see Jacob Mincer, "Labor-Force Participation and Disguised Unemployment," in Robert A. and Margaret S. Gordon, editors, Prosperity and Unemployment (to be published by Wiley).

41. San Francisco Chronicle, September 2, 1965.

42. California Population--1964 (Sacramento: California Department of Finance, 1964), p. 7.

43. Cf. ibid., p. 8.

44. Gertrude Bancroft, "Lessons from the Pattern of Unemployment in the Last Five Years," in Gordon and Gordon, editors, op. cit.

45. Insured Unemployed, 1960 to 1963; and Unemployment Insurance Statistics, 1964 and 1965. (Both of these sources are publications of the U.S. Bureau of Employment Security.)

46. Ibid.

47. On a nationwide basis, the majority of migrants do have a job lined up before moving. See Lansing and others, op. cit.

48. See Margaret S. Gordon, Migrants and Non-Migrants in San Francisco, 1940-49, unpublished report based on the Six-City Labor Mobility Survey (Berkeley: Institute of Industrial Relations, University of California).

49. For the source of these data, see the source reference to Table 22.

50. Cf. Gladys L. Palmer, Labor Mobility in Six Cities (New York: Social Science Research Council, 1954), especially Chapter 3.

51. Computed from data in Employment and Earnings Statistics for the United States, 1909-64, U.S. Bureau of Labor Statistics (Washington, D.C.: U.S. Government Printing Office, 1965), and Employment and Earnings Statistics for States and Areas, 1939-63, U.S. Bureau of Labor Statistics (Washington, D.C.: U.S. Government Printing Office, 1964).

I am also indebted to George Johnson and Stephen Welch for an opportunity to examine the extensive tables on wage differentials which they have prepared.

52. Computed from data in 1963 Statistical Supplement--Monthly Labor Review, Part II, Table III-2.

53. Cf. Gordon, Employment Expansion and Population Growth, p. 80.

JOB TRAINING AND EMPLOYMENT

by

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Training has been given high priority among the weapons used in the war against unemployment and poverty. The Great Society is giving major emphasis to training and rehabilitation rather than to straight work relief--to eliminating the causes of poverty rather than just ameliorating its symptoms. As demonstrated by the recent Congressional vote to increase the Poverty Program's financial authorization beyond that requested by the President, there is surprisingly strong political support for this program and its heavy training emphasis. Though debate rages over the relative validity of aggregative as against structural explanations of unemployment, there seems to be considerable agreement that as we come closer to full employment, training becomes increasingly important as a means of eliminating manpower bottlenecks. Many argue, in addition, that training will reduce poverty and racial discrimination and help prevent tragedies such as Watts.

But our new training programs must be evaluated in the light of our overall national training effort. The mushrooming agencies established under the Federal poverty and manpower development programs merely supplement the training activities of private employers and the public high school system (high schools, junior colleges, colleges, and universities).[1]

How well are these various educational institutions meeting the needs of our rapidly growing number of youths seeking employment, and of

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1. Our discussion will center on training below the college degree level. Furthermore, we will not deal with the important forms of training offered by the armed forces, private training schools and even by prisons.

our economy as it enters an age of automation? Is our high level of unemployment, particularly among youth, in part due to the failure of our educational system to provide employees with the skills which employers require? How can these training programs best be integrated so as to meet the widely different needs of the various segments of our population and of various employers. (For example, what should be the relationships between institutional and on-the-job training in a vocational education program?) These are some of the issues which this paper will explore.

We shall look first at individuals' and employers' needs for training, then at the major training programs, and lastly at some difficult policy questions that inevitably must be faced.

Employers' Needs for Trained Employees

For what sorts of jobs should we train? As Mrs. Gordon's paper explains, it is particularly hazardous to forecast future demand in California because of the major role played by defense expenditures. Yet we perhaps can learn something from past trends. Over the long run, jobs are developing much more rapidly in service industries than they are in manufacturing. This is dramatically illustrated by the fact that of the 182,000 jobs added in California during 1963-1964, 92 per cent were in service industries and only eight per cent in goods-producing industries (including manufacturing, mining, and construction).[2] The two most rapidly growing sources of employment in California are trade and government.

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2. Although the number of goods-producing jobs in California continues to climb, it does so at a generally declining rate. During the decade 1954-1963, of the 367,500 increase in California's jobs, 36 per cent were in goods-producing industries. California Labor Statistics Bulletin #478 (May 1964), p. 3.

The educational and skill requirements for the starting jobs for which workers are hired have been steadily increasing. As Figure 1 indicates, employment in California has gone up most rapidly in professional and technical fields, and next most rapidly for clerical and sales people, and craftsmen and foremen. All of these occupations require more than average education (and, incidentally, suffer less than average rates of unemployment). Even disregarding occupational shifts, employers seem to be raising their educational requirements, and many companies now insist that all applicants have at least a high school diploma (and some prefer junior college degrees).

Why have educational requirements been increased? Some jobs require more skill today than did their equivalents in years past (though experts are divided as to whether automation raises or lowers skill requirements).[3] In addition, employers who are looking ahead to future technological change, rather than be stuck under a union contract with employees who do not have the educational background to learn new technologies, can be expected to hire people with abilities not currently needed, so as to preserve flexibility for the years to come.

Furthermore, the meaning of the high school diploma has changed. Many employers hire only high school graduates because they are convinced (and with considerable justification) that only the incompetent, social

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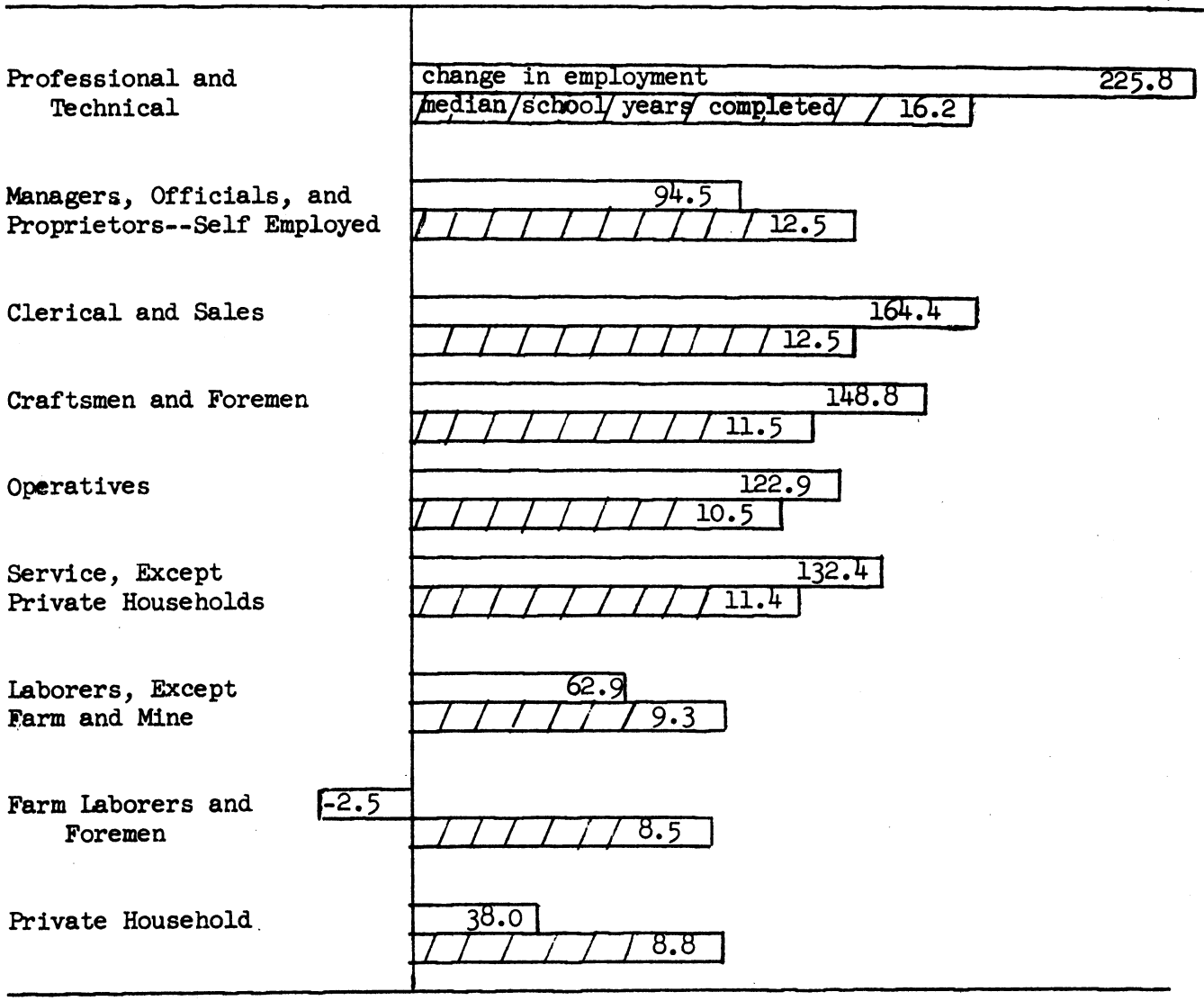
3. This debate over whether automation will increase the level of skill required is not entirely relevant to our purposes. It revolves around skills rather than kinds of education, and it is largely concerned with manufacturing, while our largest needs for new manpower are outside manufacturing. Obviously, whether or not we need more skills, we will need different skills (and since skill levels can be measured on many different dimensions, the question of whether more skills are required on the average may be only a matter of which dimensions receive greatest weight).

Figure No 1

Major Occupation Groups: Percentage Change in Employment, 1940-1960, for the State of California, and Median Year of School Completed by Occupation for the United States in 1964



Source: U. S. Census of Population, 1940, Vol. III, Part 2, Table 10, pp. 216-218; U. S. Census of Population, 1960, Vol. I, Part 6, Table 120, pp. 660-665; Manpower Report of the President, 1965, p. 207.

misfits, and seriously undermotivated fail to finish high school. (Of course, these disqualifying factors can be explained in terms of cultural deprivation and race prejudice. The fact remains, however, that the very attitudes which lead youths to drop out of school may also lead them to be poor employees.)

Have these increased educational standards led to skill shortages? With increasing prosperity and our ever-widening involvement in the Far East, are we likely to develop such shortages? Economists disagree here, but I am of the school which believes that we have actual shortages in only a very few occupations at the moment, almost all of which require at least a bachelor's degree.[4] My hunch is that such shortages are unlikely to occur as long as unemployment remains above the three per cent level. During the last two years our national unemployment rate has declined from more than six per cent to well below five per cent. Yet during this period no shortages developed.

It must be remembered that hiring standards during a given period tend to reflect the state of the labor market. When there are plenty of well qualified people available, as has been true in recent years, hiring standards go up. If graduates from junior colleges apply for factory jobs, companies may well hire them in preference to mere high school graduates. On the other hand, as one commentator put it:[5]

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4. Many of these apparent shortages, such as for librarians and social workers, could be easily cured by liberal doses of increased salary. I will not enter into the controversy over whether we have an absolute shortage of agricultural workers which cannot be cured by high wages.

5. Harold Wilensky in preface to Harold Wilensky and Charles N. Lebeaux, Industrial Society and Social Welfare (New York: Free Press, 1965).

> When the demand for labor is heavy, employers try harder to locate and train people for existing jobs and, in fact, they often remake the jobs to fit the limitations of the human beings on hand. There is nothing like a brisk labor market to make a grammar school dropout useful, an old man look strong, an unskilled woman skilled, a Negro acceptable, an "unemployable" a good bet for the next opening.[5]

If the problem of skill shortages is not an immediate one, why be concerned with training? Though we are not likely to suffer from shortages in any absolute sense, many jobs may be filled with men who are barely adequate. Certainly, with more skills available (and higher levels of employment) our rate of national growth will be faster and we will be able to adjust more easily to the uncertainties of technological change. With the future of California's job demand picture being more uncertain than that of the nation as a whole, California has an especially great need to develop a reserve of skill available to meet any development.

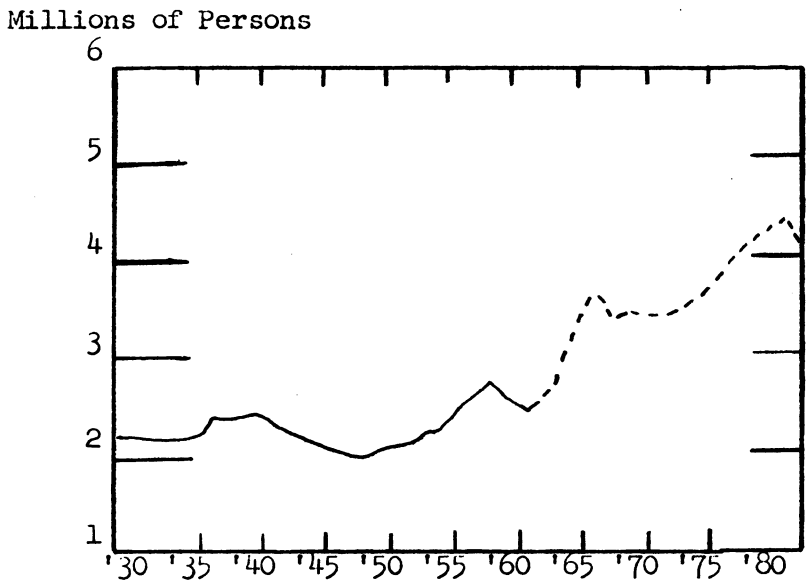
Training can easily be justified on social grounds. Through its tremendous educational investments, America has made a commitment to provide the opportunity for its citizens to develop their abilities to the utmost. As the number of high school graduates increases, the plight of dropouts grows ever worse. Without education or training the plight of many minority youth--caught in the endless circle of low income, wretched home life, undermotivation, and poor job opportunities--will never be broken. For these youths conventional education must be supplemented.

Individuals' Needs for Training

Our unemployment problem is vastly complicated by the flood of post World War II babies now entering the labor market. Figure 2 indicates the sharp jump in the number of persons reaching eighteen each year. The labor market sill soon have to provide opportunities annually

Figure No 2

Numbers of Persons Reaching
Age 18, by Year



Source: Adapted from Census Bureau data.

for 50 per cent more entrants than it did only five years ago. By 1980, our nation as a whole will have to absorb twice as many job entrants each year as it did in 1960. Since California is growing more rapidly than average, its figures are even more dramatic: the number of youths turning 18 has increased by 71 per cent--from 186,000 in the year 1960, to 318,000 in 1965. By the year 1970, this figure should rise to 367,000.[6]

Certainly the fact that the youth segment of the labor force is increasing at a far more rapid rate than the labor force as a whole may explain the youth segment's considerably above average rate of unemployment. As we all know, the unemployment rate in 1964 for youth under twenty was about three times the national average for those of all ages.

Our present bumper crop of labor force entrants is not only larger, but better educated than any group before. Back in 1940, only 29 per cent of Californians 25 years or over had graduated from high school; by 1960, this figure had climbed to 38 per cent. In 1940, 6.7 per cent had graduated from a four-year college; by 1960, 9.8 per cent had college degrees. (As Figure 3 indicates, the experiences for the United States as a whole were somewhat similar.)

The figures cited above deal with the labor force as a whole, both young and old. A sharper contrast emerges when we look at what the Census Bureau calls the "educational status in the fall of 1964 of males who entered fifth grade in fall 1956"--in other words, those who did or should have graduated in the high school class of 1965. Figure 3 deals with the

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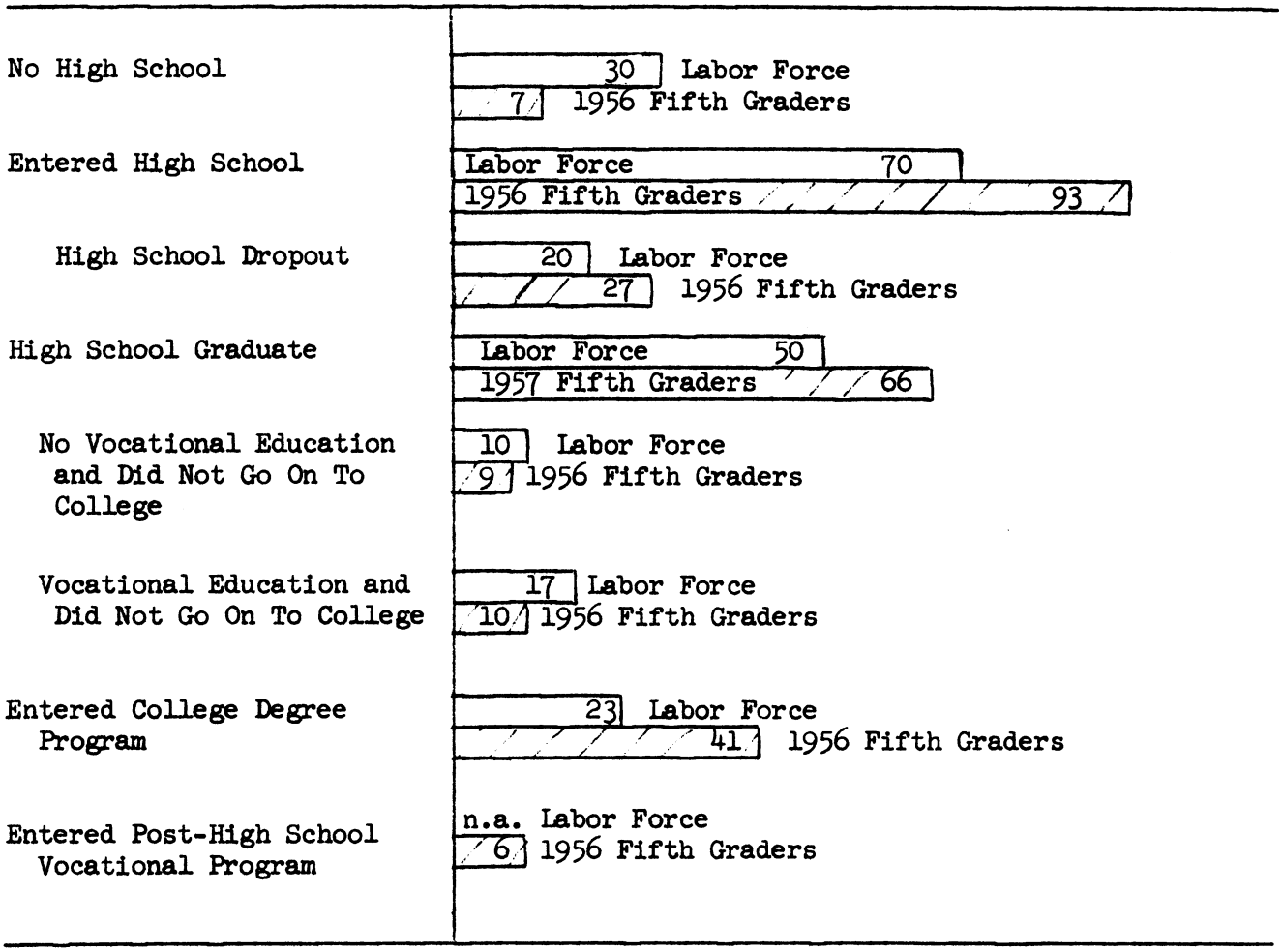
6. Estimate of Number of People by Age--California State Department of Finance, Financial and Population Division (unpublished).

Figure No 3

Percentage Distribution, April 1963, and Educational Status, in Fall 1964, of Males Who Entered Fifth Grade in Fall 1956



Sources: Office of Manpower, Automation and Training, Formal Occupational Training of Adult Workers, 1964, pp. 35, 47-48; Manpower Report of the President, 1965, p. 100. Data for civilian labor force are for males aged 22 to 64.

United States generally: only 7 per cent had no high school at all, and only 27 per cent were high school dropouts. Sixty-six per cent graduated from high school, and a whopping 41 per cent entered a college degree program, with another 6 per cent going into a post-high school vocational program. Of California's high school graduates in 1963, 55.9 per cent went on to college.[7] In fact, one might argue that our level of education is going up at least as fast as our real need for better trained people.

How well is this additional education preparing people for jobs? Clearly, it is not preparing them for specific jobs. Only 30 per cent of the labor force reports that they received formal training for their jobs, and of these no more than 14 per cent received this in high school, junior college, or technical institute (see Figure 4). Another 6 per cent learned their skills in special schools, such as private secretarial schools. Most employees have learned their jobs, at least in part, in (various) informal ways such as observing people on the job or through relatives and friends.[8]

The trend seems to be away from vocational education and toward education for a college degree. The proportion of students enrolled in vocational courses is dropping, and California vocational education is shifting its locale from the high school to the junior college (thus, in a sense, moving out of the reach of the high school dropout).

One may easily argue that our educational system today is too strongly academically oriented, and that it does too little to motivate

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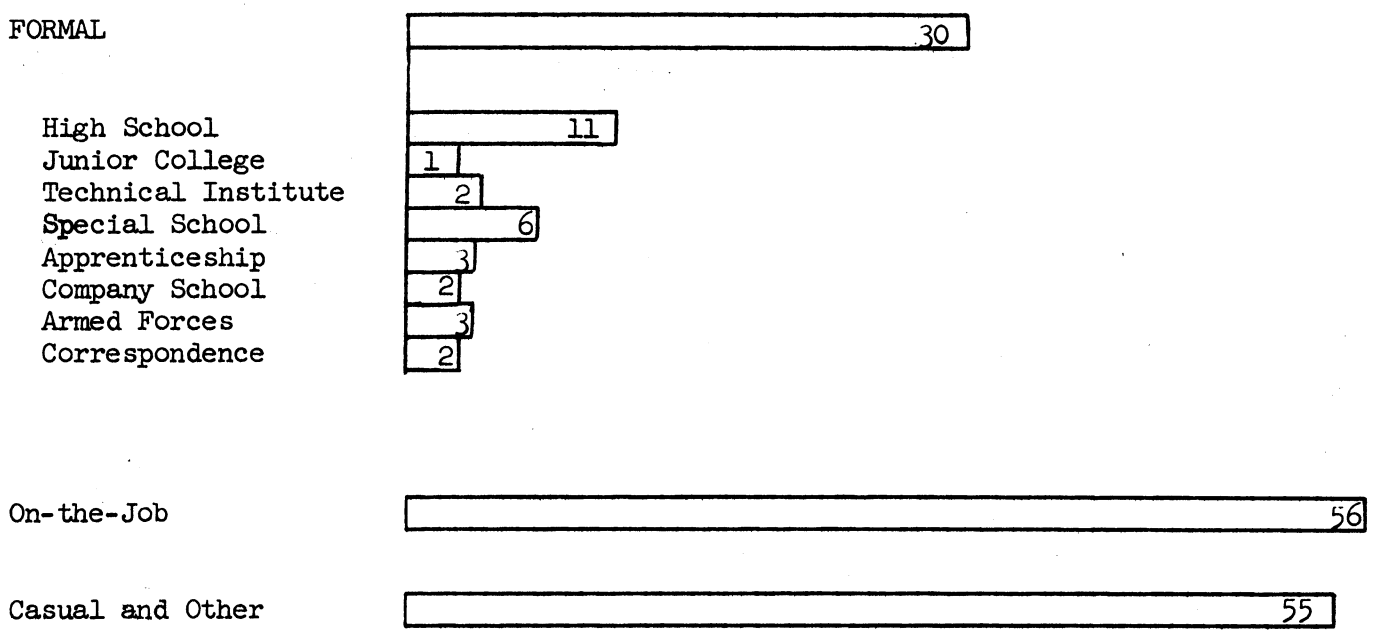
7. Coordinating Council for Higher Education, California Needs for Additional Centers of Public Education, No. 1014, December, 1964, Table VIII, p. 64.

8. Members of minority groups have relatively little opportunity for such informal contacts, and this may be a more important explanation for their failure to enter certain occupations than does their failure to obtain formal training. In fact, one of the best ways to reduce racial discrimination is to increase the relative importance of formal training and to formalize standards of admission to various occupations.

Figure No 4

WAYS IN WHICH JOB EDUCATION OBTAINED BY PERSONS
IN THE CIVILIAN LABOR FORCE 22 TO 64 YEARS OLD
April 1963 (PERCENTAGE DISTRIBUTION)



Source: Manpower Report of the President, 1964, pp. 256-257. Data do not include persons who completed college.

those who are not college bound. And yet, the de-emphasis of specific skill training seems a healthy one. Our training need today seems to be to provide our youths with a broad range of abilities (not necessarily on a college level) rather than specific skills. And in the case of the dropout or potential dropout, the need is not so much to train for specific skills as it is to develop motivation and a positive attitude toward work.

Specific Programs

With this overall introduction, let us look at some of our main training programs.

Figure 5 gives an overall picture of our training effort today from the best available statistics. Vocational education in our high schools and junior colleges is our largest single program--but 85 per cent of the high school students in federally-aided programs and 60 per cent of all federally-aided students were in agricultural and home economics programs. Formal company training comes next in size. And the various poverty programs, when they get under way, will far outnumber apprenticeship and the MDTA and ARA programs.

Vocational Education

Vocational education, the largest single component of our national training program, was a step-child until recently. With the increasing academic orientation of our high schools and junior colleges, vocational education and vocational educators fell to the very bottom of the totem pole in terms of morale and status. In many cities the programs for

Figure No 5

ENROLLMENT IN WORK TRAINING PROGRAMS

U. S., 1950 AND 1964, AND CALIFORNIA, 1964

	U. S.		California
	1950	1964 Current and Projected	1964
Vocational Education[1]	3,364,000	4,217,000	511,000
Agriculture	764,000	828,000	15,000
Distributive	365,000	310,000	119,000
Home Economics	1,430,000	1,839,000	162,000
Trade and Industry	805,000	1,186,000	207,000
Practical Nursing	---	54,000	8,000
Apprenticeship[2]	230,000 plus	220,000	32,000
Formal Company Training[3]	N/A	2,700,000	N/A
MDTA	---	68,000[4]	8,000
ARA	---	10,000	---[5]
Poverty Act (E.O.A.) Programs[6]	---	422,000	
Job Corps	---	25,000	
Neighborhood Youth Corps	---	175,000	
Work-Study	---	97,000	
Adult Literacy	---	37,000	
Work-Experience	---	88,000	
Aid to Unemployed Fathers of Dependent Children	---	21,000	

Notes:

[1]Current U. S. data are for 1963. Add to U. S., 1963, 5 million High School students' courses in typing and other office subjects; to California, 1964, add 500,000 enrolled in similar courses, plus 500,000 in industrial arts courses.

[2]**The 1964 data are based on the assumption that there is one unregistered apprentice for every two registered apprentices. See Phyllis Groom, "An Assessment of Apprenticeship: III Statistics on Apprenticeship and their Limitations," Monthly Labor Review, April, 1964, p. 392. The 1950 data are for registered apprentices only. However, since the GI Bill provided benefits for registered apprentices only, it is fair to assume that the percentage of registration was unusually high in 1950.**

[3]Data are for 1962.

[4]68,000 represents enrollees in institutional programs only. Add approximately 10,000 on-the-job trainees.

[5]Less than 50.

[6]Figures are projections for various dates during 1965.

Sources: Manpower Report of the President, 1965; California Department of Education, Vocational Education in California, 1963-64; Office of Education, Digest of Annual Reports of State Boards of Education, 1950; Federal Bureau of Apprenticeship and Training, Trends in Apprenticeship Registrations, 1941-1964.

boys seemed to exist chiefly to provide custody for the student misfits which the higher status branches of the school system refused to handle. Since both students and instructors held low expectations as to the likli-hood that training would result in jobs, students understandably developed self-images of being rejects, their motivation was poor, and they often became virtually unteachable. Since the skills offered in these programs were frequently outdated, standards of accomplishment were set low; students learned that they could get by with a minimum of effort, and so developed poor work habits.

A vicious cycle emerged as a consequence: employers learned that the best students and best teachers avoided vocational education, and so being a graduate of vocational programs became a hinderance rather than a help in getting a job. Vocational schools have been quite successful in placing graduates with commercial training, such as in typing, but in many communities the placement rate for those who majored in skills such as plumbing or electricity was very low. The sad fact is that among high school graduates who have not gone to college, graduates of vocational courses have a higher unemployment rate than do those who did not have vocational training.

The last few years have brought significant changes--though vo-cational education is hardly out of the woods yet. More Federal money has become available for fields other than agriculture and home economics. New programs have been started in technical education and practical nursing, and there has been an expansion of area-wide programs on the junior college level. The 1963 Vocational Education Act increased federal appropriations from $54 million in 1964 to $235 million in 1966--and all this money must

be at least matched on the local level. States have been allowed greater flexibility to experiment in new areas. In general, more emphasis has been placed on programs on the junior college level and on those with higher intellectual content.

Much remains still to be done to clear away the debris left by the long years of neglect. Vocational education is inherently more expensive than academic education. New teachers, new teaching techniques, new equipment, new buildings--all are needed. More important, we must give careful thought to the role which we want vocational education to play. Perhaps it is best to think of vocational education not as a substitute for basic education, but as something which is built on previously acquired basic education.

There is still too much unimaginative, status-quo-oriented, defeatist thinking in vocational education circles. To paraphrase a well-worn saying: vocational education is too important to leave to vocational educators.

Company Training

On-the-job, company-sponsored training is one of the oldest, largest, and, from the taxpayer's point of view, cheapest forms of training available. Since it is directly tied into work needs, it may also be one of the best.

Statistics in this area are mostly guesses, but two studies agree that on the average working day there are about 2.7 million employees involved in formal company training programs--some of whom may be in more than one program. Over two million individuals at a time are in safety

and orientation programs--though much of this may be trivial. Over a million are in formal programs to develop white collar skills--almost 400,000 in supervisory and management training, for example, and 230,000 in sales training. Over 200,000 are being trained for the skilled trades, 56,000 in the tool and die field alone. And there are 125,000 individuals being subsidized to take courses in institutions outside their company. These are quite impressive figures, although I am sure we all realize that the quality of these programs varies greatly. Some are very good; some are a complete waste of time; and a few may exist only as gleams in training directors' eyes.

Of course, the limitations of company training must be recognized. Most of this training is done by larger firms, and these train for their own needs only. Such training drops off badly in times of recession, and is made available only to the best candidates. There are relatively few opportunities for company or on-the-job training for those who obtain work in small firms, during periods of recession (when such training may be most needed), or for "hard core" people with little educational background. Thus, the public educational system must carry a large part of the burden.

It has been proposed that company training should be expanded through various forms of government subsidy. This was done in one sense under the GI Bill, and we have a certain amount of it under the on-the-job provisions of the MDTA. However, the experience of European countries, which have experimented with training subsidies considerably more than we have, is that companies are generally reluctant to involve themselves in the rigidities and red tape required to qualify for such subsidies.[9]

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9. A recent British law, for example, permits each industry to tax itself to raise its own training fund, which will be used to make grants to individual firms engaged in training.

Apprenticeship

Apprenticeship combines both company training with "related" training classes in vocational schools. Apprenticeship is perhaps the oldest form of formal training--but formal apprenticeship today plays a relatively minor role in the total training picture. Compared with four million in vocational schools and three million in company programs, there are only about 200,000 apprentices, both registered and unregistered, and about half of these are in the building trades.

Various estimates suggest that from 25 to 50 apprentices per thousand journeymen must be graduated each year to replace those who die, retire, or leave the trade, as well as to allow room for gradual growth. As Figure 6 indicates, by these standards only the electricians seem to come close to replacing themselves.[10] The vast majority of the men in the other trades are what are sometimes known as "Joe McGees," who learn their trade on the job. A quite high percentage of former apprentices become foremen. Indeed the apprenticeship program seems to serve the function of providing a hard core or cadre of highly trained men who perform the difficult tasks while the bulk of the routine work is done by Joe McGees.

Figure 6 tells us something else, too. If you run up the chart from painter to electrician you will note that the trades with the higher

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10. There are a number of reasons for the relatively small number of apprentices. Many employers refuse to take on apprentices because they think it doesn't pay, or because they have inadequate training facilities. Unions are usually too conservative in estimating future vacancies. And apprenticeship proceeds by fits and jumps, being cut back severely whenever there is a recession.

Figure No 6

APPRENTICESHIP

Trade	Active Apprentices 1920	Active Apprentices 1960	Completed Program 1960	Per cent Change in Number of Persons in Occupation 1950 - 1960	Median Earnings 1959	Worked 50-52 Weeks (Per cent) 1959	Median School Years Completed 1960
	(per 1,000 journeymen)						
Electrician	45	142	30	8.9	$5959	70	11.8
Sheet Metal Worker	NA	76	14	11.6	5485	68	10.8
Pipe Trades	36	66	11	11.6	5593	61	10.7
Iron Worker	NA	50	8	19.6	5543	46	10.0
Bricklayer	11	35	6	17.8	4793	30	9.7
Plasterer	10	25	3	-17.6	4646	33	9.0
Carpenter	5	18	2	- 6.7	4164	41	9.3
Painter	7	12	2	- 4.0	3727	42	9.1

Source: George Strauss, "Apprenticeship: An Evaluation of the Need," in Arthur M. Ross (ed.), Employment Policy and the Labor Market (Berkeley: University of California Press, 1965), pp. 302-309.

percentages of apprentices also are the trades which are expanding in size, earn higher incomes, have steadier employment, and are better educated.

A number of people have bemoaned the decline of the apprenticeship system--and point to some golden period when all journeymen had served an apprenticeship. My own research indicates that this golden period is a myth. Figure 6 suggests the apprenticeship system is more effective today than it was in 1920--and it is probably at least as effective today as it has been at any time in the last 100 years. True, there were a larger total number of apprentices immediately after World War II, but the quality of instruction today is probably considerably better than it was then.

Actually, we have all sorts of apprenticeships in our society. The intern in the hospital is serving an apprenticeship, and so is the junior executive trainee in industry. Apprenticeship of this sort may well expand. Apprenticeship in the rather rigid form in which it exists in the building trades plays a very important role in certain trades; but I see little prospect of it being expanded--at least in its current form.

Retraining Programs

Current federal retraining programs were originally designed for those who were displaced from their jobs due to economic or technological change. The first of these programs, the Area Redevelopment Act, passed in 1961, was designed for the benefit of hard core depressed areas, such as Appalachia, although it was eventually extended to cover areas in all

50 states. In 1962 a much broader program was approved, the Manpower Development and Training Act. Finally, the recent Foreign Trade Act provided a similar program for the benefit of employees who lost their jobs because of tariff reductions. Of these programs, MDTA has been by far the largest.

MDTA today provides for courses of up to two years in length for unemployed and underemployed workers, and pays these workers allowances of up to $10 above average unemployment compensation benefits. There are three kinds of MDTA programs: institutional, for the most part vocational courses taken in the public high schools and junior colleges; on-the-job training; and experimental and demonstration training. As Figure 7 indicates, 92 per cent of the trainees are in the institutional programs.

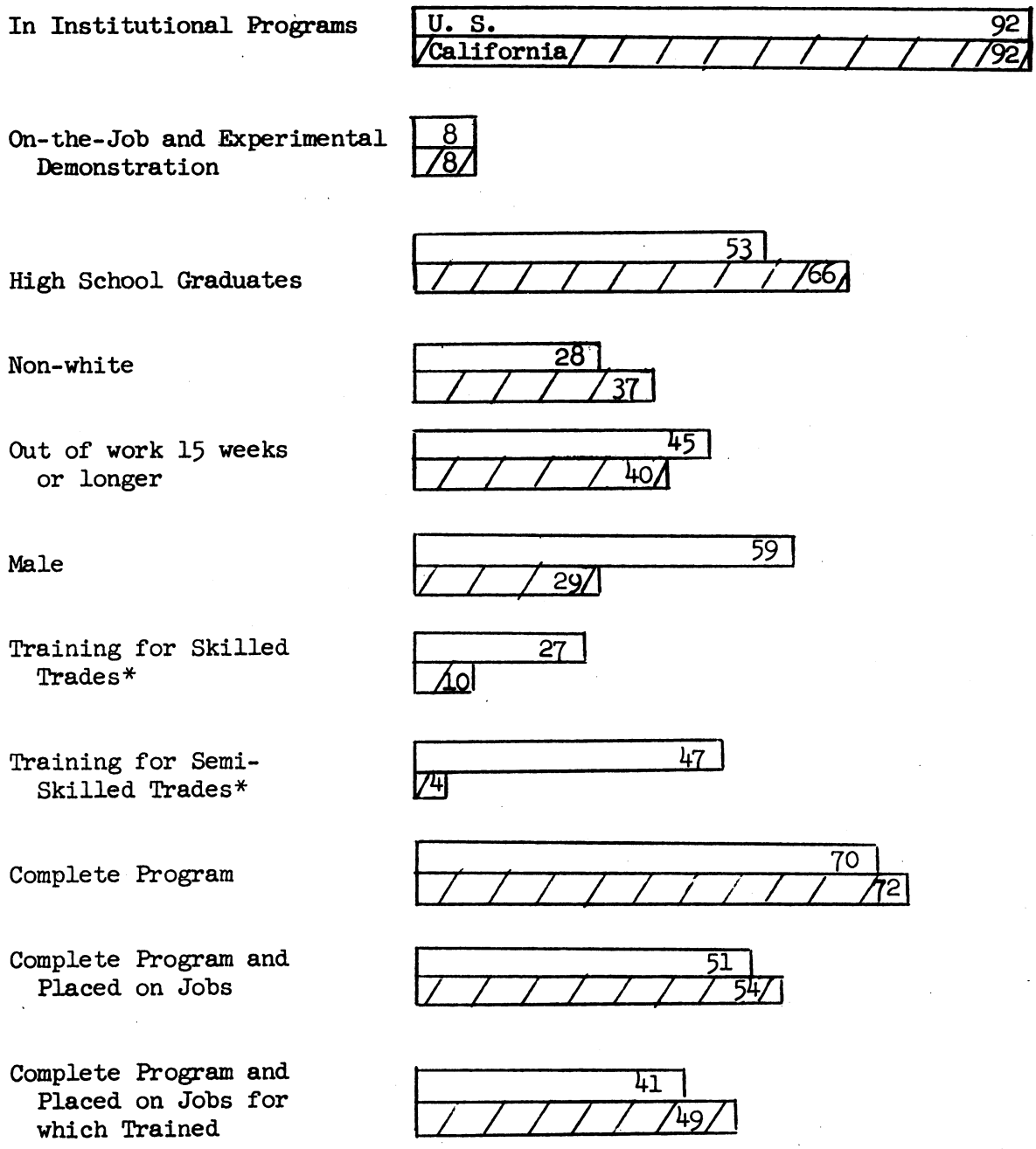
MDTA was designed originally for unemployed heads of households who had been in the labor force for two or more years--and it was heavily criticized for training only those who were easiest to train and to place--for skimming the cream off the top of unemployment pools--and for doing very little for the more difficult cases, such as teenagers, members of minority groups, and those with little education.

In response to these criticisms, the law was amended to permit greater emphasis on teenagers and on basic education, chiefly in reading and writing skills, for those whose educational level was too low to permit them to profit from training for specific skills. In effect, the distinction between retraining and training for first-permanent jobs was dropped. As of the moment, MDTA trains its proportionate share of non-whites and the long-term unemployed, but still devotes less than proportionate attention to teenagers, older workers, and the undereducated.

Figure No 7

SELECTED CHARACTERISTICS OF MDTA TRAINEES

PERCENTAGE DISTRIBUTION, 1964



*As a percentage of single-occupation training.

Sources: California Department of Employment; Report of Secretary of Labor on Manpower Research and Training, 1965. U. S. data (except for percentage in institutional programs) for institutional programs only.

On-the-job training so far has been relatively unsuccessful, although the government has ambitious plans to improve it. On-the-job training for the most part, so far, has been confined to upgrading those already employed or, in the case of construction workers, those who belong to the appropriate union but are temporarily out of work.[11]

How does California compare with the rest of the nation? Both programs are heavily institutional; both give substantial emphasis to high school graduates, non-whites, and the long-term unemployed. Non-whites receive especially heavy attention in California. The completion and placement rates of the two programs are very much alike. These rates are disappointingly low, though it must be noted that many of the dropouts find jobs and report that their partial training was useful. But even if only half of those who enter the program found jobs through it--and so make a contribution to the economy rather than being a drain on it--the program seems worthwhile.

There are some substantial differences between California and the rest of the country. The California program is largely female and places relatively little emphasis on the skilled trades (in part reflecting union opposition). Almost two-thirds of the trainees were in clerical, sales, and service programs. For various reasons, California has not been able to spend the money allocated to it. The red tape required to get programs approved has proved quite time consuming; a number of programs have been abandoned before work could be started because the individuals to be trained

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11. For a duscussion of this problem, see Jack E. Brookins, "MDTA and Apprenticeship: Some Skeletons and Shadows," paper prepared for the Conference on Job Training and Industrial Relations, St. Francis Hotel, San Francisco, May 26, 1965, sponsored by the Institute of Industrial Relations, University of California, Berkeley.

had found jobs or because the work for which they were to be trained was no longer available.[12]

Economic Opportunity Programs

There are three major programs under the Economic Opportunity Act, plus a number of minor ones. The major programs are the Job Corps, the Neighborhood Youth Corps, and the Community Action Programs.

The Job Corps provides residential type programs primarily for younger dropouts on the implicit assumption that the rehabilitation of some youths from impoverished families will require uprooting them from their present unwholesome environment. The Job Corps is administered directly by the Office of Economic Opportunity and consists of two kinds of programs. The conservation programs are modeled after the CCC. Men in these programs spend half of their time working on conservation projects and the remainder in school. The urban programs are located closer to big cities and are, in effect, vocational boarding schools. Camp Parks, which is being run by Litton Industries, is an example of an urban program.

Since many of the Job Corps trainees are deficient in their education, the first order of business is to make them literate--to provide training in reading and writing. Then they are taught social skills, such as how to work under supervision, and later a broad range of work skills, mostly on the pre-apprenticeship level.

The Neighborhood Youth Corps is administered by the Department of Labor, and it provides part-time employment with public or non-profit

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12. Unfortunately, many of the jobs which these individuals found were of short duration and of considerably less value than the training which they could have received had MDTA moved faster.

agencies. Youth Corpsmen are placed on newly-created jobs which do not provide competition with private enterprise or take work from those already working. Here, too, there are two programs. One is for those still in school and provides additional income both in the summer and during the school year. The other is for dropouts, but in contrast with the Job Corps, it is designed to develop work habits rather than work skills themselves.

Finally, there are the Community Action Programs. These are being developed on a local level and cover a broad and miscellaneous spectrum only part of which is related to training.

Miscellaneous Programs

I should also mention a number of miscellaneous programs, most of them quite small. The Poverty Act establishes a Work-Study program, which provides part-time work for college students, an Adult Basic Education Program for literacy instruction, and a Work Experience Program for unemployed fathers. The latter program is much like the Neighborhood Youth Corps, but at an adult level. The MDTA runs a group of experimental and demonstration projects which are in effect precursors for the Community Action programs under the Poverty Act.

In addition, the State of California has experimented with its own conservation work camps, a state version of the Job Corps' conservation program, and it has another program for adults on relief which is much like the federal work experience program. Finally, as a state

counterpart for the MDTA there have been a few retraining programs for adults on unemployment compensation. The California programs have, to some extent, been outmoded by the more liberally financed federal programs.

Policy Questions

With this bird's eye view of the training scene let me pose some general policy questions relating to training objectives: should our emphasis be on the easy-to-train or the hard-to-train? What emphasis should be on developing motivation and work habits in addition to skills? Should broad or specific skills be taught? Where should training occur--in schools and colleges or on the job? Should school training be at the high school or junior college level? Should training be for presently available jobs only, or should people be trained for jobs which may eventually open up? And, finally, who should control and pay for training?

Easy to Train vs. Hard to Train

Perhaps the first question is where do we start? Should we start with those easy to train? Should we skim the cream and take the better educated who will be easy to place? Or should we start with the hard core unemployed, the dropouts, the socially and physically handicapped who will be very expensive to train--if they can be trained at all?

The emphasis in the early MDTA programs was on the easy-to-train. More recently, with the MDTA amendments and with the poverty program, greater emphasis has been given to the more difficult cases who need broader, more basic forms of training which are not related to immediate jobs. Through rehabilitation work with the physically handicapped we have learned that

something can be done even for the worst cases, but this requires a great deal of time, patience, and money.

With the easy-to-train it may be possible to train a relatively large number of people at low cost. But, assuming an upswing in employment, many of these might find work with companies who would train them on the job. Perhaps we can get more for our money if we concentrate on the hard cases who would otherwise be completely unemployable--even though the cost per man will be greater.[13] The Job Corps has been criticized, for example, because it won't take parolees or probationers.

Ideally, we should be able to train both groups at once--the easy and the hard. Our problem is lack of training funds and lack of jobs to put trained people on. Training itself rarely increases the number of jobs available. What happens is that the better trained take work away from the less trained, and by training one group, in effect, we reduce the opportunity for those who don't get training.[14] Our dilemma here resembles that of doctors after an atomic attack. Since there won't be enough doctors to treat everyone, should those available treat those who are worst injured or should they save their limited energies for those lightly injured who will require less care and have a greater chance to survive?

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13. Some European countries have emphasized training for those already employed. Of course, unemployment is relatively low in Europe, and European countries have more concern with raising productivity than with reducing unemployment. Yet, it is argued that if, in this country, semi-skilled workers can be made skilled and unskilled workers made semi-skilled, then unskilled job openings would be created for those presently out of work. This assumes a quite high level of employment.

14. Training may also increase the amount of community tension, as newly trained groups begin to threaten those in lesser trained groups who may have held the jobs in the past. On the other hand, by providing opportunities for previously underprivileged groups, it may reduce tension.

Training for Skills vs. Training for Work

A painful lesson from recent training efforts is that various segments in our population have different training needs. For the majority of people it may be enough to provide opportunity to learn skills. More than this may be required for members of underprivileged minorities who have "learned" through past experiences of discrimination that hard work does not pay off. Having developed relatively little "achievement orientation" and having little expectation that study will help in finding work, they fail to make the most of their educational opportunities. (These same attitudes make them unattractive candidates for jobs once they finish school.) Before such "underachievers" can learn specific manual skills they must develop motivation to learn; and before they can become employable they must learn work habits and social skills.

A number of government programs are designed to break this vicious cycle through providing work experience for underprivileged youths and hopefully developing a sense of achievement which will motivate these youths to return to school and eventually fit themselves for good jobs. Some of these programs are well designed. Unfortunately, many programs seem to be repeating the mistakes previously made by vocational education. They invoke make-work jobs for which standards of achievement are set quite low. Participants develop little pride in what they see as "Mickey Mouse" assignments which have little liklihood of leading to real employment. Nor do the low standards on many projects give youths a realistic understanding of what private employers actually want.

Although there is a great deal of need for experiment, it would seem that a successful program should involve meaningful work. It should require

punctuality, regular attendance and high standards of performance. It should be looked upon not as a means of keeping kids off the street during the "long hot summer," but as a realistic step toward permanent employment. Since programs of this sort are difficult to devise, perhaps it would be better to have fewer programs and higher quality. The recent announcement that Neighborhood Youth Corps training will be intensified and lengthened, but the number of enrollees reduced, may indicate a move away from quantity toward quality.

Broad Vs. Specific Skills

A related problem is this: should training be basic or applied? Should we look for broad expertise or for specific narrow skills? The current philosophy of the apprenticeship program is to train men in all aspects of the trade, even though upon the completion of the program they may work only as specialists.[15] Apprenticeship officials are opposed to broad courses which lead to splintered skills. They argue that we need higher levels of training rather than lower--longer apprenticeship periods rather than short MDTA programs. It is suggested that with broader training men will have the flexibility to adjust to technological change. Specific skills become easily outmoded; broader skills are less likely to be so.

On the other hand, it can be argued that time and advancing technology are working against broad skills. The day of the master of all

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15. The same approach is used in training college professors. To earn their Ph.D. we make our graduate students do advanced research even though they will spend most of their time teaching the basic course.

aspects of the trade is gone. We see this clearly in the professions. Nursing and engineering, for example, are becoming increasingly specialized. Some nurses and engineers go on to advanced degrees in highly specialized fields, but many of the functions they once performed are now carried out by nurses' aides and engineering technicians. Even in construction, the vast majority of the men are only partially trained Joe McGees. Jobs are available for men with splintered skills, and it is becoming more and more unrealistic to take the position that if men don't get complete training they should get none at all.

Some of the debate here may be irrelevant. The significant difference may not be between long-term and short-term training, but between basic, often intellectual skills and applied, often manual skills. The broad skills taught by many apprenticeship programs, on analysis, turn out to be but a bundle of specific skills. A graduate of such a program may be thoroughly competent in many aspects of present technology, but still have little ability to adjust to new technology. By contrast, a relatively short time spent in learning the theory underlying a trade's technology may equip a man to comprehend new processes on his own, just as fast as they come out. Indeed, the new processes being developed in many trades today require largely intellectual skills--mathematics or electronics, for example--rather than manual skills.

Yet we still don't know how to identify what are the basic underlying elements in many trades, nor how to teach these elements to students who are primarily concerned with the practical. Certainly, intellectual skills can be overemphasized. Bricklayers or plasterers have little need to know the basic chemistry of the materials with which they work, and there seems little merit in the position of some apprenticeship officials that every trade must

have 144 hours a year of intellectual, nonmanipulative classroom training. Some trades need more than this, some less.

Institutional vs. On-The-Job Training

This brings us to our next major question: to what extent should training be on-the-job as opposed to institutional? Traditionally, even doctors and lawyers were trained on the job--but as intellectual, theoretical skills have become more important, and as we have begun to expect people to stay in school longer--our society has placed a greater emphasis on institutional training. This is a long-term trend, and I doubt if we can reverse this.

On-the-job training is often highly specific. The trainee may learn the details of his own particular job and something about the technology of the particular firm for which he works. In a period of rapid technological change this is often not enough. Yet individual firms are rarely so far-sighted or altruistic as to provide their employees with skills not needed in the immediate future. Moreover, on-the-job training is highly dependent on current job vacancies; since trainees usually have low seniority, slight fluctuations in employment may easily disrupt the continuity of their education.

Institutional training has its costs. Classroom training tends to be impractical, and laboratory exercises and manipulative training are required. If practical experience is to be given at school, expensive equipment and supplies are required. Good teachers who are up to date in their trade are few and far between.

On-the-job training is cheaper for the taxpayer; in some cases

(not all) it is more up to date;[16] and in many cases it is more likely to lead to a permanent job. In addition, many trainees learn more rapidly on the job than they do in class, especially if they believe such training has practical value. Many trainees, particularly those from underprivileged backgrounds, hate the classroom situation. They have little intellectual curiosity; they have done poorly in elementary school, and so expect to do badly in high school; they see little tie-in between school and anything practical; and so they are poorly motivated and fight and resist the classroom situation. For such trainees on-the-job training is necessary, or at least some sort of cooperative arrangement in which the student spends part of his time working and part of his time at school.[17] Arrangements like this are much more common in Europe than they are in this country.

High School vs. Junior College Training

This brings us to another problem. At what level should classroom vocational training occur? In the high schools or in junior college? Because of the increasingly complex nature of modern technology, the amount of mathematical, scientific and other knowledge required for employment in many skilled occupations has increased considerably. Many educators believe that training for such occupations can be done best at the junior college level, building on the broad background of general education in the high school. Fine as this sounds, this philosophy leaves out the underprivileged and undermotivated youths who never finish high school in the first place.

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16. In the fields of science, medicine, and technology practicioners, we usually look to the universities and colleges to provide the most up to date techniques. Vocational schools, however, are too often followers rather than leaders.

17. For such kids even schooling is often best presented in a disguised, chocolate-coated form.

Train Only for Available Jobs?

For what sorts of jobs should training be provided? Some unions have argued that training should be provided only in those occupations in which there are current vacancies in the local labor market. Many unions have insisted on a veto power over work-study courses in unionized occupations. Understandably, unions are reluctant to add to the number of unemployed in fields which are already overcrowded.

On the other hand, it can be argued that this is a defeatist position which would result in very little training done. If it makes good sense in terms of manpower flexibility to overtrain apprentices, to equip them with skills for which they have no immediate use, perhaps it also makes sense to train too many people, to equip people with standby occupations in which they cannot obtain immediate employment. If we look upon training as a long-run proposition, we should concern ouselves more with jobs which will exist in the future[18] than with immediate local conditions. Indeed, local conditions may be irrelevant, since over one-third of our workers today work in communities other than where they went to school. Finally, it is argued that the MDTA policy of training just for jobs that are now available has resulted in overemphasis on low-paying, poverty jobs such as hospital attendant and hotel chambermaid--and that the apparent vacancies in these areas may be due to low wages rather than to lack of properly trained people.

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18. This implies we can do a better job of job-demand forecasting than we have been able to do thus far.

Who Shall Control?

Next we come to a very sensitive question rarely discussed frankly, and this is: who shall control the training? Unions, management, the school system, the department of employment, new agencies, or who? Obviously, this is an important question, for the agency which determines who gets trained also, to a large degree, determines who gets jobs. And the question is obviously especially important in those trades where labor has traditionally asserted the right to control entry. The new programs cannot help but to either strengthen or weaken labor's position--they are not likely to have a strictly neutral effect.

Naturally, we see similar power struggles within the government. Should the new programs be handled by fresh new agencies with fresh new ideas, or by old established agencies with years of experience and know-how? Should the control be at the federal, state, or local level? How about the relative balance between manpower agencies, such as the department of employment, and the educational system? Should Community Action Programs at the local level be controlled by the Mayor's Office--or by representatives somehow selected from the poor themselves (an issue which has led to much controversy in many cities)? To some extent these problems have been avoided by bringing everybody into the act, by establishing a number of joint programs, joint committees, etc. But the effect has been to make administration terribly slow and to drown enthusiasm with paperwork.

Who Pays for Training?

Finally, who should pay for training: The individual, the firm, the union, or the government? Our practice today varies from the commercial

typing school where the student pays her own tuition through the vocational school where the government pays the tuition but the student meets his own expenses; or the company school where the company pays both training costs and wages for the trainees; to MDTA classes where the government pays both tuition and living allowances.

The trend certainly seems to be that of taking the economic burden of training off the shoulders of individuals and companies--and placing it on the government. There are dangers here: we may be persuading youngsters that anyone who goes to school without being paid for it is a sucker.[19] Also, we may be taking from companies the training function which traditionally they have handled themselves.

On the other hand, there are some who are so poorly motivated that only the dollar sign will bring them back to school. And unless they receive training allowances, heads of families feel compelled to take any job which comes along, even though they might eventually earn much more where they are able to complete their training. Furthermore, it can be argued that if we want those in the Job Corps or the Neighborhood Youth Corps to feel that they have real jobs, we must be prepared to pay them "real" wages.

Conclusion

Only one thing seems clear in this area. Training is going to be more important as our technology advances. Our national training program--

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19. Already difficulties have developed because the Neighborhood Youth Corps pays $1.25 an hour, while the allowance for MDTA trainees has been only $20 per week.

if we can call it that--is a matter of bits and patches, and we are going to have to give it a lot harder thought than we have in the past.

Despite the intricate series of checks and balances built into the MDTA and poverty programs--despite the cloying stream of gobbledegook and good intentions spilling forth from government mimeograph machines, one gets the impression that much of what is being done is haphazardly designed and that much of the money being poured into these fields will go to waste. The war on poverty will not be won by a blitzkreig or by a public relations attack. Yet these programs are on the right track in that they emphasize that a well-rounded training program should reach adults and dropouts as well as those attending regular schools; it should be concerned with developing work habits, motivation, literacy, and a broad background in the sciences as well as specific skills.

Finally, it should be emphasized that all our training problems will be simpler if we have a high level of employment. Companies will expand their training programs; unions will reduce their resistance; and trainees' motivation will increase.

TAXES AND SERVICES AS FACTORS IN INDUSTRIAL LOCATION

by

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TAXES AND SERVICES AS FACTORS IN INDUSTRIAL LOCATION*

State and local taxes seem to be living two lives. On the one hand there are numerous studies that conclude that taxes are a minor factor in location decisions. John Due reports [Due 1961, p. 171]:

> On the basis of all available studies, it is obvious that relatively high business tax levels do not have the disastrous effects often claimed for them. While the statistical analysis and study of location factors are by no means conclusive, they suggest very strongly that the tax effects cannot be of major importance.

On the other hand, we are told that federal aid is required because the state-local governments are unable to raise their own taxes for fear of creating a competitive disadvantage. For instance, Joseph Pechman says [Pechman 1965 p. 76]:

> In every state and municipality, fear of driving commerce and industry to competing jurisdictions or of discouraging the entry of new businesses restrains new and increased taxes.

These two apparently contradictory points of view can be recon-

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ciled if we assume that government officials think that state-local taxes are important but industry does not really think so. Other possible reconciliations are that state-local taxes are really important, despite the industrial surveys; or that industry has sold the elected representatives a bill of goods just to keep taxes down. Our own findings are that industry is primarily responsive to what it gets for the tax money it pays. This involves, on the tax side, concern with the efficiency and incentive-effects of the revenue structure, not only the tax rates. It also involves concern with the quantity and quality of services provided. More bluntly, industry is influenced by the cost reductions that result from tax-supported services. This is brought out by statements made by plant-location officials and is obscured by check-list surveys.

COST REDUCTIONS RESULTING FROM TAX-SUPPORTED LOCAL SERVICES

Our study deals with the direct benefits which local tax-supported services confer on industry. These benefits may sometimes take the form of a measurable reduction in cost; more often, the reduction in cost must be inferred from increased productivity or the ability to attract better personnel at the going wage and salary levels.

Most of the discussion of the present problem in the literature on taxation has arisen in the context of taxation as a factor in industrial location. The basic problems are the same, namely what industry gets for the local taxes it pays. Hence, except for a slight difference in context, the studies of tax factors in industrial

location are pertinent to our problem. We will have to rely heavily on this material since very little is available on the precise question of what an existing industry gets out of the taxes it pays to the locality in which it is situated.

Importance of Property Taxes

Municipalities are chronically short of revenues and they must seek various sources merely to maintain essential services. Thus, instead of relying solely on property taxation, municipalities have had to go to business and occupation taxes, licenses, etc. These are all just different ways of getting the funds for the provision of general municipal services to industry, commerce and individuals. Many municipal governments, especially cities, have encountered difficulties in obtaining sufficient funds to meet their needs. The almost sole reliance on the property tax has placed a limit on revenue-raising possibilities. At the same time the demands for municipal services have grown. [Somers 1949, p. 428]. These alternative and supplementary sources of revenue represent forms of taxation relied on by local governments to provide general, essential services which an industry would otherwise have to provide for itself as overall (or "overhead") operating costs.

The trend away from reliance solely on property to finance essential municipal services was recognized twenty-five years ago by the National Association of Real Estate Boards which said [New York Times, November 15, 1940, p. 41]:

> There are emerging several influences which, it is believed, will cause increases in taxation to settle more heavily proportionately on forms of wealth other than real estate.

The personal property tax is one of the diversified sources of revenue which is relied on to provide general services which industry would otherwise have to provide for itself.

The fact that the form of property involved is incidental to the main purpose of property taxation is well-stated by Russell L. Hendricks, Manager of the Tax Division of the Proctor & Gamble Company [Hendricks 1957, p. 197]:

> The basic principle upon which our general property tax laws are based is that each taxpayer should contribute an equitable share of his wealth toward the expenses of his community, regardless of the form in which that wealth is held. [Emphasis supplied]

This statement clearly establishes the idea that the property tax is an attempt to impose a burden on the wealth of the taxpayer regardless of the particular form which that wealth happens to take. Whether it is personal property or real property, is of no consequence from this point of view. The aim is to extract a tax in adequate amount to provide the revenue needed for municipal services.

Lower Costs of Essential Services

The Chairman of the Board of the Northwest Bancorporation has said [Thomson 1957, p. 210]:

> ...I think businesses are more interested in obtaining adequate local services at reasonable cost than in temporary tax advantage.

This is recognition of the fact that there is a quid pro quo: taxes for services; and that, in general, it is to the advantage of industry to buy its services through taxes. Moreover, the reference is simply to taxes, not any particular tax. It is of no consequence either to the taxpayer or to the municipality what form the tax takes

(as far as this particular issue is concerned). What is important is the dollar total of taxes paid and the dollar value of services received.

The direct connection between taxes and services is well recognized. A publication of the Federal Reserve Bank of Boston states [Strasma 1959, p. 2]:

> Services offered by the community differ widely between locations. If these services are inadequate for a particular plant, the firm may lose what benefits it gains in low taxes through costs incurred in providing its own services. [Emphasis supplied]

Thus the existence of higher taxes or taxes of a particular sort may simply be a substitute for overhead costs incurred by the company itself.

The very close relation between local taxes, municipal services and manufacturing cost has been well stated by one writer [Floyd 1952, p. 20]:

> If higher-than-average taxes in a location make possible superior public services of a type which directly benefit the taxed firms without also benefiting competing non-taxed concerns, these high tax costs may be counterbalanced by other cost reductions. For example, use of industrial tax revenues to support efficient fire and police departments may reduce the taxed firms' expenditures for watchmen and fire insurance. Other types of public expenditures may also bring about similar reductions in industrial costs. [Emphasis supplied]

The author hastens to add that not all state and local expenditures can be so directly related to industrial benefit as to show up in any direct cost reduction. He says [p. 20]:

> The bulk of state and local spending is for schools, highways, and public welfare. Such expenditures bring only indirect, long-run benefits to manufacturers, and even these benefits may be diffused over a wide area, since recipients of these expenditures may move to other taxing jurisdictions.

Granted that there is some leakage through emigration from an area--offset, incidentally, by immigration--even these so-called "indirect" benefits may have direct effects on costs through the ability to attract higher-quality personnel, a subject which is considered more fully below.

The following is an actual instance in which a company president examined a number of different possible locations in Arkansas [Gray 1962, p. 27]:

> In four of the five towns, they looked at the industrial sites described in AIDC's report [AIDC = Arkansas Industrial Development Commission], drove around town looking at the schools, the churches, the county hospital and the courthouse (when they were in the county seat). Jefferson [company president] even noted the condition of lawns, asked questions about surface water and sanitary sewers...
>
> Between towns there was an endless barrage of questions about the towns...willingness of highly skilled Arkansas workers - tool and die makers and the like - to live in these towns,...everything that might conceivably affect the productivity of his operation or the efficiency of his workers.
>
> At the fourth community the story was different. They hadn't reached the center of town when Jefferson asked that they push on to another town. The shacks and junk yards lining the main state-federal highway plus an obviously overburdened sewer system were enough to sour him on that town. Because Jefferson had to move in managers and skilled workers - personnel that can find good jobs in any city in America - living conditions were extremely important to his decision... [Emphasis supplied]

By and large, a taxpayer gets what he pays for in the way of local taxes: higher taxes involve more essential services and lower taxes involve fewer essential services. Since we are dealing with "essential" services, the difference must be made up by the taxpayer himself. Even the allegedly lower-taxed suburbs cannot escape the inexorable relation between tax costs and benefits received. [Hirsch et al 1957, p. 83]:

> Many people assume that, insofar as governmental costs are concerned, it is cheaper to live in the suburbs than in the City of St. Louis. This assumption is not warranted. There are still some areas in the County where the property owner pays less in taxes than he would in the City of St. Louis, but in such cases he also receives fewer public services. [Emphasis supplied]

This may seem to be belaboring the obvious, but it is the obvious that is often overlooked.

The burden which an industry places on municipal services has been worked out in one major study on a hypothetical basis for various-sized industries. The study dealt with the question: how does industrial development affect community costs and tax rates required to meet these costs? It is evident that any industry established in a community requires outlays for capital improvement and operation of roads, sidewalks, sewers, schools; annual costs of rubbish and garbage collection, fire and police protection and public welfare; and that the tax rates must be adequate to meet these costs. [Isard and Coughlin, 1957, pp. 30, 47-50].

The fact that any large enterprise increases greatly the strain on educational facilities is widely recognized. Thus all the employees in the plant make demands on the school system which, in turn, is financed in large part by all the taxes imposed on the company, however assessed. The same is true of other local facilities. One of the writers quoted above states the impact of industry on local services thus [Walker, 1955-57, pp. 35-36]:

> INCREASED EDUCATIONAL COSTS.
>
> If the new enterprises attract workers to the community, it is likely that the increase in school population will be greater percentagewise than the increase in total population since the new workers will be of the age group most likely to have children

of school age. Therefore, a disproportionate increase in school costs may be anticipated. Since education is the most expensive function of local government, this will be a vital fiscal consideration.

TRANSPORTATION FACILITIES.

Demands upon streets, highways, parking areas, and public transit will be augmented as a result of industrial development.

WATER SUPPLY AND SEWAGE DISPOSAL.

These functions will be affected both as a result of industrial demands and also by the influx of any new workers who move into the community....

FIRE AND POLICE PROTECTION.

The cost of supplying such services increases disproportionately as population increases, so these costs are likely to increase even though the industries may provide themselves with a substantial amount of their own protection.

The Front Royal, Virginia, study offers specific data concerning increases in government expenditures:

> Gross expenditures for municipal functions tripled during the 10 years after Viscose's arrival. Town officials' salaries increased, the police force was enlarged, and the electrical, sewerage, and fire departments increased in size. Water service costs increased more than 100 percent. The municipal debt was increased to finance needed extension of the water supply and sewerage systems. Because of annexation, large expenditures were necessary for new street paving, sidewalks, and curbing...
>
> County expenditures also increased greatly. Gross expenditures rose 243 percent. Indebtedness increased and debt service charges increased, though not as fast as the debt itself. Education, the principal county function, caused most of the increased costs. The total number of pupils increased from 1,976 in 1934-35 to 3,079 in 1947-48. Operational costs of schools increased 262 percent for the period, compared to a statewide increase of 187 percent. Large capital outlays for new schools were necessary, but additional construction on a large scale remained to be carried out.*

/ Emphasis supplied throughout /

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*/ Quoted by Dr. Walker from U. S. Department of Commerce, Office of Technical Services, WHAT WILL INDUSTRY MEAN TO MY TOWN? 1955, pp. 10, 11./

The various local services that we have considered are felt to be so valuable to industry that they form a major inducement to industrial location. The Executive Director of the Tax Institute summarizes this point as follows [Walker 1955-57, p. 52]:

> Robert B. Garrabrant, Secretary, Industrial Council, Urban Land Institute, has said: "The provision of municipal services is the least controversial form of inducement, since it is the normal responsibility of the government to provide these anyhow."* [*THE COMMUNITY AND INDUSTRIAL DEVELOPMENT, Technical Bulletin No. 21, Washington, D. C.: Urban Land Institute, 1953, p. 15.]
>
> First and foremost, it is important that a community take stock of its assets and liabilities. One obviously primary requirement is suitable sites and the safeguarding of those sites through zoning or acquisition...
>
> A water supply that is adequate for both industrial and residential uses is another prime consideration. Transportation facilities, police and fire protection, sewage disposal, public health services, education, recreation, and the whole gamut of governmental services are all important considerations... [Emphasis supplied]

The value of local taxes to industry is forcefully stated by the same author [p. 105]:

> ...High taxes may represent a high level of government services which more than compensate for the burden of taxation...
>
> If an industry has to choose between going into a backward area where it will have to drill its own wells, build its own roads, provide its own police and fire protection, train its own employees and provide various community facilities for them, or going into an area where these services are provided by government; it may very well decide after a series of cold calculations that the higher taxes and the services they buy in the latter community, are an attraction rather than a deterrent. For the higher grade industrial concern that makes a careful analysis of all pertinent data for the locations under consideration, it will not be so much a question of how high its taxes are, as what it gets for them, that will be the determining factor. [Emphasis supplied]

The industrial value of local taxes shows up particularly when we compare a rural location characterized by low taxes and few services with an urban location with higher taxes and better services.

In the former case the industry must incur costs for many essential services. As one writer has said [Herbert 1961, p. 164]:

> Obviously, in comparing the low general property taxes in rural communities with the high taxes in large urban centers, allowance must be made for the additional costs of operations usually inherent in a rural area location. The company may have to provide its own water and sewage systems. Very often other costs are higher too, such as for fire protection equipment or higher insurance rates. These additional operational operating costs in rural areas may also be present to a lesser extent in suburban areas and small cities. [Emphasis supplied]

The direct relation between local taxes and services essential to industry has been emphasized by the Committee for Economic Development [1960, p. 24]:

> Abnormally low taxes in some areas may result from an avoidance of responsibilities which are passed on to others to carry; or they may reflect a reluctance to provide positive services in the nature of good schools, recreational facilities and the like. The absence of good public services of this type may reduce a community's attractiveness for new industry. [Emphasis supplied]

The relation between the property tax and benefits received has been stated succinctly in a study of California local finance [Vieg 1960, p. 189]:

> No one can deny that every owner of property receives some benefit from local expenditures. It follows that every property owner should expect to pay his fair share of the cost of fire and police protection, for example. [Emphasis supplied]

The industrial importance of governmental services supplied by local government cannot be emphasized too strongly. The executive head of the Tax Institute, a non-profit organization has said [Walker 1955-7, p. 8]:

> ...I think we must assign considerable credibility to the principles of plant location outlined by leading consultant firms because these statements have been formulated as a guide for the industrial executive to follow in locating his plant.

I have been surprised and interested to see the emphasis in such materials on standards of governmental service. [Emphasis supplied]

The relation between taxes and essential services is stated incisively by Professor Walter A. Morton of the University of Wisconsin [Morton 1955, p. 179]:

> The total amount of local taxes is governed primarily by the volume of local government expenditure and can be diminished only if expenditures are cut proportionately...
>
> Nor is it desirable to cut expenditures simply in order to lower the tax load, for the services offered by a municipality provide the necessities, luxuries, and amenities of community life. Drastic reduction of such expenditure regardless of its consequences is just as foolish as a slashing of household expenses by a parsimonious housekeeper who has no end in view other than the savings she can make. Adequate city government, police and fire protection, health, education, and recreation are forms of consumption provided for individuals by the community and paid for by them collectively. Continual expansion of these services is prima-facie evidence that they meet with a welcome response and are performed better and more cheaply by the community than they could be by individuals. Any attempt to reduce local taxes by slashing such services indiscriminately is therefore unwise. It follows accordingly that those who seek a reduction in property taxes must provide some other means of procuring the wherewithal for the conduct of local government... [Emphasis supplied]

It is recognized that the quality of municipal services can affect manufacturing costs. The property taxes, including personal property taxes, purchase municipal services which, in turn, reduce the cost of manufacturing. As one author has put it [Fyfe]:

> ...the standard of municipal services may affect operating costs. The quality and quantity of the water supply, traffic regulations, sewage facilities, zoning restrictions, fluctuations in electrical supply, fire and police protection, can affect operating costs of particular firms. Good municipal administration can mean a real saving to a firm.
>
> . . . . . .
>
> ...the standard of municipal services can affect the productivity of labour and the type of labour force available...
>
> . . . . . .

> ...The taxation of real property by municipalities is based in part on the principle of paying in relation to benefits received from services. The more valuable the property, the more benefit it derives from the physical services provided such as fire protection, roads, water supply and sewage facilities. The relationship can never be an exact one, with each property paying taxes equal to the services it receives, but there is a relationship nonetheless.
>
> . . . . . .
>
> It is on these grounds that many industries, often the ones considered most desirable, state that they do not ask for tax concessions... Several executives, when questioned on this point, stated that in local services one got roughly what one paid for. If the municipalities did not have the tax revenue, then it could not provide the services and the firm would suffer, either directly through poorer fire and police protection, etc., or indirectly through poorer services to their employees.
>
> . . . . . .
>
> ...There appears to be a trend towards industries taking the attitude that municipalities exist to provide services and that taxes are necessary to pay for those services. [Emphasis supplied]

That basic services are essential in attracting industry is generally recognized. In connection with the opening up of a new area, a consulting firm has said [Wise 1957, p. 39]:

> ...Whether handled by a private organization or by the city, the problem is one of cooperation on the part of the entire community so that these sites can be offered in 'complete' form. Necessary services-- water, power, sewage disposal, etc. --must be planned so that they will be available when needed... [Emphasis supplied]

It is evident that it pays industry to have these services provided publicly and paid for through taxes rather than provided by industry itself.

The close interrelation of public services and private business has been well stated by Chatters [1948, p. 8]:

> In deciding what a community should try to finance, the interdependence of private business and public business must be kept

> in mind. Private business, directly and indirectly, provides the money for government. On the other hand, private business cannot function without the services and protection of local governments. The public streets, sewers, and water plants; the police, fire, health, and educational facilities of government; the public attitudes developed through public leadership -- all of these are as indispensable to private business as taxes are to the public treasury... [Emphasis supplied]

It will be noted that the writer considers the services to be "indispensable to private business."

The Urban Land Institute has gone to great lengths to point out all the facilities that are essential in the establishment of any industrial community. [Urban Land Institute 1951]. Among the services that are directly related to the industrial operation are schools, sewers, access roads, hospitals, refuse disposal and even parking facilities. In short, the existence of any large industry in a community calls forth the need for all the usual municipal facilities to service the employees and their dependents to say nothing of the direct needs of the industry itself. Since employees are obviously essential to the enterprise, the services are likewise essential to the manufacturing operation.

It is of no ultimate consequence whatever on the service side whether the municipal services are financed by property taxes or other taxes. The important thing is the municipal service, not how it is financed. The effect of the service is what counts.

The dollar value of good governmental service is recognized by Garwood, who writes [Garwood 1952, pp. 366-367]:

> Although a state's tax structure may appear favorable from the point of view of taxes collected, it may very well be that essential governmental services are so neglected than an establishment would face additional costs in providing these services for

> itself. A firm can afford higher tax rates if services such as fire protection, public health and recreational facilities, and local transportation facilities are adequate. [Emphasis supplied]

This indicates the author's recognition of the fact that lower taxes may merely be an indication of inadequate services and that the company may have to incur costs to make up for inadequate services. Another aspect of the same problem is that any dollar paid in taxes (any taxes) makes possible the provision of governmental services which the company would otherwise have to provide for itself -- and possibly at higher cost.

The close relation between local taxes and the provision of essential services to industry is recognized by the Federal Government itself. One community may tax personal property, another may not: the important thing is the relation between the tax burden and the services provided. The U. S. Department of Commerce gives the following advice on the subject [U. S. 1961, p. 7]:

> ...local taxes in one location may be limited to real estate (land and buildings), while in another community, stress may be on taxation of equipment or inventories. By relating these tax patterns to the physical, financial, and operating characteristics of a site-seeking industry, plant management, together with local officials in each proposed location, can determine if the tax structure there will permit efficient plant operation and subsequent expansion.
>
> To the extent that taxes are pertinent to an industry's interests, a comparative study of taxes and the services rendered for them should support confidence in the final location choice. [Emphasis supplied]

Dun's Review speaks in similar terms [1960, p. 77]:

> Finally, any interpretation of the tax cost either at the local or state level is really meaningless without considering the services rendered by all the taxing agencies. For example, in some communities, the cost of sewage disposal is covered through a tax levy. In other communities where taxes

> might be lower, such costs would be met through sewer charges added to the water bill. Obviously, an appraisal of the difference in tax cost without reference to over-all operating costs would be unsound. /Emphasis supplied/

The important point emphasized by Dun's Review is "over-all operating costs." The precise form of such costs is not so important as the total.

Lower Costs of Personnel

It is important to emphasize that industry may be getting its money's worth out of local taxes even if the money value of taxes exceeds the estimated direct benefit to industry in terms of measurable cost of such services as police and fire protection. The company's employees are essential to the company's operation. If they receive a tax bargain as homeowner-taxpayers because of the taxes paid by industry that tax bargain is one of the factors attracting the employees to work for that company and live in that community; hence, the benefit shows up indirectly, but no less significantly, through the better quality of personnel at any given salary scale. All the company's business, whether commercial or governmental, benefits thereby. In some cases, even the direct, measurable benefits to industry exceed the direct tax costs, hence industry gets its direct services at a bargain and all the indirect services (via benefits to personnel) "free." As the ARCHITECTURAL FORUM has noted regarding such instances, /1961, p. 68/:

> ...Aside from direct costs, such as streets, sewers (frequently heavy-duty facilities for industrial waste), and police and fire protection, industry's presence means other less-obvious costs as well. Industrial workers want to live near their place of work, and they need low-cost housing...

A low level of tax-supported services will discourage competent

people from moving into the area. The result will be higher salaries and wages if quality of personnel is not to be impaired. An author has said [Thomson 1959]:

> In choosing his place of residence, the individual will take into account all the advantages and disadvantages of the various towns and areas, including the level of earnings, the amenities and standards of culture, the proximity (or distance) of other members of the clan, and the type and kind of public services. He may select a town whose level of public expenditure is low if wages (for his particular trade) and amenities (as he views them) are correspondingly high...
>
> ...A man will not locate in a poor town with inferior schools, untrained policemen, and a dilapidated city government -- supported by a high tax rate on a meager base of local wealth -- unless other personal and economic advantages attract him and keep him there. [Emphasis supplied]
>
> . . . . . .
>
> Other things the same, an individual will prefer a community with a high dividend of public services.

It is well established that industry considers good public services, even of the health, welfare and education variety, of direct importance to it, hence worth something to it in dollars and cents [Pulaski Plan 1956, pp. 54-55]:

> Industry will not locate in an area simply because there is local economic need for it. The industrialists will view each proposed location in terms of security of investment. In addition to all of the site requirements, they will view community development from the standpoint of employee-family satisfaction, which is governed by the provision of good schools, colleges, parks, highways, utilities, and cultural facilities. Most industrialists have realized that better employee performance can be obtained in attractive surroundings. [Emphasis supplied]

Thus even these services which are remote from such basic needs as police and fire protection are of direct economic benefit to the company, hence to all of the company's customers. Anything that results in "better employee performance" is money in the pocket to the

company and its customers. It reduces both overhead and direct labor costs.

The value of local services, including schools, to any company is demonstrated by the fact that companies check closely on these matters before they decide where to locate. A Vice President of Westinghouse Corporation, for instance, mentions nearness to <u>schools</u> as one of the factors his company takes into account in deciding where to locate. Also included are such items as the provision of utility services [Fort, 1953, pp. 3,5,7].

At one of the meetings of the National Tax Association, one of the participants posed a question as to what would happen if a company divorced itself from the community by setting up its own school district but not providing schooling for its workers [Stiles 1960, p. 88]:

> But where are the kids of the families of those who work in the plant going to go to <u>school</u>? Clearly, in other school districts, and it's the budgets of those districts which will need to carry the costs which are associated with the existence of this plant in the broader community. [Emphasis supplied]

An interesting case history points up the economic importance to industry of the services provided through taxation. The case deals with a northern manufacturing concern that was looking for a southern city in which to place a branch plant. They received an offer of a low tax bill by a Tennessee City [Tennessee 1950]:

> Under the city's discredited offer, county taxes to the manufacturer would have been only $440 annually, whereas the city ranking second on the company list placed taxes at $46,000, and the fourth city on the list put taxes at $75,000. The company officials indicated that they desired to carry a fair tax load, otherwise 'they did not see how the community could furnish proper <u>schools</u>, <u>recreation</u>, <u>sewers</u>, and city <u>services for their employees</u>.'
>
> The company also considered the city wholly lacking in recreational facilities -- there was no adequate <u>park</u> and no

> municipal golf course. The only recreation offered in the city, as the company saw it, 'consisted of a picture show and pool-rooms.' The city also ranked low on educational facilities. The company said it wanted the best school facilities for the children of its employees. [Emphasis supplied]

The importance of local services -- what industry gets for the taxes it pays is emphasized by the Executive Director of the Tax Institute, Princeton, N. J. [Walker 1955-57, pp. 27-28]:

> Much is said concerning the effect of taxes upon industrial location. Less often does one hear any mention of standards of governmental services and their influence upon location. Yet the quantity and quality of governmental service are a more vital concern. For example, can any rational manufacturer afford to ignore such questions as:
>
> > Is the state and local pattern of streets, highways, and parking and transit facilities such that awkward, time-consuming, and costly bottlenecks and delays will take place so that transportation of goods and persons to and from the plant is seriously impeded?
> >
> > Is the water supply dependable and adequate for the manufacturing purposes involved?
> >
> > Are fire and police protection adequate for safe-guarding of persons and property?
> >
> > Does the community have a system of good schools?
> >
> > Are there park, playground, library, museum, and other recreational and cultural facilities for employees and their families?
> >
> > What are the health standards of the community?
> >
> > Finally, what are the standards of physical appearance? [Emphasis supplied throughout]
>
> The advantage of low taxes may be lost many times over if a company is forced to finance services that would normally be provided by the government or if plant operations are impeded by a slovenly and inefficient handling of government services.

The very direct relation between services to industry and taxes paid by industry was drawn in a recent study in Nevada [Nevada 1960, p. 52]:

> A frequently overlooked aspect of tax burden is the level and character of government expenditures...While high taxes do not necessarily mean that a community is enjoying an adequate level of government services, low taxes invariably indicate the absence of such services. If business firms must provide these services as a consequence, any tax savings may very well be false economy. For example, if a firm must furnish additional police and fire protection, little savings will result from low taxes. Similarly, the ability of a business firm to attract competent personnel will be greatly hindered if adequate schools are not available for the employees' children. While it may often be difficult to relate specific benefits directly to taxes paid, general benefits are basically dependent on the overall level of tax collections in a community or state, and these benefits must be taken into account when discussing comparative tax burdens. [Emphasis supplied]

This statement points out some of the costs that industry would have to assume if it did not obtain the services it derives through taxes. With respect to schools, a particularly important point is made: it is not only that schools will provide the training necessary for a pool of manpower but that good schools are essential to attract personnel at all levels whether it is a factory worker or a top engineer or executive.

User Charges: A Recognition of the Cost-Reducing Effects of Tax-Supported Local Services

The direct benefit of municipal services is so well recognized that proposals have been advanced to make direct charges to the taxpayers who benefit instead of using taxation (of whatever sort) to finance services. Such direct charges would make the property tax unnecessary in large part, and would be regarded as legitimate overhead expenses for accounting purposes. The direct charges are known as "user charges." There are many difficulties, of course, in carrying out such a proposal because it is hard to allocate a service to

one taxpayer when it is provided jointly to many taxpayers. What interests us, however, is not the practicality of the proposal but the fact that it exists as a recognition of the direct benefits derived by industry through the taxes it pays to local governments whether those taxes are computed on the basis of real or personal property.

In view of the fact that municipal services, however financed, provide a general benefit to the taxpayer's operation, such as manufacturing, it has sometimes been proposed that <u>fees</u> be charged directly for such services. There is no question, of course, that fees for such services as police and fire protection, to mention only two, would be for the benefit of the taxpayer's operations as a whole. For practical reasons, such proposals have not been carried very far but they are of importance to us because they represent a full recognition of the point being made here: that municipal services--however financed--confer a benefit to the taxpayer's operations for which fees might well be charged. The philosophical basis for such fees as well as the practical desirability of retaining the present method of financing through taxation of all sorts was well expressed by Spengler over twenty-five years ago [Spengler 1939, p. 172]:

> Should the government in recognition of such benefits, adopt the procedure of imposing separate fees for its services upon all benefitted parties? Should the goal be to make as many municipal activities self-supporting as possible? .... the principle of taxation should be retained, even though it is a "benefit tax"...

Lyle C. Fitch, speaking as First Deputy City Administrator of New York, has suggested that user charges be considered seriously in

some instances. We quote him here, not to imply that such a plan should be adopted but merely to indicate how seriously the plan has been considered; and this, in turn, is indication of how strongly it is recognized that the services give direct benefits to industry. One sample of his thinking follows [Fitch 1957, p. 423]:

> First, the charge should be capable of successful administration. This implies, among other things, that the services must be capable of being divided into distinct units whose use by the immediate beneficiary can be measured. Water, electricity and trips across a bridge meet this criterion; police protection and the administration of justice, generally speaking, do not.

This implies that such services as police and fire protection should be allocated directly to the taxpayer but as a practical matter--for obvious reasons--cannot be. He does, however, suggest at a later point [Fitch 1957, p. 424]:

> ...charges for fire protection might be based upon the degree of hazard presented by the individual property, just as fire insurance rates are determined.

This is further indication of the benefit to the manufacturing operation as a whole of the services provided to the company by the taxes (such as those on personal and real property) that it pays.

It is well established that large users of community services are getting those services at a bargain rate. If they were charged separately for specific services they would undoubtedly pay more than the taxes they now pay. [See Stockfisch 1962].

Summary: The Value of Local Tax-Supported Services

The above discussion may be summarized as follows:

(1) The services provided by local taxation are generally

essential to industry located in the area, generally cannot be provided as effectively or efficiently in any other way, and if not provided by the taxing jurisdiction would have to be provided by industry itself, usually at greater cost and with less effectiveness.

(2) The extent and quality of the services provided by the taxing jurisdiction will be limited by a number of factors, a major one of which is the amount of money available from taxation.

(3) The services provided by local governments, however financed, confer identifiable benefits on a company's operations. Such benefits are both direct and indirect. The benefits are no less important to industry if they provide schooling for the company's employees and their families than if they provide police and fire protection, street maintenance, and water and sewage facilities and services for the company itself as well as its employees and their families.

COST REDUCTIONS AND MARKETS RESULTING FROM TAX-SUPPORTED STATE SERVICES

The foregoing discussion has been mainly in terms of locally provided, tax-supported services. Many of the observations apply equally to state-financed activities at both the state and local levels. Much of the state's tax structure is directed toward the financing of schools and the provision of parks and highways at the local level. The state provides services of direct use to industry in reducing the costs of utilities -- such as water -- and in attracting population, hence personnel. [See Brown 1965]. Thus in

a tangible way, but one more difficult to compute, taxes paid to the state are "user charges" for cost-reducing services provided industry. [See Stockfisch 1961, 1962] Industry is buying services which no individual company could purchase for itself at so low a cost. In economic terms, the "transaction cost" would be prohibitive if companies by themselves or any feasible grouping of companies attempted to provide these services themselves.

Another important purchase which industry obtains through the State taxes it pays is a ready-made market for its products. The many services and facilities provided by the State through its tax money help attract and hold population. The prospect of employment is a significant factor, of course, but not the only one. Good schools, parks, playgrounds, highways, police and fire protection and even social legislation undoubtedly help attract in-migrants. These provide domestic markets. It may well be that the State tax money paid by industry is a relatively inexpensive and efficient way to "promote" markets compared with other promotional costs and the costs of transportation to distant markets. The same may be true to a limited extent of particular companies in particular localities but the markets will generally extend far beyond the borders of the local unit to which the company pays taxes.

DISINCENTIVE PROVISIONS OF PARTICULAR TAXES

The fact that state and local taxes may be regarded generally as efficient ways of buying services, personnel and markets at economical prices does not make the tax structure a matter of in-

difference. A given amount of tax money may be extracted from industry in different ways with widely different consequences. Particular taxes may discourage investment and employment or may discourage the stability or growth of investment and employment. Although every tax can undoubtedly be improved to some extent, there are a few aspects of California's tax structure that are crying for attention to improve the "tax climate" and make California more attractive to business investment. We single out three for purposes of illustration: (1) the business inventory tax; (2) property tax assessment practices generally; and (3) corporate tax treatment of multistate companies.

The Business Inventory Tax

It would be difficult to devise a tax that would be better designed to discriminate against certain lines of activity than the business inventory tax. It is assessed at 12 noon on the first Monday in March of each year on the inventories on hand at that time. Since an exact physical inventory is seldom taken at precisely that time, various book-keeping techniques must be used to make estimates. And since inventories are open to numerous (acceptable) methods of valuation, much discretion is left to the taxpayer and the auditor in valuation. This may lead to abuses including fraud and bribery. Inequity and criminal activity may result. The discouraging effect of this on legitimate business is obvious.

The tax has serious economic effects even if fairly and honestly administered as it undoubtedly is by most of the assessors in the state. /Derived with revision, from Somers in Doerr and Sullivan 1964_7

The fact that the tax is assessed on a single day each year has led to some ingenious, although not illegal, avoidance behaviour on the part of business firms. The tax presents a decided incentive for the business firms to have their lowest possible inventory on the first Monday in March. Most firms draw down their inventories after the first of the year and attempt to get by on the lowest possible stock until the tax date has passed. A great many firms have goods stored in transit in other states such as Nevada, where goods stored in transit are tax exempt, until the tax date has passed. The tax thus places a burden upon the business community to engage in avoidance techniques.

California's treatment of business inventories, while not unique, is in the minority among the states in the treatment of goods stored in transit. While Nevada is most often mentioned in this connection, every State that borders California has some provision in its laws for the tax exemption of goods stored in transit.

Table I lists the special tax treatment afforded business inventories in the several States. As can be seen from this table, 35 of the 51 jurisdictions considered have some provision for exemption of business inventories. With the exception of California, the States that do not have any provision for the exemption of business inventories are small and primarily agricultural.

By far the most prevalent provision is the exemption of property stored in transit. In practice, this usually means storage in a warehouse at some point along the regular route to the destination. The property remains under the original bill-of-lading, thus preserving for the shipper the through or "long-haul" rate. There is a limitation

Table 1

Business Inventory Tax Exemptions of the Several States

State	Business Inventory Tax Provisions
Alabama	No exemption.
Alaska	No exemption.
Arizona	Property stored in transit is exempt.
Arkansas	No exemption.
California	No exemption.
Colorado	No exemption.
Connecticut	Property held in public warehouses which is owned by non-resident persons or corporations is exempt.
Delaware	No personal property tax.
District of Columbia	Property stored in transit is exempt.
Florida	No exemption.
Georgia	No exemption.
Hawaii	No exemption.
Idaho	Property stored in transit is exempt.
Illinois	Property stored in transit is exempt.
Indiana	Property stored in transit is exempt.
Iowa	Property stored in transit is exempt.
Kansas	Property stored in transit is exempt.
Kentucky	No exemption.
Louisiana	Property stored in transit is exempt.
Maine	Property stored in transit; food products produced in Maine while stored for shipment outside the State; pleasure vessels stored in the State by non-residents are exempt.
Maryland	Tangible personal property of Maryland corporations whose stock is subject to taxation are exempt.
Massachusetts	Property stored in transit is exempt.
Michigan	Property stored in transit is exempt.
Minnesota	Property stored in transit is exempt.
Mississippi	Property stored in transit; and manufactured products produced in Mississippi for later shipment elsewhere are exempt.
Missouri	Property stored in transit is exempt.
Montana	No exemption.
Nebraska	Property stored in transit is exempt.
Nevada	Property stored in transit is exempt.
New Hampshire	Goods for out-of-state delivery, held by the manufacturer after title has passed to the purchaser are exempt.
New Jersey	Property stored in public warehouses is exempt.
New Mexico	No exemption.
New York	No personal property taxation.
North Carolina	Tangible personal property held at any seaport awaiting shipment to a foreign port is exempt; as are farm products stored in public warehouses.
North Dakota	Property stored in transit is exempt.
Ohio	Property stored in transit is exempt.
Oklahoma	Property stored in transit is exempt.
Oregon-	Property stored in transit is exempt.
Pennsylvania	No personal property tax.
Rhode Island	No exemption.
South Carolina	Property stored in transit is exempt.
South Dakota	No exemption.
Tennessee	Property stored in transit is exempt.
Texas	Property stored in transit is exempt.
Utah	Property stored in transit is exempt but it can only be stored for 12 months.

Business Inventory Tax Exemptions of the Several States (Continued)

State	Business Inventory Tax Provisions
Vermont	No exemption.
Virginia	No exemption.
Washington	Property stored in transit is exempt.
W. Virginia	No exemption.
Wisconsin	Property stored for out-of-state shipment; and property shipped into the State which is stored in public warehouses is exempt.
Wyoming	Property stored in transit is exempt but it can only be stored for 9 months.

Source: Commerce Clearing House, State Tax Guide (Second Edition), All States, Commerce Clearing House, Inc. (Chicago: 1964).

of one year on such storage under current Interstate Commerce Commission Railroad Tariffs. The shipper pays a rather nominal fee for this storage in transit. For example, Tariff 264-I, which provides for storage in transit in Nevada and Arizona on shipments to California, contains the following rates:

Item 3580 Household Appliances	.135 per hundred lbs.
Item 3445 Heating or Cooking Apparatus	.135 per hundred lbs., $35.71 minimum per carload

These rates mean that storage in transit can be provided on these items for $35.00 to $40.00 per carload. When this is measured against the value of a carload of appliances and against the inventory tax that would have to be paid on these goods, it can be seen that this is a very small amount. For items with a higher value-to-weight ratio there is even more advantage to be gained by storage in transit. Conversation with railroad officials indicates that it is not unknown for a taxpayer to load up a boxcar with his inventory before the tax date, ship the boxcar to Phoenix, leave it on a siding and then bring it back after the first Monday in March. Other shippers have their goods routed by a zigzag route (at no extra charge) so that they arrive after the first Monday in March.

All of these maneuvers, taken solely for the purpose of tax avoidance, reduce the productivity of the firms involved and represent a burden upon them in the nature of the costs incurred. If there were at hand some method of obtaining the same amount of tax yield without causing this tax avoidance burden, then the costs to the business community would be greatly lessened without reducing

the revenue received by the local government units. Some of the consequences may be enumerated.

(1) A moment's reflection will show that the distribution of the burden of the business inventory tax is both uncertain and inequitable. The amount of tax burden that a particular firm must bear is a function not of its sales or even of its lack of sales, but of the flexibility of its inventory. This is determined partly by the nature of its business. Some businesses, such as motor vehicle parts sales, must keep an inventory on hand of thousands of different items. A firm in this business may be able to draw its inventory down to only a few of each item but the firm would still have to have a huge inventory if the doors were to be kept open at all. Another firm may sell only a few types of items. This firm would be able to draw down its inventory to almost nothing when the tax date rolled around. Another important variable would be the supply practices of the particular industry. If a new supply of goods can be obtained in 24 hours, the inventory level can be drawn down much lower than if three months lead time is required. The burden of the tax is distributed, not according to the ability to pay or any other principle, but simply by the nature of the business involved. This hardly seems to be an equitable type of taxation.

(2) The customer suffers an immeasurable loss where the selection available to him is reduced on account of the tax. His choice is restricted and he gets less for his money. He really ends up with a lower level of utility.

(3) It should also be noted that an inventory tax falls most

heavily on the firm that has not been able to sell its stock rather than on the firm that has been able to sell its goods. The tax then falls on the firm that is least able to pay it. The inequity of this feature of the tax hardly needs comment. Unlike the sales tax, the inventory tax imposes a penalty on not selling; unlike the income tax, the inventory tax imposes a penalty on not making a profit.

Much of the burden, as in food markets and department stores, is undoubtedly passed on to the consumer. The great lengths to which most firms go to avoid the inventory tax, however, seem to indicate that the firms believe that the tax cannot be wholly shifted. At least part of the final burden of this tax is borne by the firms upon whom it is levied. The capriciousness of this burden distribution has been noted above.

While we are concerned with questions of equity, we cannot ignore the claim made that the elimination of inventory taxation "would free many classes of business from the only form of local taxation to which they are presently subject."* Even assuming the literal validity of this statement, it refers only to "local" taxation. A new or increased State tax, such as the sales or income tax, collected in behalf of localities could, for all practical purposes of equitable revenue burden, make up the difference. The California sales tax, with its heavy exemptions and exclusions, is not a regressive tax. /See Somers 1964/.

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* Statement to the Assembly Interim Committee on Revenue and Taxation (Hon. Nicholas C. Petris, chairman) by San Diego County Chief Administrative Officer, San Diego, June 26, 1964.

(4) In an open economy such as that of California, it is quite easy for some firms to avoid a tax such as the business inventory, tax as indicated above. Other firms cannot avoid it, except at prohibitive cost. It is impossible, therefore, for such a tax to be equitable. The tax discourages business from locating here and particularly causes a great deal of warehousing activity which otherwise would take place in California, to be shifted elsewhere.* This causes a loss of both jobs and income to the State.

The following specific example of the effect of the tax on warehousing activity was presented at a hearing in San Diego on June 26, 1964:**

> "Recently the Burroughs Corp. announced that they were moving their warehousing to a neighboring state because one computer in a crate carried a tax of $6,500.00. That's just one, and they had a warehouse full."

The claim of an unfavorable impact on warehousing activity in the State is consistent with the data on unemployment. As shown in Table II, compensated unemployment in public warehousing in California in 1963 was 7.1% of covered employment whereas it was only 4.8% for all industries. (It should be noted that statistics are available only for "public warehousing" as a separate industry and not for warehousing generally.)

The seasonal fluctuations within the year are not so convincing.

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* Presentation of Jack Dawson, Executive Manager, Pacific States Cold Storage Warehouseman's Association before Assembly Interim Committee on Revenue and Taxation, San Diego, June 25, 1964.

** Presentation of John Nagy, President, Statewide Homeowners Association, p. 8.

The present business inventory tax may be expected to cause increased unemployment in the California warehouse industry during February and March when firms are drawing down their inventories to the lowest possible level. Data on employment and unemployment in the Public Warehousing Industry in California together with similar data for all California industries, as shown in Table II, do not indicate such fluctuation. Warehousing unemployment does rise in February and March from the January figure, both in absolute and relative terms. However, if this were substantially caused by the business inventory tax, we would expect this unemployment to level off quickly after the March assessment date. This is not the case. The peak of unemployment in fact is during the months of July and August. Covered employment went up by 2 workers from February to March while unemployment went up by 28 workers; in April, when we would expect the warehouse business to pick up if the business inventory tax were having great effects upon it, we find that unemployment drops by 8 workers while employment drops by 341 workers.

The figures for all industries show that February, March and April have the highest relative unemployment of the entire year. The relative rise in unemployment at that time can certainly not be attributed entirely to the business inventory tax. There are a great many other factors which cause a seasonal dip in business activity at this time in California and throughout the country. In short, if the inventory tax has a seasonal effect on public warehousing, the effect is submerged in strong seasonal factors which affect business and industry as a whole.

The above discussion has been concerned with the possibility of the warehousing industry leaving the State on account of the business inventory tax. How much other business and industry leaves the State -- or is discouraged from ever entering it -- we cannot say. It takes little insight, however, to imagine that a tax that penalizes those who cannot transfer their inventory out-of-state over assessment day and penalizes those businesses that fail to sell and accordingly fail to make money, must act as a damper on plans to locate in this State. This is not inconsistent with the well-established view expounded above that enlightened business looks at what services it gets for its State and local taxes before deciding where to locate. We are dealing with a particular, peculiar tax whose "incentive" power is out of proportion to its magnitude.

Property Tax Assessment Practices

The uneven treatment of real property assessment is notorious. /See Doerr and Sullivan 1964/. The percentage of full value at which different classes of property are assessed in the different counties of the State varies greatly. Only the overall average for each county is substantially (not completely) controlled by the State Board of Equalization. Practically anything can happen within each county. The only safety valve is the taxpayer's right of appeal. An undertaxed taxpayer is hardly likely to appeal and an overtaxed taxpayer has a hard time proving his case in view of the existing legal presumptions and the difficulty of obtaining convincing data. The resulting inequities and disparities, and the wide range left to individual discretion and negotiation, not to mention anything

Table 2

Employment and Compensated Unemployment(a)
For all Industries and in Public Warehousing
1963

California

Period	All industries			Public warehousing industry		
	Total covered employment	Compensated unemployment(a)		Total covered employment	Compensated unemployment(a)	
		Total	Percent of covered employment		Total	Percent of covered employment
1963	4,216,531	201,291	4.8	5,486	387	7.1
January	4,058,774	239,266	5.9	5,627	332	5.9
February	4,040,900	247,322	6.1	5,562	382	6.9
March	4,102,165	247,292	6.0	5,564	410	7.4
April	4,125,870	246,572	6.0	5,223	402	7.7
May	4,171,389	222,451	5.3	5,137	393	7.6
June	4,242,459	180,329	4.2	5,216	450	8.6
July	4,274,065	180,327	4.2	5,171	467	9.0
August	4,325,603	166,886	3.9	5,186	467	9.0
September ...	4,338,278	149,415	3.4	5,343	400	7.5
October	4,308,807 P	150,759	3.5	5,667	403	7.1
November	4,281,489 P	172,036	4.0	6,107	250	4.1
December	4,328,067 P	214,161	4.9	6,023	280	4.6

(a) Weekly average weeks compensated for regular unemployment insurance.
P - Preliminary.

Source: California Employment and Payrolls.
Unemployment Insurance Payments by Industry, Report 96A Tabulations.

From: Report S1U #239, State of California, Department of Employment, Research and Statistics, July 20, 1964 (Table 1).

worse, must act as a burden on legitimate business. Reform here would unquestionably improve greatly the "tax climate" and attract job-giving industry to the State.

Corporate Taxation of Multistate Companies

Companies engaged in business in several states encounter an unusual handicap in the multiplicity and diversity of taxes facing them. [See Somers and Doerr 1965] A national company contemplating investment in California faces a myriad of taxes and tax forms and runs the risk of double (or multiple) taxation of the same income by this and other states because of the variety of allocation formulas used. Without going into detail, greater adherence by California to uniform laws (and thereby encouragement of other states to do the same) would reduce a damper that now exists on all investment, including investment in California.

CONCLUSIONS

Two conclusions may be derived from the foregoing discussion:

(1) The services financed by state and local taxes, rather than the taxes themselves, influence industrial location and investment. These services may be in the form of, or result in, lower costs of utilities, materials and personnel or in the attraction of a healthy, affluent population constituting a ready and effective market.

(2) Some taxes or their administration may provide disincentive effects out of all proportion to their revenue-producing (hence, service-providing) ability and discourage industrial location and investment in California.

Two recommendations follow:

(1) Make every effort to provide as much service as possible for every tax dollar. This requires economy and efficiency in both taxation and expenditures. The services are not only those that are directly obvious and measurable to the particular company but all those state and local facilities and services that lower costs and attract markets.

(2) Reform the tax structure to minimize disincentive effects that result from inequitable and discriminatory treatment of particular industries and taxpayers and that introduce unnecessary barriers to decisions to locate and invest in California.

TAXES AND SERVICES AS FACTORS IN PLANT LOCATION

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DETERMINANTS OF CALIFORNIA'S FUTURE GROWTH

by

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DETERMINANTS OF CALIFORNIA'S FUTURE GROWTH*

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How fast will California grow? Will the state continue to attract new business, new industry, and new people? Will it continue to increase its economic well-being over the decades ahead?

The answers will depend, in part, on the decisions that private and public leaders of California make today. The answers will also depend, in part, on events which occur outside our own state. The conditions that arise from both of these sources will determine the comparative advantages our state will offer, and will thus determine the degree to which California will be able to attract from beyond its borders the many elements required for its economic growth.

In what follows, we will look at some projections of economic growth for California over the next decade. The projections are based on an analysis, using three alternative models: One model assumes that our present mixed bag of policies will continue; the second assumes full employment; the third assumes a cutback in defense expenditures.

Next we will look specifically at some of the elements which will determine California's comparative advantage for economic growth.

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Finally, in view of these projections and of our understanding of overall comparative advantage determinants, a number of policy measures will be recommended. The purpose of these measures is to enhance the chances that the full potential of California's comparative advantage will in fact be developed.

The recommendations concern:

1. The services and amenities of life which must be provided to support conditions for economic growth, and the role of a State Urban Extension Service to advise and guide public and private decision-makers.

2. Improved urban planning and land use; specifically, a California New Town Corporation is recommended as a means for developing new urban complexes in line with social and economic advantages.

3. Improved social and economic intelligence needed for effective decision-making; specifically, a California Plan and Budget Bureau that will prepare and update long run plans, and in the preparation of the budget, using such modern tools as Program Budgeting and Systems Analysis.

4. Increased research and development by the state to deal with a number of problems related to economic development.

5. A review of restrictive policies, and reversal of those which inhibit California economic growth.

6. More effective leadership on the part of private industry, labor unions, and government, in the form of a Joint Planning Council, to provide constructive communication and coordinated, self-reinforcing policies.

By discovering the general directions in which the interests of various groups lie, and by planning and taking informed, intelligent actions as open-minded partners guided by long-term, enlightened self interest, we can assure the bright economic future of California.

California Economic Growth Model

To grow, California industry will need to increase the quality and quantity of production factors in the state. These increases will depend not only on the actions of California business, government, and families,

but also on events and actions taken outside the state, which may increase or decrease the state's comparative advantage for attracting the elements needed for economic growth. For example, changes in national economic activity may influence markets outside the state; and industry will tend to locate its production in those regions which offer the best combination of efficiency factors e.g., (able entrepreneurs, thoughtful labor leaders, skilled workers, talented scientists) and market size. Families, in turn, will move into California or will leave it depending on the comparative job opportunities, income, and attractiveness of the social, physical and economic environment which the state offers.

Because of such complications, we must examine California's residential and industrial development within the context of the nation as a whole. To do this we will use the economic growth model described in detail in the Appendix. The model allows us to examine the regional growth process in three stages:

In the first stage we examine some probable trends in national economic activity, and then ask to what extent is California likely to follow these trends, in view of the specific characteristics of its workers, industries, equipment, and environment. This answer will be based largely on a comparison of past trends in California with those for the rest of the nation.

In the second stage we ask what these trends imply for California in terms of the growth of existing industries, the growth of public and private investments, the attraction of new residents, and the attraction of new industries into the state. Here the comparative advantage of California in relation to other states plays an overwhelming role in determining both the volume and type of economic activity projected.

California's comparative advantage will be affected by a number of factors which link with one another: the type of people attracted to the state; market size; congestion; the quality and quantity of the work force; the type of industry; the type of technology industry requires and creates; the influence of new investments; market opportunities; public investment required to keep pace with growth; the attitude of public and business leaders toward economic change, and their ingenuity in creating the fiscal and other instruments to bring it about.

In the third stage we ask, what does the production expected from the conditions of the second stage imply for California residents, government, and business, in terms of how incomes are spent. This of course will depend on income size as well as the characteristics and tastes of the spenders. We are particularly interested in whether the goods and services consumed by Californians are produced within or outside of the state. With such estimates we can then go back to improve our first stage estimates of California's participation in national economic activity.

Projections of population, personal income, per capita income, employment, and production which are discussed in Table I were developed using three versions of the growth model. While all figures assume that during the next decade the trend in California's comparative advantage will remain about the same as it has been during the previous decade, each version of the model is based on a different set of additional alternative assumptions concerning mainly outside forces.

Current Policy Model. Under the set of assumptions, for this model labeled "C", we move into the future without changing existing policy

Table I

California Population, Income and Employment Projections, 1970, 1975
Models: Current Policy (C); Full Employment (J); Defense Cut (I)

	All Values in 1963 Prices												
					1965			1970			1975		
	1955	1960	1962	1963	C	J	I	C	J	I	C	J	I
					California								
Population (Million)	13.0	15.9	17.0	17.7	18.9	18.9	18.9	21.2	21.8	21.7	23.6	25.0	24.4
Civilian Employment (Million)	4.9	5.9	6.2	6.4	6.6	6.8	6.7	7.3	7.9	7.5	7.7	9.0	8.4
Personal Income (Billion)	34.1	44.5	50.0	52.4	56.1	58.2	57.6	66.9	75.9	72.1	78.0	96.9	91.0
Income Per Capita	2,624	2,804	2,925	2,966	2,967	3,079	3,048	3,155	3,489	3,330	3,305	3,874	3,723
Income Per Employee	6,893	7,542	8,065	8,142	8,498	8,525	8,538	9,160	9,608	9,633	10,109	10,821	10,863
Employment Per Capita	38.1	37.2	36.6	36.4	34.9	36.0	35.4	34.4	36.2	34.6	32.6	36.0	34.4
			1947	1957									
Net Output (Billion)			28.0	48.3	60.7	68.3	67.6	75.8	89.3	84.5	89.8	113.8	106.4
Net Output Per Employee			7,078	8,914	9,203	10,014	10,011	10,374	11,302	11,288	11,635	12,717	12,707
Income Per Net Output			80.4	79.5	92.4	85.2	85.2	88.2	84.9	85.3	86.8	85.1	85.5

intentions, legislation, or the fixed commitments of the federal, state, and local governments, or of private industry. These projections do not imply that the future will look like the present; they take into account possible developments in a number of factors, including population growth, increases in productivity, consumption habits, and investment decisions. Thus, because such developments will occur, this set of no-changes assumptions will lead to a policy gap and to the under utilization of resources.

Full Employment Model. Under this assumption set, labeled "J", the model assumes that national policies will be implemented which permit the national economy to operate at a high level of capacity and manpower utilization. Specificially, we assume that four percent of the labor force is unemployed for each of the projected years. The fact that California's unemployment rate today is above the national average, and is likely to remain so for a number of years, is reflected in the California projections.

Defense Cutback Model. This version of the model, assumption set "I", examines the trend of future developments, based on the observation that a defense cutback in a particular environment reduces the average employment level for the nation. We assume a defense cutback based on the Gilpatrick proposal. If immediately implemented, such a proposal could reduce the 1963 level of defense expenditures ($53 billion) by about $3 billion in 1965, $13 billion in 1970, and $15 billion in 1975. The direct and indirect effects of such cuts—in terms of employment, population, income, and output in the United States and California—have been estimated and are introduced into the projections.

Some California Projections for the 70's

We would like to summarize and interpret some of the findings we obtained from the California Economic Growth Models (see Table I).

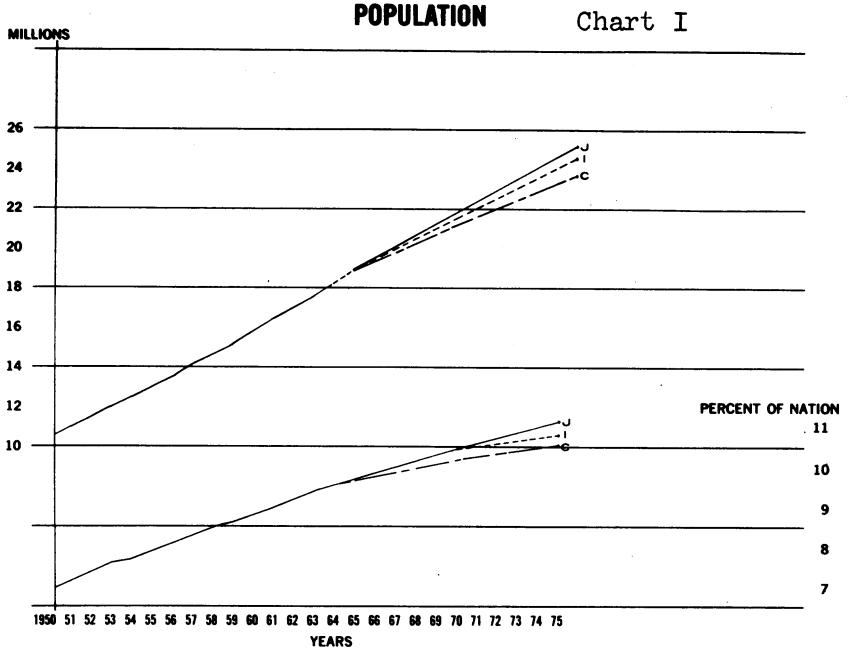
California's growth is likely to proceed at a somewhat slower pace than it has in the past decade (see Charts I-IV).

Population. As job opportunities fail to increase, the number of in-migrants to California will slow down. By 1975, the gap between needed policy change and current policy will have become large. As a result, the number of net annual in-migrants could decline from the present figure of about 325,000 per year to about 100,000 persons. Even under full-employment assumptions, net in-migration could be reduced by about one-third. This decline will be more than compensated for by the natural growth in population, which will guarantee the state even larger numbers of people, markets, needs, and problems.

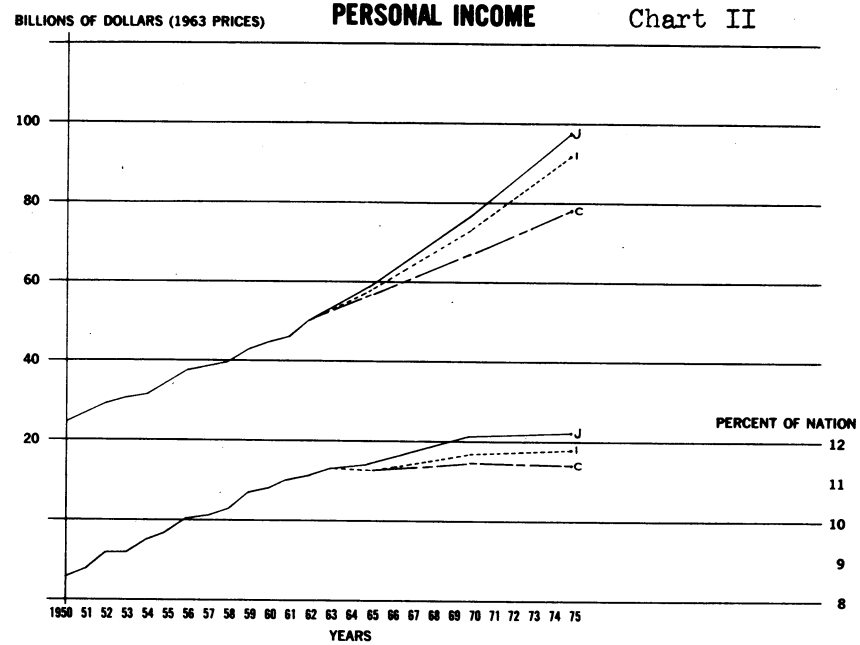
Income. Projections of future personal income in California also depend on which model is used. For the full employment model, projections show an increase of about $40 billion by 1975 (Chart II). If policies are not changed, a modest increase of only $22 billion can be expected, and California's historical trend of increasing its share of national personal income would be stopped.

All models show that per capita income in California will tend to converge downward toward the national average (see Chart III). For under the current policy model the per capita income increase will be $400 less than for the full employment model.

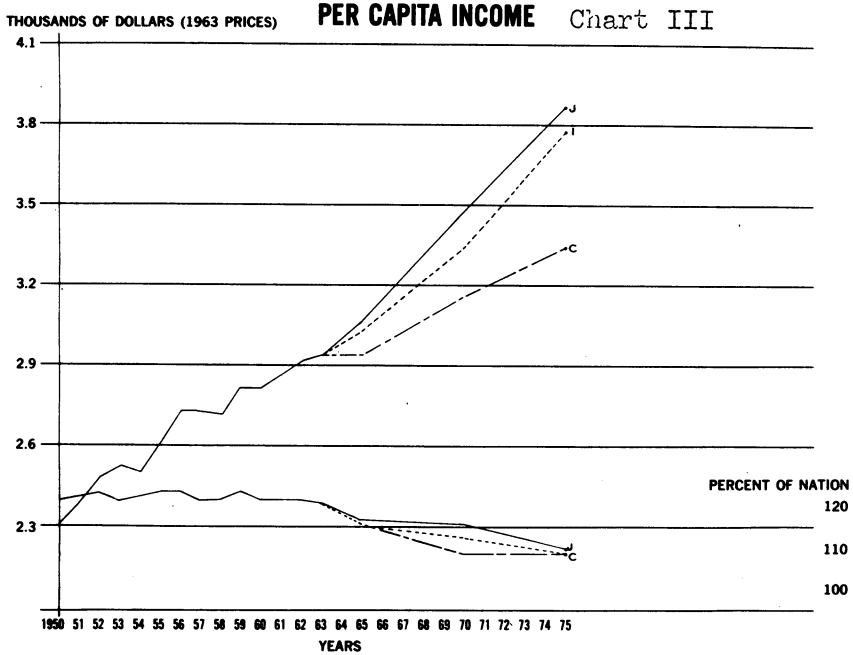
POPULATION Chart I



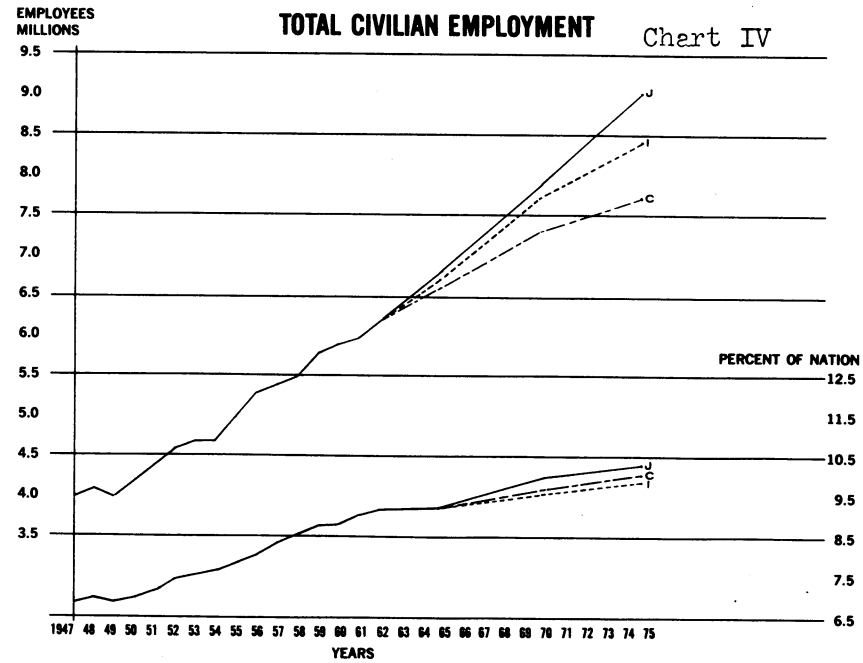
PERSONAL INCOME Chart II



PER CAPITA INCOME Chart III



TOTAL CIVILIAN EMPLOYMENT Chart IV



Employment. The California unemployment rate will tend to be higher than that for the nation. If national unemployment levels off at the 4 percent full employment rate, California may run between 4.5 and 5 percent.

Under the assumption of full employment, California, can expect civilian employment to increase in the next few years by about 2.1 million or slightly more than 30 percent (see Table II, and Chart IV). Industries we would expect to grow more rapidly than the California average include construction, finance, insurance, real estate, services, civilian government, textile, paper, printing, electrical machinery, transportation equipment, and instruments.

The population increase in California in particular, and in the western United States in general, may produce a critical mass which will offer certain firms increasingly important local markets. Thus, California and the western United States should become more and more self-sufficient. As a result, more business activities should become oriented towards the needs of the people in and around California, as expressed directly through personal expenditures, and indirectly through business investment and state and local government services. At the same time, exports to the rest of the United States and abroad are likely to play a declining role in California's economy.

An affluent California will demand more services. Thus, the service industries, real estate, finance, insurance, and local and state governments will provide employment opportunities (see Table II). Our high level of education and skills will continue to attract the knowledge industry; thus, we will probably engage in much research and development work for the United States, possibly also for foreign countries. With the rapid improvement of transportation and communications, manufacturers in

Employment Projections For California:
Current Policy (C); Full Employment (J); Defense Cut (I.) Models

	Thousands of Employees											Percentage change for 1965-75 projections		
				1965			1970			1975				
	1955	1960	1962	C	J	I	C	J	I	C	J	I	C	J	I
Total Employment	5,288	6,194	6,542	6,900	7,125	7,030	7,600	8,190	7,706	8,000	9,230	8,575	16	30	22
Armed Forces	336	296	307	300	300	283	290	290	220	280	280	200	(7)	(7)	(29)
Total Civilian Employment	4,952	5,898	6,235	6,600	6,825	6,747	7,310	7,900	7,486	7,720	8,950	8,375	17	31	24
Agriculture	310	306	274	251	259	258	227	245	239	201	233	224	(20)	(10)	(13)
Mining	35	26	26	26	27	27	27	27	26	23	27	26	(12)	0	(4)
Construction	332	362	376	383	416	409	424	490	459	448	564	520	17	36	27
Transportation, Communication, Utilities	350	378	372	383	396	395	380	400	390	340	394	377	(11)	(1)	(5)
Trade	1,057	1,216	1,240	1,346	1,358	1,351	1,497	1,575	1,527	1,621	1,790	1,719	20	32	27
Finance, Insurance and Real Estate	215	290	298	330	341	340	394	427	419	440	510	496	33	50	46
Services	824	1,156	1,278	1,379	1,426	1,417	1,594	1,710	1,657	1,745	1,978	1,900	27	39	34
Civilian Government	652	813	929	1,036	1,058	1,045	1,192	1,264	1,196	1,328	1,486	1,396	28	40	34
Manufacturing	1,175	1,350	1,442	1,465	1,542	1,501	1,572	1,770	1,573	1,575	1,969	1,717	8	28	14
Food & Tobacco	154	157	165	163	171	171	165	186	182	159	199	193	(2)	16	13
Textiles	7	7	7	9	9	9	11	12	12	13	16	15	44	78	67
Apparel	59	67	66	64	68	68	66	74	73	65	81	79	2	19	16
Lumber	65	55	54	57	60	60	58	65	64	54	67	65	(5)	12	8
Furniture	29	32	33	32	34	34	35	39	38	33	41	40	3	21	18
Paper	22	31	32	34	35	35	39	44	43	41	51	50	21	46	43
Printing	60	80	80	82	86	86	90	101	99	91	114	110	11	33	28
Chemicals	35	45	46	48	51	51	52	58	57	52	65	63	8	27	24
Petroleum Refining	33	35	32	26	28	28	22	25	25	14	18	17	(46)	(36)	(39)
Rubber & Plastics	21	28	29	31	32	32	33	37	37	33	41	40	6	28	25
Leather	7	6	6	7	8	8	8	9	9	8	10	10	14	25	25
Stone	42	44	47	45	48	48	46	51	50	43	53	51	(4)	10	6
Primary Metals	50	52	54	56	59	57	61	69	58	63	79	64	12	34	12
Fabricated Metals and Ordnance	106	164	205	171	180	177	162	182	169	139	173	158	(19)	(4)	(11)
Non-electrical Machinery	77	84	93	92	97	91	101	113	90	101	126	96	10	30	5
Electrical Machinery	80	174	223	234	247	235	259	295	238	268	335	266	15	36	13
Transport Equipment	291	246	222	256	270	254	299	336	267	329	412	326	29	53	28
Instruments	16	24	27	32	34	33	39	44	38	43	53	46	34	56	39
Miscellaneous	18	20	22	23	25	24	27	30	24	28	35	28	22	40	17

() indicates decrease

other parts of the country should not be reluctant to locate their headquarters, research facilities, and other non-production elements in California. This will increase the demand for consulting, engineering and research services and medical services. Some of the growth forces discussed will be self-reinforcing and will generate a major multiplier effect.

Production. While we project about a 50 percent increase in California's output by 1975, results differ according to the model used. The defense cutback model shows a loss of almost $8 billion as compared to the full employment model, and the current policy model shows a loss of almost $25 billion (see Table I).

While in California productivity has been higher in the past than in the rest of the nation, and is projected to remain so, the relative difference is expected to decline. The reason is a shift in employment and output to sectors with lower productivity while other parts of the nation improve their performance.

Growth Determinants and Current Policy

Compared with the full employment conditions, a continuation of current policies will lead to consistently inferior performance of California's economy. As is pointed out in Table I, for example, civilian employment in 1975 under full employment is projected to be 9 million, while under current policy it would be a mere 7.7 million, a difference of 17 percent. Personal income under full employment is projected to reach $97 billion, in 1975—$19 billion or 24 percent more than it would under continued current policies. Under full employment, net output in 1975 is expected

to reach $114 billion, compared with $90 billion under current policies.

National forces could be invoked to help California approach full employment projections, but an understanding of California's comparative advantage determinants, and possible steps to improve them, could also enhance the state's economic performance.

Plant location decisions generally involve first the selection of a broad geographical area, with attention given to required market availability and size, specific industries, and crucial resources. Next, a labor market area is selected within this broad region, which contains an adequate supply of labor with appropriate skills. Management is often prepared to attract scarce skills from outside. Wage rates and unionization may also be important considerations. After this examination of general location, a specific community and site are selected. This choice depends on such factors as land availability and price; transport availability and price; government services as reflected, in part, through tax rates; availability of the amenities of life; and so on. Another factor important in site selection is the agglomeration effect, which arises from the presence of complementary plants which would bring about reductions in costs.

There is much evidence to suggest that for a majority of important industries, market size is the single most crucial plant location determinant. On the other hand, a major portion of new plant capacity tends to locate with old capacity. In this sense success breeds success, and fast growing areas tend to create the expectation of future rapid growth, thus setting up a self-reinforcing spiral. This type of momentum in a growing area can help it overcome other disadvantages. California's growth in the post-war period appears to be a good example of such a spiral.

Even if we accept the theory that growth produces growth, there is still the question of attracting the many footloose industries which could locate in a variety of places. Provisions for good education and other public services, in conjunction with special amenities of life, can play a crucial role.

Whatever the motivation behind growth, we must remember, when we seek to improve the elements that determine California's comparative advantage that candidates for future growth are likely to grow at different rates.

Although we have indicated a number of potential determinants of California's comparative advantage, the literature is rather barren of reliable empirical information, probably because of the great analytical difficulties involved. In the face of this situation we have conducted a "proxy" analysis of California's comparative advantage, by examining key economic and demographic variables on an interstate basis. This study may help us understand past trends in differential growth among states, identify "take off" areas where agglomeration effects are likely to bring sharp shifts in future trends, and help us focus on that part of national growth which stays within one region.

By applying correlation techniques to cross-section data for the fifty states we found that a state can expect a large in-migration during the coming decade if it has the following characteristics:

1. A large percentage of its present population is urban,
2. A large percentage of its population is in the 25-44 year age group and a relatively small percentage in the 14-24 year age group,
3. A large percentage increase in population has taken place during the previous decade,
4. A large "gross" product has originated per employee,

5. A large percent of personal income and gross product has originated in the form of property income, i.e., rental income of persons, interest payments, corporate dividend payments, and net interest payments by government,
6. Per capita personal income is high, and
7. Large percentages of the civilian employment are in construction, trade, services, communications, public utilities, transportation, finance, insurance, and real estate industries, while a small percentage is in agriculture.

California appears to have all of these characteristics.

Improving California's Comparative Advantage

What steps can be taken in California to further improve its attractiveness to business and industry? In answering this question we must remember that the United States is becoming increasingly homogenous. Other states, for example, have begun to appreciate the importance of education and research, and are beginning to act accordingly. In many other respects state and local governments as well as private industries are making greater efforts to improve the attractiveness of their areas. California must run fast in order to retain its present leadership.

One can divide measures intended to promote economic growth in California into two broad classes: beggar-thy-neighbor polices and de novo policies.* Begger-thy-neighbor policies are those which aim to increase a region's comparative advantage at the expense of other regions, and possibly at the expense of efficient national resource allocation. Subsidies and

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* I owe this distinction to Eugene Devine of the UCLA Institute of Government and Public Affairs.

tax concessions are examples. Counter-beggar-thy-neighbor policies may be adopted to offset beggar-thy-neighbor policies of other regions; they are also likely to contribute little to overall national growth.

De novo policies are innovative, they stimulate the region in which they are initiated and enhance its comparative advantage, but at the same time contribute to the economic development of the nation as a whole. It appears that only a few states generate such policies. California's leadership has encouraged such policies in the past and, hopefully, our state will continue to follow this course.

In the remainder of this paper we discuss several recommendations which aim at improving our state's comparative advantage through forward-looking de novo policies, rather than through actions opposed to the interests of the nation as a whole. (Another important policy area is ably examined in Professor Harold Somer's paper).

Services and the Amenities of Life. One of California's historic advantages has been the amenities offered to its citizens. Developing and maintaining these amenities is a dominant responsibility of the state's decision-makers. Through forward-looking planning and zoning, and close attention to the daily affairs of the cities, urban ugliness can be attacked. The state, county and municipal governments should coordinate their efforts to insure that the construction of modern facilities and the provision of local services contribute to aesthetically desirable physical environments and satisfying social relations.

Public and private design, which extends beyond buildings, to our streets and highways, should not be antiseptic, but rather should contribute to a sense of neighborhood, inspire community pride, and create a civic grandeur. Community services of a high level and sufficient variety are

equally important requirements for a desirable environment. We need to be concerned with the manner in which vital urban services are performed, as well as with the quantity and quality of the necessary resources of our cities, our water supply, and the air we breathe.

Each department of government has its part of this responsibility; but we could make available to public and private parties alike technical information and advice on matters of concern with regard to the nature of life in our cities. A State Urban Extension Service could take an active role in preserving and creating an attractive California for tomorrow.

Improved Urban Planning. Urban California is suffering from large agglomerations, congestion, and comparatively high land prices. It might be desirable, for reasons of efficiency, to develop new urban complexes some distance from existing urban centers. The state might formulate a strategy to promote development in a few leading new regions and thus provide an improved climate for economic development in the state. The artificial planning and nursing of "growing points" after the state has acquired a substantial amount of land in advance (possibly with federal and local cooperation), could be self-reinforcing, and could create new areas of high density to fill in the checkered industrial and residential landscape. Regions would be selected that would lend themselves to profitable development by leading industries, taking into account markets, labor force, and so on.

Such a program might be carried out through a California New Town Corporation, patterned after the Communications Satellite Corporation. It might be established by having the State, perhaps jointly with the Federal Treasury, hold half of the stock, and sell the remainder to profit-seeking

private investors. A state official could serve as chairman of the board, and could break a tie vote in favor of the public interest.

The Federal Government might be persuaded to join such a venture, not only because of its concern for an orderly development of suburbia, but also for the purpose of pulling surplus crop land out of agricultural production. Federal Assistance might be in the form of long-term loans or grants matched by state funds to acquire land. The Federal Government might also assist in planning and development.

State, federal and even local governments could, perhaps, join forces in financing public improvements, such as public utilities, roads and public transportation networks, parks in greenbelt areas, schools and hospitals, etc. Once the community has reached a certain size, it would incorporate, and the state would enter into a contractual relationship with the "new city" to regulate matters in adherence with the original plan, along with land ownership, repayment of loans, and so on.

Social and Economic Intelligence. Both public and private decision-makers need more economic and social information. Such intelligence should be provided on a continuous basis to a center that permits effective use of the information by the state government, and permits coordination of state, local and private decision-making.

I have recently served on a small, state-appointed committee to review the preparation of the California Development Plan; consequently, I have given a great deal of thought to this matter. The California Development Plan, in line with the California Planning Act of 1959, is supposed to help prepare such information. The purpose is to permit the state to keep abreast of the dynamics of state and national growth, and to assist public

and private decision-makers in reacting to cyclical changes in the development process.

Perhaps what is needed is a California Plan and Budget Bureau which would not only prepare and update long-run development plans, but would also aid in preparing the budget so that it would be consistent with the state's development plan. The Bureau would coordinate state activities with those of other governments, as well as with the private sector; and it would provide the economic and social intelligence needed for key public and private decisions. Establishing such a bureau would mean reorganizing, redirecting, and integrating some functions now partly performed by the Department of Finance, adding new ones, and placing these functions into a special staff agency of the Governor's office.

Research and Development by Governments. By any standard, state and local governments in California are a major industry; yet they spend exceptionally little on research and development. The high cost of public services and their importance for industry location decisions, emphasizes the necessity of offering industry, commerce, and residents the kind of public services they need and want, and of providing the services as efficiently as possible. To do this on a consistent basis requires more investment in research and development. In parts of the private sector it is not uncommon to find firms spending ten to fifteen percent of their funds on research and development. Perhaps the State of California should set aside one or two percent for this purpose. Local government might then also begin to invest in badly needed research.

Rescinding Restrictive Practices. There exist in California a number of policies which can hinder economic growth. They include restrictive business and labor practices, occupational licensing, various marketing schemes, and so on. Reversal of these policies could play a major role in improving the comparative advantage of California. Admittedly, such steps would have to be taken with care on the basis of thoughtful inquiry. We should have a formal review of existing policies and laws that sanction price regulation, through marketing controls, that inhibit the development of the trades by excluding new techniques, and that permit the mantle of public safety to disguise monopolistic tendencies.

Industry and Labor Joint Planning Council. Though ideas generated on the federal level, and backed up by large-scale funds, have become increasingly important in our lives, the state must continue to exert far-reaching leadership, if we are not to become overly dependent on Washington. To improve our comparative advantages as a state, we must develop and retain our uniqueness and our ability to initiate social, cultural, and economic change. A major role can be played here by industry and labor. The private sector should organize itself and assume leadership in formulating and implementing policies which will promote the future growth of California. Perhaps the single most important decisions affecting the future of California are those which concern the investments of national and local corporations. They not only create jobs and provide income, but they also create innovations, the climate of success, and new business opportunities. More constructive and intensive communication between government, labor, and industry can also lead to a coordinated and self-reinforcing process in support of continued economic progress.

We can learn perhaps from English and French planning experience of recent years. The National Economic Development Council in England and the Commisariat du Plan in France bring together the major interest groups to discuss and plan the future. The plan then becomes a joint product, and indicates the general direction in which the interest groups, including the state in its various economic guises, have agreed that they want to go. Hopefully, this has the effect of moving economic currents along the desired path.

Should a California Plan and Budget Bureau be created, it could furnish a Joint Planning Council with social and economic intelligence as well as serve a variety of crucial research and staff functions.

What can we conclude from this review of the possible futures of California, of the elements of its comparative advantage, and of the measures recommended to help our state reach its full potential? At least this: California has a unique heritage of natural endowments and prudent direction. Though in recent years California has achieved leadership in urban and industrial development, we cannot assume that its potential will be realized automatically. National policies as well as those of this state are important. As growth proceeds, a hydra of problems also develop which can strangle this growth. Thus, it becomes vital for us to learn to detect these problems and to discover the means of dealing with them before they become intertwined with our lives and institutions, taking their inevitable toll of the state's economic and social health. Our projections reveal the promise of greater prosperity for our state. But reflection indicates that discord and decline could follow if public and private decision-makers fail to plan and proceed together. Hopefully, serious consideration of the recommendations made in this paper will be a positive step toward progress.

APPENDIX

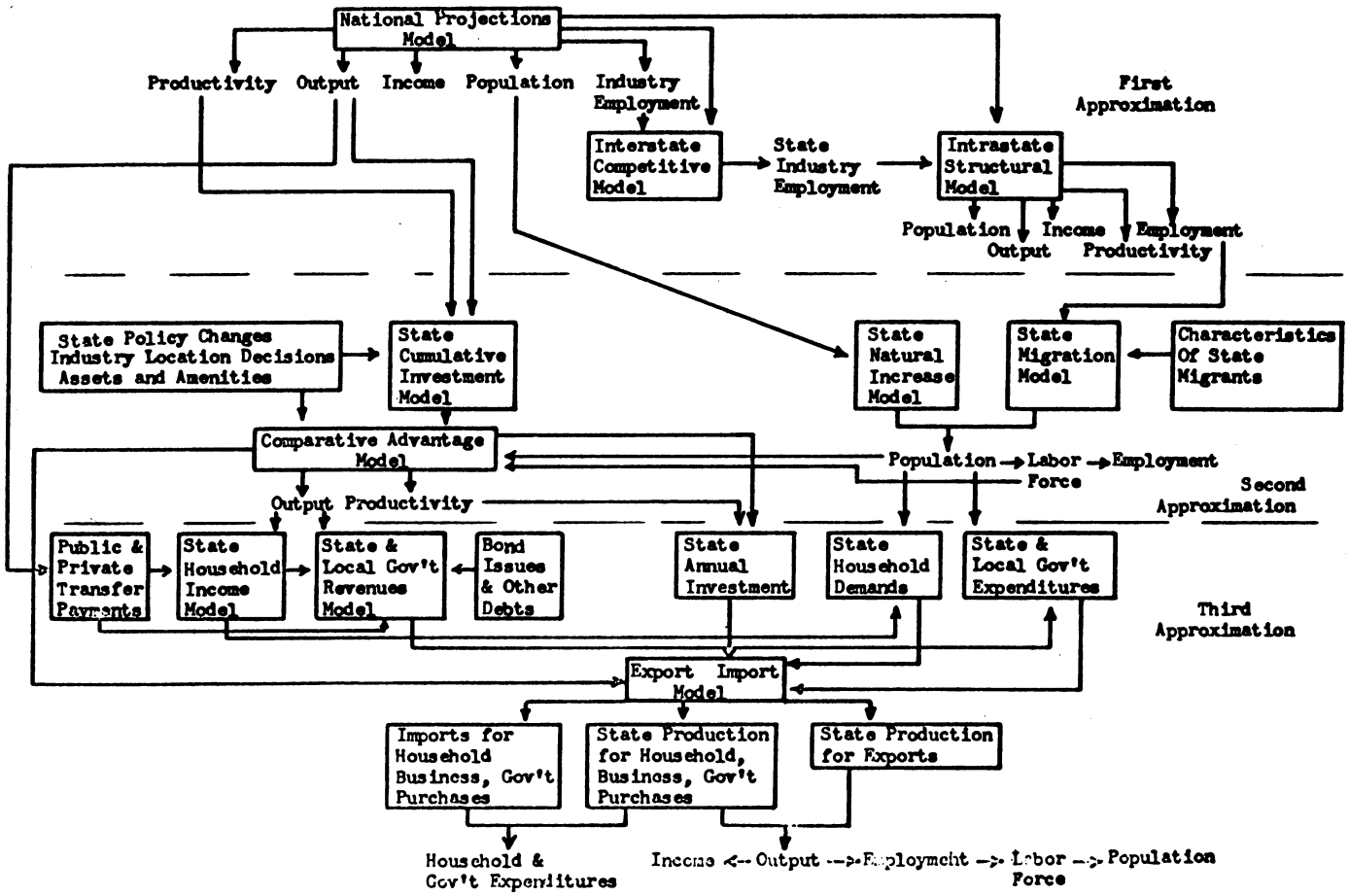
A THREE-STAGE CALIFORNIA GROWTH MODEL

Regional projections depend on the quality and quantity of production factors in a state, which in turn depends in part on, migration. Industry tends to choose its geographic location, particularly for new capacity, according to efficiency considerations and market size; families will change their residence location because of job and income opportunities and other factors defining the social, physical and economic environment in which they would like to reside.

To analyze the causes and effects of migration of people and plant capacity, as well as the internally generated changes in the area, we have developed a model with three successive stages of approximation. The first approximation can be roughly identified as a national disaggregation approach, using trend and shift analysis; the second is a supply approach; and the third is a demand approach. Each approximation modifies and elaborates on the results of the preceding stage. This procedure permits the introduction of analytical judgments about likely public policy shifts, and also allows for the use of some quantitative behavioral relationships which have been only roughly estimated as well as those which have been more precisely tested.

The flow chart provides us with a map of this three-stage migration model.

STATE ECONOMETRIC GROWTH MODEL



First Approximation - National Disaggregation Approach. We begin our procedure with a set of economic and demographic target year projections for the nation as a whole. National projections are needed to show the total supply and demand of productive factors and output from which each state potentially can draw. These estimates serve as control totals. National projections are needed because many trends and policy shifts are common to all states and can best be studied in the aggregate. Finally, national projections are needed because they can be used as a standard against which to measure deviations of individual states so that analysis of the trends in a state's relative position in the nation can be made.

We use the national projections made by such groups as Resources for the Future, National Planning Association, and various federal agencies. In conformance with most of these studies, we will assume a reasonably high employment rate for the nation, although our procedure permits any given state to develop higher or lower rates of employment.

National industry employment projections serve as a starting point for state projections. Examining past trends in the state allocation of an industry's employment, we use a differential-proportional shift analysis to tentatively allocate the target year industry employment projections among states.

We next compare the current "economic structure" and past changes in "structure" for the fifty states. The economic structure includes the interrelationships in the state among such variables as output, productivity, industry employment, labor participation, population, average earnings, and per capita incomes. This procedure permits us to project the structure of a given state consistent with its estimated employment projections. It also enables us to revise the tentative state industry employment projections

in case structural inconsistencies show up. Should this happen changes in the industry employment estimates are needed. Lead lag-relationships can be used in this interstate comparison. It permits us to examine the effects of other variables on employment.

Second Approximation - Supply Approach. The outputs of the disaggregation approximation serve as inputs to a detailed migration model, which incorporates such variables as state and national employment, wage rates, armed forces, school enrollments, and family size to determine net migration for the state. Adding net migration to the state's base period population and natural increase (as based on state fertility and mortality assumptions, related to the national population growth) provides a revised population (age, sex, color) projection for the target years. Using labor force participation-rate estimates, the projected labor force (age, sex, color) is then estimated.

The migration model permits the preparation of projections from the base year to intervening years as well as the target year. One advantage of introducing such partial dynamics into the model is that the target year employment estimates can be revised if they are inconsistent with likely developments in intervening years.

The factors influencing migration are likely to be different among the different classes of the population. Therefore, we investigate the relationship between characteristics of migrants and their migratory behavior in order to better estimate the volume and composition of migrants coming to the state.

In general terms, it is an area's comparative advantage over other areas which determines its volume and type of economic activity. This advantage can be affected by population changes which influence market size; by labor force changes which influence the quantity and quality of the

labor supply; by changes in technology, scales of production, and final demand mix--all of which affect the "value" of an area's physical and human resources; and finally, by changes in the cumulated private and public investments and in state and local policy decisions which affect the valuation of assets and amenities in the area.

In investigating the comparative advantages of California, we pay particular attention to (a) factors that determine industry location decisions, (b) public policy decisions that are likely to occur and affect the area's advantage, (c) amenities that exist in the state which, coupled with job and income opportunities, make it an attractive place to live. These analyses require exploratory investigations into issues of how best to measure physical and nonphysical assets in an area so they can be related to measures of economic change.

Third Approximation - Demand Approach. The output projections derived from the supply approximations, along with estimates of net interstate government and private transfers, aid in the projection of state household incomes, state and local government revenues, and business investment. These projections are critical in projecting state consumer expenditures and state-local government expenditures. Income and revenue projections alone are not sufficient. The population characteristics (including income distribution estimates) are examined to determine the kinds, as well as the amount, of household expenditures, and to determine the likely development in the expenditures for various government programs, some of which could be financed from government borrowing.

Having projected the output and the final demands of households, business, and government in the state, we are now prepared to ask how much

of this output will be exported, how much will be sold to each of the state final demand sectors, and how much of the final consumption will be imported from other areas. By specifying the implied markets for the components of state output, we can determine whether the projected magnitudes of these markets are inconsistent with other assumptions. For example, we could have implied an export market for California lumber products which is too high in light of competition from southern lumber producers. If this is so, and if there are no production offsets resulting from other inconsistencies, then we would revise our output estimates, which in turn would lead to revisions of state income and employment estimates, followed by revisions in the labor force and population projections.