



MONTHLY REVIEW

TWELFTH FEDERAL RESERVE DISTRICT

NOVEMBER 1954

FEDERAL RESERVE BANK OF SAN FRANCISCO

TRENDS IN CONSTRUCTION ACTIVITY

NEW construction activity in the United States has risen to a new high level in the first ten months of this year. Expanded outlays on construction in the private and state and local government sectors have been a major prop to over-all levels of economic activity throughout the year thus far. Total new construction expenditures for the first ten months were at an annual rate of nearly \$37 billion, a gain of about \$1.7 billion or 4 percent from the 1953 rate. While the expansion in building activity was broadly based, some marked shifts have occurred in the relative importance of some types of construction. Most noticeable has been the substantial expansion in the private sector of the economy with only a slight rise in public outlays. Within the sphere of public building, however, the relative stability of construction expenditures is accounted for by an offsetting movement, with sharply increased state and local government spending outweighing the large decline in Federal Government outlays for construction purposes.

The sharp expansion in private residential building, accounting for more than half of the dollar gain in total construction outlays, reflects to a high degree the increased availability of mortgage funds and a liberalization of the terms of mortgages. Easing of the money markets since mid-1953 accompanied by a decline in the demand for credit by business led to a substantial increase in the amount of funds available for investment in residential mortgages. The turnabout in the availability of mortgage money was a major factor in the second quarter pickup in housing starts. Additional impetus was imparted to the market for new housing in midsummer when Congress liberalized the terms of mortgages insured by the Federal Government. Down payments were reduced and maximum maturities were extended on mortgages insured by the FHA for new dwellings, and the new law afforded similar although slightly less liberal terms to buyers of existing houses. This liberalization of mortgage terms has had a marked expansive effect upon the new housing market, judging from the very substantial rise in activity at FHA offices throughout the nation. Basic housing demand factors, such as a rising population and increased number and size of families, migration from city to suburb

and from one region to another, and relatively favorable consumer income expectations, though not as strong as in some earlier years, still seem to be sufficiently high to generate a substantial demand for housing in an environment of easy credit.

Private nonresidential construction, while accounting for a smaller dollar gain, has risen more percentage-wise than has residential building in the first ten months of the year. During this period total nonresidential construction expenditures increased 10 percent over the same period in 1953 despite declines in three major types of construction—industrial, farm, and public utilities. Unusually sharp advances ranging from 21 to 35 percent in private outlays for commercial, educational, social, and recreational facilities have been large enough to outweigh by a considerable margin declines in other sectors. It should be recalled that construction of these types of structures was restricted in varying degree by Federal stabilization measures for a period of approximately two years during the Korean war. The attempt to make up for the backlog accumulated during the period of restriction is at least partly responsible for the current exceptionally high levels of activity in this field.

Public construction activity is dominated by the growing needs associated with a rapidly rising school population and a continued expansion in population generally. Needed enlargement of educational, highway, sewer, water, and other community facilities has been instrumental in raising the rate of state and local government expenditures in 1954 by nearly \$1 billion per year. This is a gain of 13 percent over the already high rate of expenditures attained during 1953. Federal expenditures on new construction, meanwhile, have declined sharply, off 20 percent in the first three quarters of this year from the same period in 1953. Nearly all the decline in Federal expenditures is accounted for by a reduction of more than one-third in outlays for military facilities, a cut of 14 per-

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cent in expenditures for conservation and development, and a drop in industrial plant construction of some 10 percent.

District construction appears less active

On the basis of available data, which are not comprehensive, the construction situation in the Twelfth District appears to be somewhat less favorable than in the nation. Owing to the lack of expenditure data for the District, it is not possible to compare expenditures on new construction in the District with those in the nation. However, information that is available on District building permits issued and construction contracts awarded indicates a smaller rise in over-all activity here than elsewhere in the nation. The available data also indicate that most of the District weakness relative to that of the nation occurred in the first half of the year. Since midyear, District gains have tended to equal or exceed the rise nationally.

Construction employment declines

Employment in contract construction in the District has shown a considerable degree of weakness throughout the first nine months of the year. Seasonally adjusted average monthly employment during the January-September period this year was almost 8 percent below the comparable months of 1953. In the nation, however, monthly employment during this same nine-month interval averaged slightly higher than in the corresponding period of last year, although employment in September and October was significantly below the same months of 1953. It appears somewhat paradoxical to find the employment level virtually unchanged at the same time that expenditures on construction are at a record rate, at least in the nation where outlays were 4 percent ahead of 1953 in the first nine months of the year. There is no ready explanation for this seeming paradox. No consistent relationship is discernible in the past record of expenditures and employment. Such factors as changes in productivity, changes in the composition of the types of construction in different periods, shifts in the proportion of work done by contractors and by the owners' own force, shifts in the proportion of expenditures on contract construction labor as distinct from building materials and equipment, methods of data estimation and computation, and other less obvious elements account for this apparently paradoxical situation.

That there has been a shift in the composition of construction is quite apparent in the nation as well as in the Twelfth District. Nationally, Federal military construction expenditures in the first ten months of this year were down nearly one-third from 1953 levels and in the Twelfth District military contract awards and force account work started on military projects were off by approximately the same percentage. Industrial building has dropped sharply while commercial and other nonresidential structures have assumed greater importance in over-all construction activities. The varying requirements of the different types of construction may well account for a major portion of

the weakness in construction employment relative to expenditures. The explanation as to why the District has fared less well than the nation in this regard probably lies in the fact that residential construction was relatively less active in the District than in the country as a whole in the first half of this year. This affected the volume of work started and hence the total volume of construction in process, which in turn diminished the District demand for labor.

Variation in construction activity marked as between District states

While over-all District construction employment declined nearly 8 percent in the first nine months of the year, there were fairly substantial differences in behavior between the various states. In two states, Washington and Nevada, employment averaged slightly higher in the January-September period this year than last and in the other five states the declines in employment ranged from 3.1 percent in Arizona to 12.5 percent in Idaho. A variety of factors accounts for these differences in construction activity.

In Washington the high level of over-all construction activity reflects the continued heavy volume of work at the atomic installations at Hanford and expanded employment at the large Federal reclamation and hydroelectric power projects. Building permit volume, moreover, has shown a stronger upward tendency in Washington than for other District states during the year thus far. Nevada's relatively rapid population gains and expansion of tourist and Federal Government facilities throughout most of the current year are the factors largely responsible for its gain in construction activity.

Among those District states in which construction employment has fallen off, Idaho and California show the largest relative declines for the first nine months of the current year from the same period last year. In both states, the completion of major Federal defense construction projects has had a major impact upon the total number of workers employed. In addition, despite very substantial gains in recent months, the weakness early in the year in the volume of housing starts has been a factor holding the level of construction employment below comparable 1953 periods. In contrast to the nation, California has had a decline in commercial and utility construction. Roughly similar circumstances have accounted for reduced construction activity in Utah and Oregon, although residential construction in Utah did not share in the weakness in the early months of the year. Measured by the value of building permits issued, nonresidential construction activity generally has been relatively weak in Utah during the first ten months of this year. In Arizona, strike interruptions in June and a fairly sharp cutback in road-building and residential activity in September reduced employment for these months below the same months of 1953. June and September, therefore, were exceptions to a generally strong situation during the other months of the year.

PRE- AND POSTWAR STABILITY IN DISTRICT PER CAPITA INCOME PAYMENTS

AN article on income payments in the Twelfth District published in the last issue of the *Review* showed that a wide dispersion of changes in incomes among the District states during 1953 largely reflected differences in the year's developments in major industries of each state. This suggests that differences in the range of year-to-year fluctuations in income payments between the District and the nation and among the District states may be significantly associated with regional differences in economic specialization. If, in addition to annual data, monthly or even quarterly income data for the several District states were available, it would be possible to make many more useful comparisons between income stability in the District and the nation. For example, minor business fluctuations may be transmitted inter-regionally because of the flow of trade between regions, but their effects in any one area such as the Twelfth District may not be traceable through annual income statistics. Also, the timing of leads or lags between changes in District and national income is probably concealed in yearly data.

However, even the use of annual statistics of income payments—one of the most comprehensive and intelligible indicators of regional economic activity available—serves to reveal some differences or even lack of differences between the nation and District and among the seven western states. Also, since income is one of the primary determinants of consumer expenditures on goods and services, a review of pre- and postwar movements in state relative to national income payments may suggest differences in trends and year-to-year fluctuations between the District and national retail sales.

Differences in the rate of change of total income payments between the Twelfth District and the country as a whole have been associated with variations in population growth to a large degree. Thus, a comparison of trends and annual fluctuations in total income payments between this region and the nation will reflect population variations between these areas as well as differences in other economic forces. In order to compare regional movements in income exclusive of differential rates of population growth, it is preferable to examine changes in per capita rather than total income payments. Long-term changes in per capita incomes reflect not only business developments but also changes in public policy (*e. g.*, social security laws and farm price support programs) and changes in the proportion of the population participating in the labor force (due, in part, to changes in the age distribution of the population) as well as many other economic factors. However, the primary emphasis in this article will be in associating state differences in annual per capita income fluctuations with regional differences in economic specialization.

A fair degree of stability in the ratio of District to national per capita income payments over the pre- and postwar years suggests that cyclical movements in per capita

income payments in this region generally paralleled those in the country as a whole. This broad geographic aggregate, however, conceals a good deal of intra-District development. The District states, considered individually, exhibited marked differences in their per capita income fluctuations over the past twenty-five years. Department of Commerce income and census data further suggest that these differential fluctuations in per capita income payments are largely associated with state differences in (1) economic specialization and year-to-year economic developments and (2) the proportion of total state income payments arising from property income as opposed to wages, salaries, and proprietors' income.

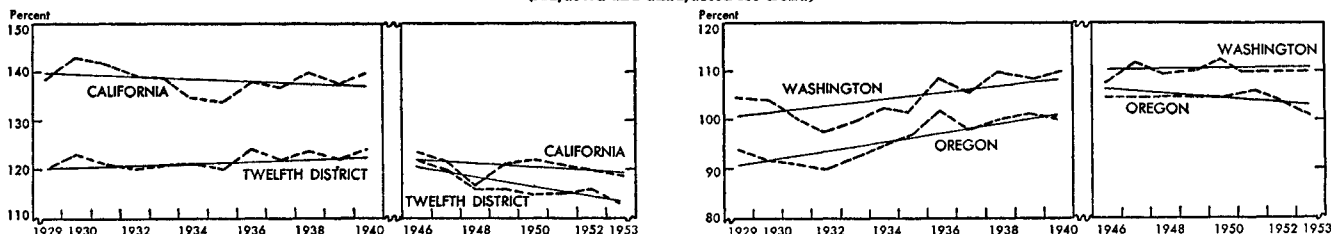
District per capita income changes not significantly insulated from national movements

Charts 1 and 2 show District and state per capita income payments expressed as a percent of the national figure in order to enhance comparison of regional and national per capita income movements. Thus, a rise in the plotted ratio of state to national per capita income payments indicates greater strength (that is, a smaller relative decline or a larger percentage rise) in the state than in the nation; a horizontal movement in the ratio indicates equal percentage changes in the state and in the nation; and a decline in the ratio indicates less strength (that is, a larger relative decline or a smaller percentage rise) in the state than in the nation. The annual ratios of state to national per capita income payments are affected by a variety of forces. Some of these forces cause the ratios to have a rising or declining trend over a period of several years. In an attempt to remove some of the longer run movements, trend lines were fitted to the annual ratios of state to national per capita incomes for two separate periods—the twelve prewar years and the eight postwar years.

Twelfth District per capita income payments, particularly after adjustment for trend, have departed from national changes to only a minor extent during the pre- and postwar years. Thus, insofar as annual per capita incomes are concerned, the District as a whole has not varied greatly from national economic fluctuations since 1929. Chart 1 indicates that even in the Great Depression of the early thirties Twelfth District per capita incomes did not depart to any great extent from changes in national per capita incomes. Small deviations from this fairly stable 1929-37 pattern occurred during a year of downturn (1930) when District per capita incomes declined less than the national average and during a year of upturn (1936) when District per capita incomes rose more than in the nation.

Since 1946, the average annual rate of growth in District per capita incomes has not kept pace with that nationally. This is in contrast to the twelve prewar years when the District percentage rise was larger than the percent increase in the country as a whole. Adjustment

CHART 1
RATIO OF STATE TO NATIONAL PER CAPITA INCOME PAYMENTS—TWELFTH DISTRICT, CALIFORNIA, OREGON, AND WASHINGTON—1929-40 and 1946-53
(Adjusted and unadjusted for trend)



Source: United States Department of Commerce, *Survey of Current Business*, August 1954.

for the downward trend in the ratio of District to national per capita incomes since 1946 somewhat reduces fluctuations in the ratio during the postwar years. For example, a drop in the ratio of District to national per capita incomes during the 1948-49 recession is tempered when adjusted for the postwar downward trend.

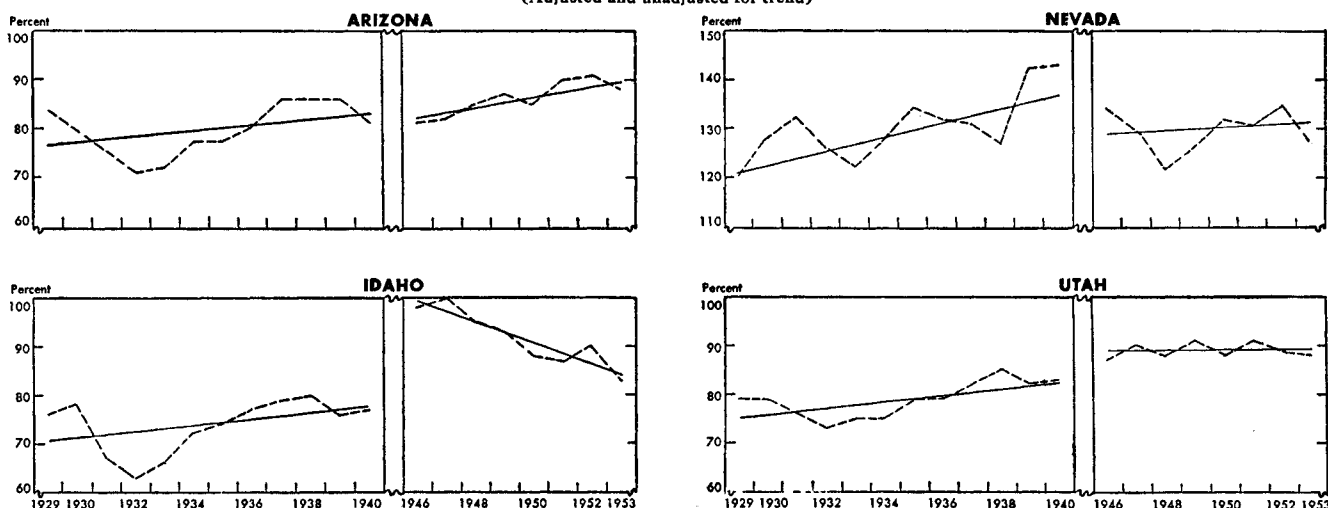
States deriving a large proportion of their incomes from agriculture experience largest per capita income fluctuations in the District

The Intermountain District states have generally experienced marked fluctuations in per capita incomes relative to changes in the national average during both the pre- and postwar periods. Whether an attempt is made to adjust for a prewar trend or not, per capita income payments in Arizona, Idaho, Nevada, and Utah show the greatest volatility in the District. Per capita income payments in Arizona, Idaho and, to a lesser degree, Utah declined sharply relative to the nation during the Great Depression but showed more moderate decreases than national per capita incomes during the 1937-39 cycle. Since 1946, each of these three states has continued to experience significant annual fluctuations (either adjusted or unadjusted for trend) in per capita incomes compared with changes in the nation as a whole.

Prewar changes in the ratio of state to national per capita income in Arizona, Idaho, and Utah were in part due to a twelve-year upward trend in each of these regions. Among all seven District states, Arizona has shown the highest average annual rate of growth in its per capita income during both the pre- and postwar years. Idaho, on the other hand, has suffered the sharpest downward trend in per capita income in the District since 1946.

Completely acceptable data do not exist for measuring differences in industrial structure. However, comparisons of percentage distribution of total gainfully employed by major industry group are generally sufficient for suggesting differences in economic specialization between areas. Reviewing population census data for 1929, 1939, and 1949—the only complete regional statistics available for this purpose—along with per capita income fluctuations since 1929 may suggest possible relationships between state differences in economic specialization and annual changes in per capita income payments. Chart 2 indicates that the Intermountain states have generally exhibited the widest swings in per capita incomes in the District. The table on page 150 shows that they have also had large proportions of their gainfully employed labor force engaged in extractive industries—particularly agriculture.

CHART 2
RATIO OF STATE TO NATIONAL PER CAPITA INCOME PAYMENTS—ARIZONA, NEVADA, IDAHO, AND UTAH—1929-40 and 1946-53
(Adjusted and unadjusted for trend)



Source: United States Department of Commerce, *Survey of Current Business*, August 1954.

There also appeared to be an ordering among these Intermountain states during the prewar years; the state with the largest proportion of its gainfully employed labor force working in agriculture (Idaho) experienced the widest swings in its per capita income payments. The pattern—though less marked—has been much the same over the postwar years. In 1949, each of the Intermountain states had a larger proportion of its labor force gainfully employed in agriculture and other extractive industries than any of the three Pacific Coast states and also experienced larger fluctuations in per capita incomes than did the Pacific Coast states during the postwar years.

Further evidence is suggested by Chart 3 showing indexes, based upon national data, of average per capita net incomes of individuals living on farms,¹ those not living on farms, and of the total population. The chart clearly demonstrates greater volatility in per capita incomes among individuals living on farms compared with individuals not living on farms. Though regional differences in prices, products, and general market conditions are lost in using national averages, the graph suggests possible similar differential movements between agricultural and nonagricultural per capita incomes in the Twelfth District economy. Thus, states in the District in which large proportions of the population derived incomes from farm activity can also generally be expected to have experienced larger fluctuations in per capita incomes over the pre- and postwar years than those District states having a smaller proportion of their labor force engaged in agriculture.²

The wide swings in Nevada per capita income payments seem to have been out of tune with the other Intermountain states, the Pacific Coast states, and the country as a whole during pre- and postwar periods. The difference in fluctuations of per capita income payments in Nevada compared with other areas is probably explained by the importance of tourist trade in that state's economy. Over the two decades, 1929-49, Nevada has had a much larger proportion of its labor force employed in trade and service activities—largely reflecting the importance of tourist trade—than either Arizona, Idaho, or Utah. Postponability of tourist travel with resultant fluctuations in tourist trade and service industries probably accounts for some of the continued annual swings in per capita income payments in Nevada.

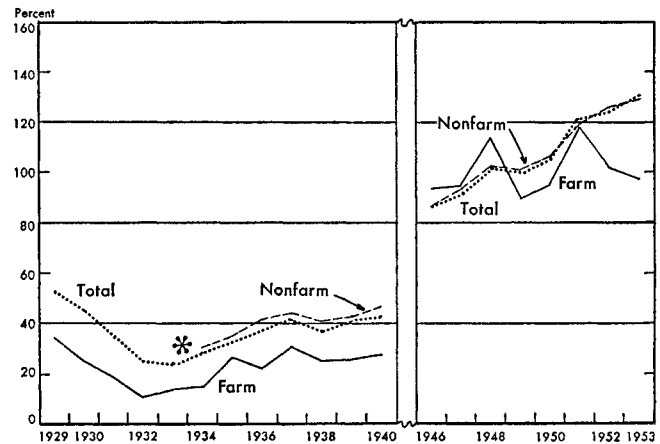
Pacific Coast states show varied but more moderate per capita income changes than Intermountain states

The three Pacific Coast states have generally experienced smaller fluctuations in their per capita income payments than the Intermountain states during the pre- and postwar years. On the whole, changes in California an-

¹Includes only income derived from farming.

²Data are not available for average per capita net income of individuals not living on farms from 1929 through 1933. However, the close parallel movements between average per capita incomes for total population and nonfarm population over the charted fifteen years plus the predominance of nonfarm population in the country strongly suggest a similar parallel movement between the two series during the early thirties.

CHART 3
INDEXES OF AVERAGE PER CAPITA NET INCOME OF FARM
POPULATION FROM FARMING, NONFARM POPULATION,
AND TOTAL POPULATION—1929-40 AND 1946-53



* Figures not available.
Source: United States Department of Agriculture, Agricultural Marketing Service, *Farm Income Situation*.

nual per capita income payments (Chart 1) were more closely associated with changes in national per capita income than those of any of the other six District states. During the Great Depression, per capita income payments in California declined somewhat more moderately but recovered more slowly than in the country as a whole. During the 1937-39 cycle, California per capita incomes bore a fairly constant relation to the national figure and, except for a dip in 1948 due in part to a differential rate of population growth, stood at a fairly stable percent of national per capita incomes during the postwar years.

A faster annual rate of growth in national relative to California per capita income payments since 1929 has resulted in a downward trend in the ratio of California to national per capita incomes. Population census data indicate that this downward trend is, in part, explained by a decline in the proportion of California population participating in the state's labor force from 1929 to 1949 compared with a generally rising labor participation ratio in the country as a whole.¹

Annual fluctuations in per capita income payments in Oregon and Washington generally followed changes in national per capita income payments during the prewar and, particularly, the postwar years (Chart 1). Prewar fluctuations in the ratios of state to national per capita income payments are largely dampened after adjusting for the 1929-40 average annual rate of growth (trend). During the Great Depression, Oregon and Washington experienced declines in their per capita incomes which were neither as moderate as in California nor as large as in the Intermountain states. During the 1937-39 cycle both states suffered slightly less severe declines in per capita income payments than the country as a whole.

¹Available data suggest that annual differences in movements of the population in and out of the labor force between the District states and the nation have probably had only a small or negligible effect upon year-to-year fluctuations in the ratios of state to national per capita income payments. However, even these mild differential annual movements have apparently contributed to pre- and postwar declining trends in the ratio of California to national per capita income payments.

Since 1946, changes in per capita incomes in both Oregon and Washington were even more similar to movements in national per capita incomes. Changes in Oregon per capita incomes from 1946 to 1950 and in Washington per capita incomes since 1951 both illustrate a fairly constant relation to movements in the national figure over the postwar years.

The somewhat larger fluctuations during the prewar years of per capita income payments in Oregon and Washington compared to California probably reflect a greater concentration of generally more volatile industries in the two Pacific Northwest states in contrast to the location of generally less volatile industries in California. Even when considered in the aggregate, manufacturing and construction activities are, on the whole, more volatile than either trade or service activities. In 1929 and 1939, California had a larger percent of its gainfully employed labor force engaged in trade and service industries, particularly the latter, than either Washington or Oregon. On the other hand, both Oregon and Washington during these same census years had larger proportions of their gainfully employed workers concentrated in manufacturing industries than California.

A further breakdown of total manufacturing activity, based upon the 1949 census, indicates differences in re-

gional specialization in durable goods industries which might also have contributed to differences in per capita income fluctuations between California and the Pacific Northwest during the postwar years. Washington and especially Oregon had a somewhat higher concentration of durable goods industries (generally more volatile than nondurable goods industries) than California. In California the largest proportion of durable goods employment is centered in transportation equipment—primarily aircraft—with the Federal Government as the principal customer. Major fluctuations in this industry are largely the result of changing national defense policy and may, therefore, bear little relation to changes in general business activity. In contrast, the largest proportion of durable goods manufacturing employment in Washington and, particularly, Oregon is concentrated in the production of lumber and lumber derivative goods—an industry in which major fluctuations are the result of numerous changes in both the private and governmental sectors of the economy.

Property income as a possible source of District stability

In addition to differences in industrial specialization, differences in state percentage distribution of income payments by type during the pre- and postwar periods

PERCENTAGE DISTRIBUTION OF GAINFULLY EMPLOYED WORKERS BY MAJOR INDUSTRY GROUP
TWELFTH DISTRICT AND UNITED STATES—1930, 1940, AND 1950

Industry group	United States			Twelfth District			California		
	1930 ¹	1940	1950	1930 ¹	1940	1950	1930 ¹	1940	1950
Total all industries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Extractive industries	24.4	20.9	14.2	20.9	16.5	10.7	16.1	12.9	8.4
Agriculture, forestry, fishing	22.0	18.9	12.5	18.3	14.2	9.6	13.9	11.0	7.6
Mining	2.4	2.0	1.7	2.6	2.3	1.1	2.2	1.9	0.8
Manufacturing and construction	29.7	28.1	32.0	23.9	23.0	26.6	24.7	23.0	27.3
Manufacturing	23.5	23.5	25.9	17.1	17.0	18.9	17.4	16.8	19.6
Construction	6.2	4.6	6.1	6.8	6.0	7.7	7.3	6.2	7.7
Trade and services	43.1	49.2	52.4	55.1	59.0	61.3	56.1	62.6	63.2
Trade	13.4	16.8	18.8	16.3	21.0	21.7	17.5	22.3	22.4
Services	20.1	22.2	22.4	24.0	25.7	26.9	26.2	27.5	28.0
Finance, insurance, real estate	2.9	3.3	3.4	4.1	4.1	4.2	5.0	4.8	4.6
Transportation, communications, other public utilities	6.7	6.9	7.8	7.6	8.2	8.5	7.4	8.0	8.2
Industries not represented	2.7	1.6	1.5	3.1	1.5	1.3	3.1	1.4	1.2
	Oregon			Washington			Arizona		
	1930 ¹	1940	1950	1930 ¹	1940	1950	1930 ¹	1940	1950
Total all industries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Extractive industries	25.8	19.7	13.0	22.1	15.8	10.6	34.5	30.3	19.3
Agriculture, forestry, fishing	25.2	18.9	12.7	21.1	14.9	10.1	23.9	21.7	14.9
Mining	0.6	0.8	0.3	1.0	0.9	0.5	10.6	8.6	4.4
Manufacturing and construction	24.3	26.3	30.1	26.5	28.3	29.4	17.6	14.4	17.4
Manufacturing	18.0	20.9	22.7	19.9	22.0	21.2	11.5	8.4	8.8
Construction	6.3	5.4	7.4	6.6	6.3	8.2	6.1	6.0	8.6
Trade and services	46.9	52.3	55.5	47.9	54.2	58.6	44.9	53.9	61.6
Trade	15.0	19.0	20.5	15.3	19.6	20.7	13.5	18.5	21.9
Services	21.3	22.3	23.0	21.1	22.3	24.9	22.5	25.5	27.8
Finance, insurance, real estate	2.8	3.0	3.4	3.1	3.6	3.8	2.0	2.0	3.0
Transportation, communications, other public utilities	7.8	8.0	8.6	8.4	8.7	9.2	6.9	7.9	8.9
Industries not represented	3.0	1.7	1.4	3.4	1.5	1.5	2.9	1.5	1.6
	Idaho			Nevada			Utah		
	1930 ¹	1940	1950	1930 ¹	1940	1950	1930 ¹	1940	1950
Total all industries	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Extractive industries	48.1	41.2	29.8	35.3	30.8	15.9	31.8	26.3	17.9
Agriculture, forestry, fishing	44.1	37.0	27.2	21.2	15.6	10.7	24.4	19.5	12.6
Mining	4.0	4.2	2.6	14.1	15.2	5.2	7.4	6.8	5.3
Manufacturing and construction	13.5	12.5	16.7	14.0	12.0	13.7	19.0	16.5	19.6
Manufacturing	9.5	7.9	9.2	8.0	4.5	5.1	13.5	11.0	12.2
Construction	4.0	4.6	7.5	6.0	7.5	8.6	5.5	5.5	7.4
Trade and services	35.4	44.7	51.8	47.6	55.1	68.6	45.4	55.6	61.2
Trade	11.4	16.4	19.2	11.1	16.5	19.9	14.4	19.5	20.4
Services	16.5	19.8	21.3	21.7	24.4	34.6	19.6	22.6	28.0
Finance, insurance, real estate	1.5	1.7	2.3	1.7	1.7	2.5	2.4	3.0	3.2
Transportation, communications, other public utilities	6.0	6.8	9.0	13.1	12.5	11.6	9.0	10.5	9.6
Industries not represented	3.0	1.7	1.5	3.2	2.1	1.7	3.7	1.6	1.3

¹ Adjusted to the 1940 and 1950 census definitions.

Source: United States Department of Commerce, Bureau of the Census, *Census of Population*.

suggest a second major factor probably contributing to state and national differences in per capita income fluctuations. Income from property—particularly personal interest income, the largest single source of property income—is generally more stable than wages and salaries, or proprietors' incomes during periods of fluctuating business activity. Thus states with large proportions of income arising from property may be expected to exhibit a higher degree of stability during periods of changing economic conditions than states in which personal interest and rental incomes are a significantly smaller fraction of their total income payments.

Among District states, California has generally shown the mildest fluctuations in per capita income payments during the pre- and postwar years. At the same time, California has derived a larger proportion of its total income from property than any of the other six western states. In 1929, California obtained slightly less than 23 percent of its total income from property compared with slightly less than 19 percent in the country as a whole. Nationally, property income declined at a slower rate from 1929 to 1932 than the sum of the remaining types of personal income. This suggests that the differential importance of property incomes between California and the nation may be a significant factor in explaining the apparent slower rate of decline in California per capita income during that four-year period compared with the decrease in the country as a whole. However, since 1929, the proportion of California income derived from property has declined at a faster rate than in the country as a whole so that by 1953 the California fraction was less than 1 percentage point above the national ratio.

Conclusions

In summary, the data indicate that fluctuations in per capita income payments in the Twelfth District have, in general, paralleled changes in the country as a whole during the pre- and postwar years. Thus, insofar as annual per capita income payments are an indicator of regional purchasing power, this District—considered as a whole—has generally not been greatly insulated from major economic cycles in the nation since 1929. However, the seven District states reviewed separately show varied fluctuations in their per capita incomes which appear to have been associated with differences in industrial structure and, in the case of California, with the fraction of property income as a major type of total income payments.

The District Intermountain states, with large proportions of their gainfully employed labor forces engaged in agricultural activity, have generally experienced larger per capita income fluctuations than the Pacific Coast states. Among the Pacific Coast states, California has had milder year-to-year changes in per capita incomes than either Oregon or Washington, which may reflect both the larger concentration of less volatile trade and service industries and the larger percentage of total income derived from property in that state. Further analysis, especially of the postwar period, using a more detailed re-

gional breakdown of durable goods manufacturing among the three Pacific Coast states would probably suggest further differences contributing to the differential fluctuations in per capita income payments.

Similarly, a more detailed regional comparison of government (Federal, state, and local) employment suggests another probable factor contributing to differences in fluctuations in per capita income payments between the District and nation and among the seven District states. Government employees are counted among other major industry groups in the census data and cannot readily be identified as a separate category. For example, government workers engaged in medical services, transportation, and other activities commonly carried on by private enterprises are classified in the appropriate industrial category. In general, the bulk of government employment is included under services—public administration and education—in the census reports. However, estimates published by the United States Department of Labor indicate sizable differences during 1953 in the proportion of nonagricultural workers employed in governmental activity in the nation (13.6 percent) compared with the District (17.5 percent).

Still another important factor probably contributing to similar per capita income movements between the District and the nation is the effect of public policy. Where large subregions like the Twelfth District are involved, public policy directed at stabilizing incomes may well result in a greater uniformity between regional and national fluctuations in annual per capita income payments. Thus differential cyclical movements in per capita income payments between the District and the nation resulting from differences in industrial structure may be reduced by public policy.

Finally, several precautions should be pointed out in interpreting both the pre- and postwar trends and the annual fluctuations shown in the charts. The trend lines shown in the charts measure twelve-year prewar and eight-year postwar average annual rates of growth in the plotted ratios of state to national per capita income payments. These trend lines cannot be sensibly extrapolated. For example, the possible location in the future of a high wage industry or industries in the smaller populated and less developed Intermountain states could well result in a sizable jump in the trend of the ratio of state to national per capita income payments.

Somewhat similar precautions should be taken in comparing annual income fluctuations among the District states. Not only is there a paucity of annual observations (12 prewar plus 8 postwar years) but allowance must also be made for differences in the size of per capita incomes when employing ratios. For example, an absolute difference of 5 percentage points in the ratio of state to national per capita income payments would appear as a larger relative deviation in a state with generally lower per capita income (for example, Idaho) than a state with generally higher per capita income (for example, California).

