SIXTH FEDERAL RESERVE DISTRICT
TENN ALA GA MISS LA FLA

Monthly Review

Atlanta, Georgia
November • 1961

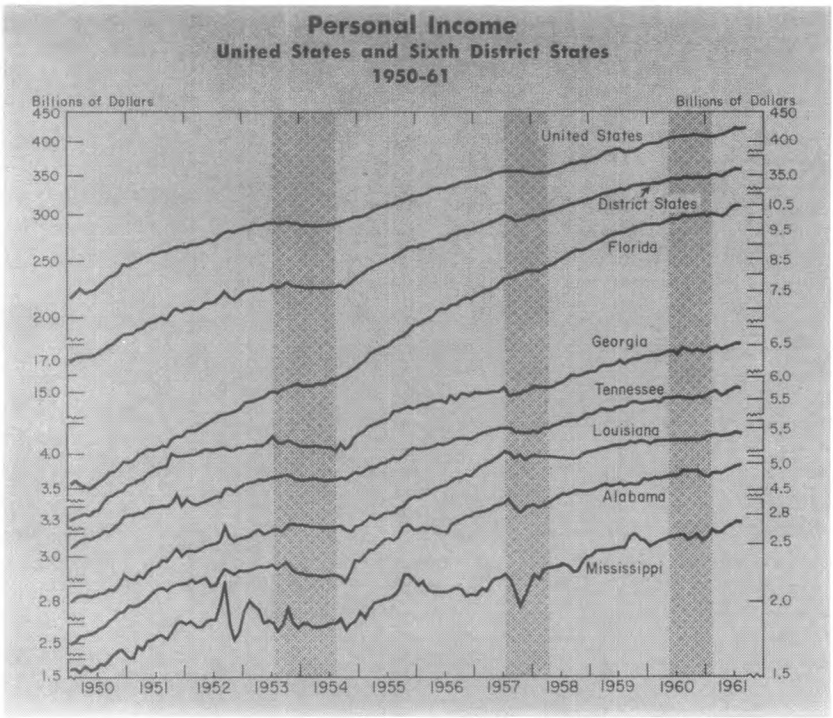
Also in this issue:

Federal Reserve Bank of Atlanta

Personal Income Resumes Growth

Personal income in the Sixth Federal Reserve District began increasing early this year, following a period of relative stability associated with the recent nationwide business recession. Although gains in the District occurred somewhat ahead of those in the nation as a whole, the extent of recovery in personal income has so far been very similar in both areas. A look at monthly figures for the period 1950-61 proves that changes in personal income for District states have generally paralleled changes in national income. Among the District states of Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee, the patterns of recovery this year have been generally comparable, whereas recoveries from the previous two business recessions had shown somewhat more variation.

These are some of the generalizations that can be drawn from a new series of monthly estimates of personal income in District states. From the figures, developed by the Federal Reserve Bank of Atlanta and shown in the first chart, analysts can study short-run income changes, such as those occurring in business recessions lasting only eight to ten months, that could not be studied on the basis of annual data alone. Using the monthly estimates, analysts should also be able to discern, rather accurately, current trends in income before more comprehensive annual figures become available. The U. S. Department of Commerce has long published annual figures for each state, and this Bank's new monthly estimates, presented in terms of seasonally adjusted annual rates, are tied directly to them.



HOW THE ESTIMATES ARE MADE

The monthly estimates of personal income discussed in the accompanying article provide both a preliminary measure of current income trends in District states and a view of short-run changes in income not discernible from annual data. Similar in concept to national estimates prepared monthly by the U. S. Department of Commerce, they provide a basis for comparing District and national income changes.

The new monthly figures are also similar to annual estimates of personal income long prepared for each state by the Department of Commerce and fully described in its publication, *Personal Income by States*. These annual state estimates serve as so-called "bench marks" for this Bank's monthly estimates.

Based on much more comprehensive information than is available monthly, the estimates of the Department of Commerce undoubtedly provide the most reliable indication of personal income received each year. The monthly estimates made by this Bank for the years 1950 through 1960 were, therefore, adjusted upward or downward in such a way that their average equals the respective annual estimates of the Department of Commerce. This adjustment process was followed by still another one to remove the effects of the normal seasonal swings in personal income. The final result was a series of seasonally adjusted monthly figures shown as annual rates, that is, the annual total that would result if income were earned throughout the year at the rate it was earned during any one month.

Methods of estimating monthly income vary, depending upon the availability of suitable data, the selections made from available sources of information, and the way in which the selected data are combined to produce the desired result. Different people using different methods will, of course, obtain different results, and no mathematical means are available to test the correctness of these results. One test of this Bank's estimates, given their relationship to the annual estimates of the Department of Commerce, will be to see how well they serve as a preliminary indication of changes in the annual estimates, which become available after a considerable time lag. Observers can also draw upon their knowledge of other economic developments to check monthly changes in personal income for reasonableness.

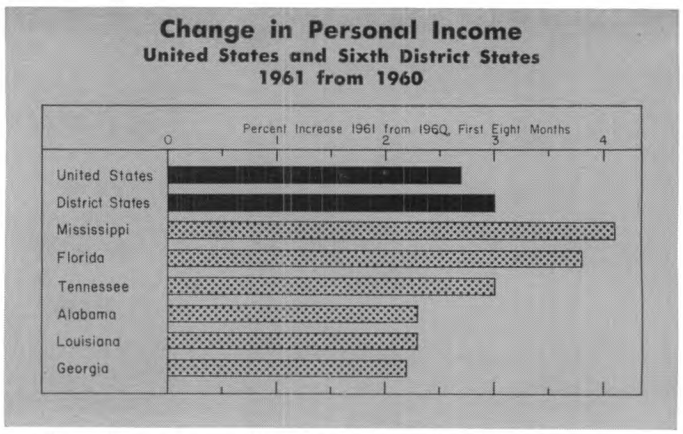
This Bank arrives at its monthly estimates of total personal income by adding, for each state, separate estimates of 13 different components of income. We estimate wage and salary payments on the basis of data on employment and average earnings in the following activities: manufacturing; mining; construction; government; service; trade; transportation, communications, and public utilities; and finance, insurance, and real estate. In all such instances, reliable employment figures are available for each state. For the important manufacturing sector, state figures are also available for average weekly earnings. For the other sectors, however, national changes are used to estimate average earnings, which are then combined with state employment data to determine changes in income received.

Supplementing these wage and salary estimates, we make separate estimates of agricultural income on the basis of farm cash receipts published by the U. S. Department of Agriculture. Through this point, fairly direct measures have enabled us to make estimates for those sectors accounting for about 70 percent of total personal income. Less direct but still relevant information is then used to estimate nonfarm proprietors' income, property income, and transfer payments.

Currently, the available basic data will permit us to present estimates with about a two-month lag. Thus, with the publication of this issue of the *Review*, we are able to present figures for August 1961 in the table on page 6. Historical data is available upon request.

Income Gains Widespread

On the basis of estimates through the first eight months of 1961, we can say with reasonable confidence that individuals living in District states will receive about 3.0 percent more income this year than they did last. This will about match the national rise from 1960 to 1961, as is shown by the comparison presented in the second chart.



The view of monthly trends permitted by the new estimates indicates, moreover, that the gain for the full year could be even more favorable than is indicated by the first eight months. Last year, growth in personal income was halted in the second quarter by a nationwide business recession. For the remainder of 1960, personal income changed little. While personal income last year thus reflected business developments in the late stages of a typical period of expansion and in a period of recession, this year it has been reflecting business developments in the early stages of what appears to be another typical period of expansion. If the current expansion continues to follow the pattern of recovery from recession previously experienced, therefore, further gains in income would appear likely. Matched against the plateau of late 1960, such gains would augment the already favorable year-to-year comparisons shown by figures for the first eight months.

All District states have experienced gains in personal income this year, although, as is typical of any large area with diverse economic developments, the increases have varied from state to state. On the basis of estimates for the first eight months, Mississippi so far has shown the largest increase over 1960, 4.1 percent. Florida is close behind, with a gain of 3.8 percent, while personal income in Tennessee has gained 3.0 percent. The other three District states—Alabama, Georgia, and Louisiana—have shown very similar increases of slightly more than 2 percent.

These increases may be surprising to observers who have been following the seasonally adjusted indexes of nonfarm employment each month on the statistical page of this *Review*. During the first eight months of this year, these indexes have shown that employment ran consistently under the first eight months of year-earlier levels in all District states except Mississippi and Florida and that in these two states, year-to-year employment increases occurred, respectively, only after May and June 1961. This seeming paradox is easily understood, however, when one

realizes that the index of economic activity represented by the personal income estimates depends not only upon trends in employment, but also upon trends in average wage and salary earnings, and, even beyond that, on changes in agricultural and property income and in transfer payments such as unemployment compensation. These other determinants of personal income have exerted an upward influence in District states that more than offset the downward influence of nonfarm employment.

While employment in the first eight months of this year has averaged lower than in the comparable period of last year, the trend in recent months has been upward in all District states except Louisiana. This has been reflected in the recently rising trends of the state personal income estimates. Despite weakness in employment, even Louisiana has shown some recent gains in income, as the other determinants of income have continued to exert an upward influence.

Income Stable in Recession

The monthly estimates of personal income also provide us with a view of income behavior during the three periods of business recession that have occurred since 1950. For the most part, the behavior has been remarkably stable during recession. In fact, for the District states as a group, the three recessions, shown on the monthly chart by the shaded areas, have merely caused personal income to level out temporarily on a generally upward trend over the years.

The effect has varied among states, of course, depending upon the strength of the long-run growth trend and the relative importance of manufacturing activity, which typically is affected most by business recession. In Florida, where growth has been especially strong and manufacturing provides a relatively small part of total personal income, the three recessions caused, at most, only a slowing of the long-term upward trend of income. The most recent recession caused a more pronounced leveling off than the others, a development that is consistent with a somewhat reduced rate of growth in about the past three years. The effect of recession has clearly been more noticeable in Alabama, especially, and, to a lesser extent, in Georgia and Tennessee, where growth in the past decade has been less rapid than in Florida and where manufacturing provides a much larger part of personal income.

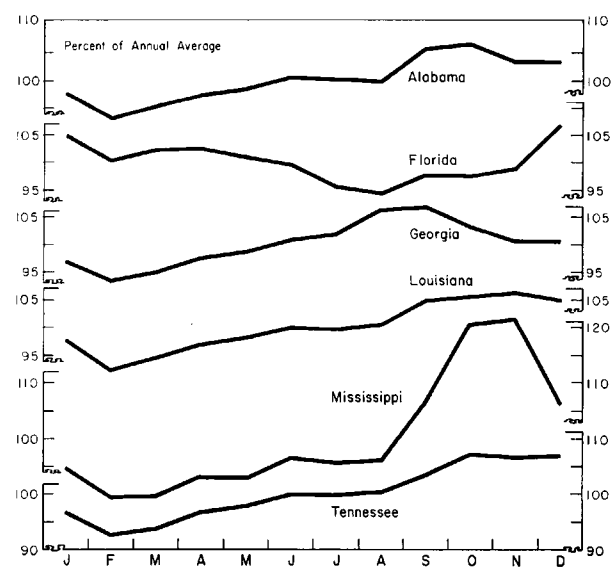
Several unusual fluctuations in Mississippi's income figures reflect developments in farming. Agriculture is a particularly important source of personal income in that state, accounting for about 12 percent of the total compared with an average of 5 percent for other District states. Moreover, agricultural receipts may provide as much as a fourth of total personal income during two or three months of the fall harvest season. When agricultural income follows its normal seasonal course, the seasonal adjustment explained in an accompanying discussion satisfactorily smooths out the income curve within the year. When an unusual shift in harvest time affects farm marketings, however, monthly trends in total income may be affected rather sharply where agriculture is important, as was the case in late 1952. In that year, an early harvest boosted farm incomes sooner than usual in Mississippi,

SEASONAL SWINGS IN PERSONAL INCOME

Individuals living in District states receive more income in some months of the year than they do in others. Moreover, the resulting monthly variations in income within each state tend to repeat themselves every year in rather well defined patterns. Knowledge of such patterns of seasonal variation is useful to businessmen and governmental authorities who must plan for relatively high business volume in some months and low volume in others. This knowledge is also important to those who want to eliminate the effect of seasonal influences from economic indicators to see more clearly what longer-run changes are occurring. For this latter reason, the monthly estimates of personal income discussed in the accompanying article have been adjusted to eliminate seasonal influences. A more extended discussion of the reasons for seasonal adjustments and the general method used by this Bank appeared in the *Review* for September 1960.

The accompanying chart illustrates the seasonal swings for which the personal income estimates are currently being adjusted. Differences among states in the degree of fluctuation and in the timing of seasonal peaks and valleys reflect, of course, differences in economic structure and the orientation of activities. The most marked difference is between Florida's behavior and that of the other five District states. Undoubtedly reflecting the importance during the winter of tourist-oriented activities and citrus and vegetable marketing, personal income in Florida reaches its seasonal peak in December and January; its low point comes in August. In the other states, however, personal income climbs from a low in February to peaks in late summer or fall. Mississippi, reflecting the greater importance of agriculture as a source of income, reaches an unusually high peak in October and November. As a result, income varies there by about 32 percent from seasonal low to seasonal high. In the other five states the variation is much less, ranging between 12 and 14 percent.

Similar data for 1950, the year in which our monthly estimates begin, would show even greater seasonal swings in personal income. Thus, the pattern of economic development has moderated seasonal variations in personal income in District states. Careful periodic review of the figures will be necessary to assure that our seasonal adjustment process is keeping up with the times.



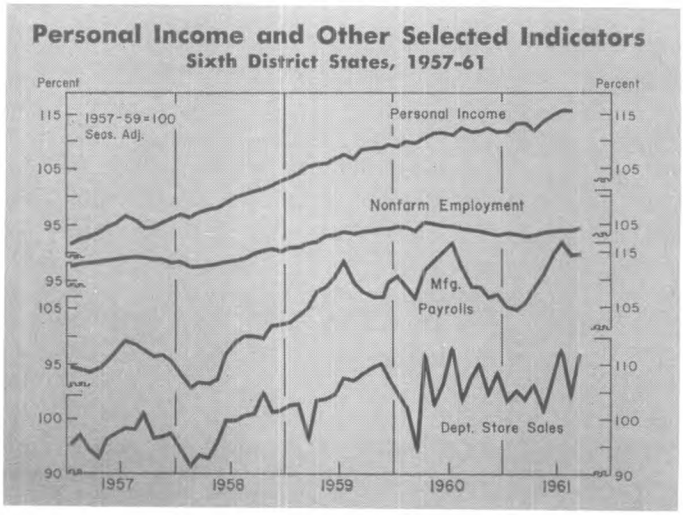
Adjustment for seasonal swings involves dividing actual income by the percentages shown. For example, Mississippi's actual income is raised in February by dividing by 89 and lowered in November by dividing by 121.

causing first a sharp rise and then a temporary dip in the total income figures shown on the monthly chart. Then, in late 1957, rather heavy participation in the Federal Government's Soil Bank Program reduced farm cash receipts from marketings, and this, too, was reflected in a temporary dip in the total income figures. The effect was also apparent, in much less degree, in Alabama, Georgia, and Tennessee.

The stability of personal income is emphasized by comparing (as is done in the third chart) its behavior to that of other economic indicators during the past four years. Business recessions, it will be recalled, occurred in the last half of 1957 and early 1958 and again in about the last seven months of 1960 and first two months of this year. District personal income was, however, mainly affected by a slowing of its longer-run upward growth, as mentioned earlier, although a slight dip associated with agricultural developments occurred in late 1957. Nonfarm employment, in contrast, declined approximately 2 percent in both recessions. Manufacturing payrolls show the greatest fluctuation, for they reflect activity in that sector of the economy most affected by swings in business activity. Not only does manufacturing employment tend to decline more in recession than other types of employment, but the average work week is typically shortened as well.

Important as developments in manufacturing are, it is apparent that the observer cannot regard them as typical of changes occurring in other kinds of business activity. These other activities provide proportions of personal income that vary from about 75 percent in Tennessee to about 90 percent in Florida. Less influenced by business swings, they thus provide an important stabilizing force.

Looking at changes in department store sales during



the past four years, you see that the effects of the business downturns are clearly delineated, but it is also clear that sharp swings in sales at District department stores are not dependent upon changes in personal income. Factors other than income obviously have great importance in affecting sales.

These comparisons merely suggest what observers of the economic scene have long known: We need a great deal of information in order to follow developments in our complex economy. With this in mind, the monthly estimates of personal income in Sixth District states may prove to be a valuable supplement to previously available statistical indicators in analyzing developments in District economic activity.

PHILIP M. WEBSTER

Tennessee Business: Looking Better

If you were to ask Tennesseans how business is these days you undoubtedly would receive a wide range of answers, for individual circumstances vary considerably in a state having as many diverse activities as Tennessee has. Interviewing individuals would be an extremely interesting way to determine the economic state of the State, but it would be awfully time-consuming. The chances are too that most Tennesseans would tell us about what we could find from a close look at the figures summarizing the state's economic behavior: Business looks better than earlier this year, there's still room for improvement, and there's no room for complacency.

Most Indicators Show Gains

Tennessee, nearly all economic indicators show, has been sharing in the general business recovery from the nationwide recession that lasted from about May 1960 through February of this year. The most comprehensive indicator, personal income received by Tennesseans, resumed its upward movement in January, two months ahead of the comparable national figure, but the overall gain of nearly 4 percent through August of this year was not much different from that in the country as a whole. During the months of recession, income in Tennessee had held steady because reduced earnings in some sectors were offset by higher income in others. This stability in recession was a characteristic of personal income in Tennessee during the past decade, as revealed by new estimates prepared by this Bank and discussed in another article of this *Review*. Over the years, income changes have been quite similar to those occurring in the nation, reminding Tennesseans once again that their economic behavior mirrors to a large extent developments on the national scene.

This year's improvement in personal income reflects, in considerable degree, the gains in the top four indicators in the accompanying chart. After stabilizing in the first quarter of this year, total nonfarm employment increased from March through August. Initially, the rise was attributable to greater employment in Tennessee's manufacturing activities, but gains also occurred somewhat later in nonmanufacturing employment. Manufacturing payrolls rose even more sharply than employment because the rising number of workers put in longer hours each week. Farmers, too, have enjoyed some recent improvement in their cash receipts.

With the rise in income, Tennesseans have increased