

MONTHLY REVIEW



Various factors account for the more rapid growth
of coin and currency in recent years.

FEDERAL RESERVE BANK OF RICHMOND

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FACTORS AFFECTING MONEY IN CIRCULATION



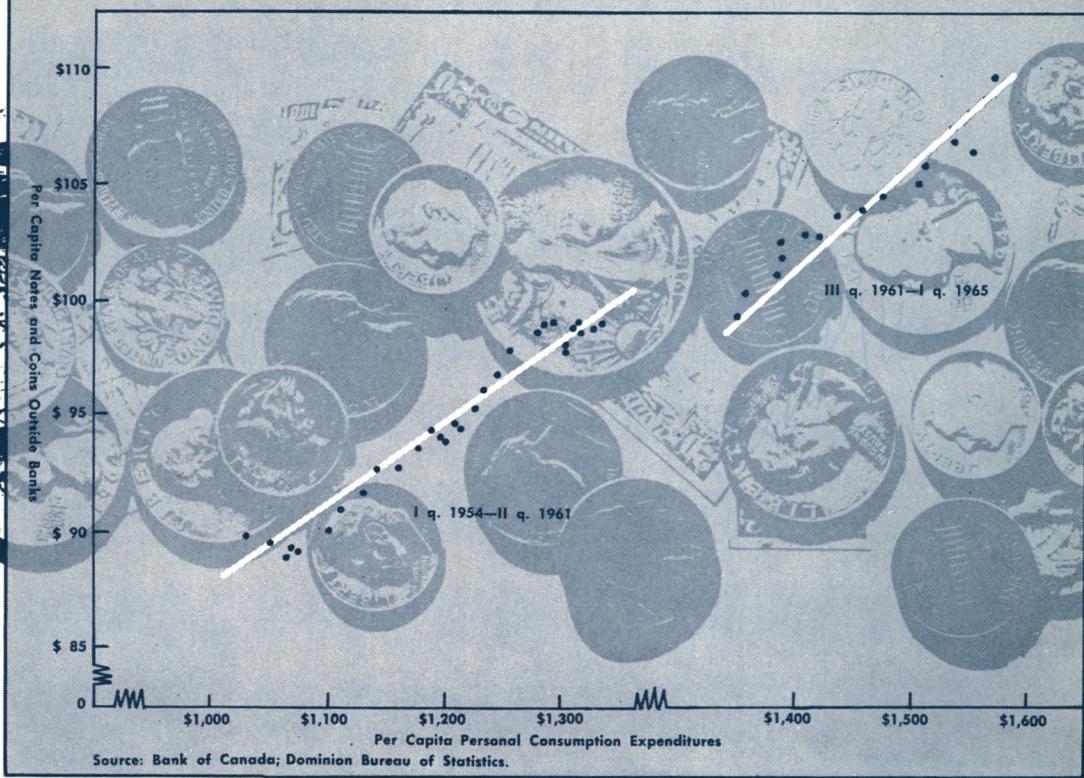
What has caused the strong upsurge in coin and currency held by the public in recent years? An article in the August issue of this *Review* described in some detail recent major changes in circulating money (coin and paper money) in the United States. Perhaps the most interesting and most significant development noted in that study was a sharp increase in the growth rate of circulating money beginning in 1961. Coin had shown a rising rate of growth for several years, but that rate increased considerably after 1961. The growth in paper money, which had been slow and erratic, accelerated several-fold. In earlier years the demand deposit component of the money supply had grown much more rapidly than the currency component; after 1961 that pattern was sharply reversed, and in recent years the currency component has been growing much the faster. This article considers some possible causes of these changes.

The Increase in Coin The coin portion of the money supply has caused most of the fireworks and created the most acute problems, but the causes and the explanations of the increase in coin are fairly clear—demand has greatly outrun supply. For the tremendous increase in demand, there are abundant explanations on the surface without looking for

obscure causes. Perhaps the most important, at least initially, was a great increase in the use of coins in automatic selling devices. These include vending machines of many kinds, laundromats, telephone pay stations, parking meters, highway toll booths, and many others. Another important factor was a rise in the number of bona fide coin collectors.

When the demand created by these developments began to press on the productive capacity of the Mint, coin shortages began to appear. These shortages triggered additional demands which, coming at a time when the Mint's capacity was already taxed to the limit, may have done more than the more basic factors to produce acute problems. Speculators and amateur coin collectors began to accumulate hoards of coins. This, in turn, encouraged many people to set themselves up as coin dealers. As these new dealers built up their inventories, they added further to the demand. Then, to avoid being inconvenienced by coin shortages, banks and business units began to hoard coins. In some cases, whole new systems of distribution were built up, bypassing commercial banks and Federal Reserve Banks, and large amounts of coin were required to fill the pipelines of the new systems. All of these developments fed on themselves, increasing demand almost in geometric proportions. At some point these artificial demands

RELATIONSHIP OF MONEY TO CONSUMER EXPENDITURES, CANADA
1954-1965



probably will reverse themselves and we may be deluged by a surplus of coins, but that time is not yet.

In addition to the above, the normal attrition in the supply of lower denomination coins, especially pennies, probably has been accelerated by the low esteem to which they have fallen. One teen-ager, returning from a shopping tour with her mother, reported to her father with considerable amusement: "Daddy, while we were downtown Mother actually stooped down to pick up a penny." Of such is the difference between generations in an affluent society.

Despite these developments, the increase in coin in recent years has not been nearly as great, relatively, as it was during World War II. From mid-1940 to mid-1946 the total increased from \$599 million to \$1,300 million, or 117%; per capita holdings rose from \$4.53 to \$9.20, or 103%. From 1959 to 1965 the total rose from \$2,215 million to \$3,700 million, or 67%, while the per capita amount was climbing from \$12.50 to \$19.00, or 52%.

It is easy to understand why the coin circulation has increased so much. The dollar value of the increase in coin, however, was only about one sixth of the total increase in circulating money since 1961. Thus, by far the larger part of the increase in the circulation was in paper money. The largest relative gain—30.3%—was scored by \$100 notes, while the

largest absolute increase—\$2.3 billion—was recorded by \$20 notes. In the following discussion money in circulation will be treated as a whole but the relative importance of paper money should be kept in mind.

Money and Consumer Expenditures Undoubtedly the principal purpose for holding coin and paper money is the transaction motive—to finance purchases, predominantly at the retail level. This would suggest a look at the relationship between circulating money and consumer spending. Further, it probably is desirable to reduce the figures to a per capita basis, since the amount of money needed to finance a given volume of purchases is affected by the number of people doing the buying.

Comparisons of per capita money in circulation outside banks with per capita personal consumption expenditures (GNP component) were made for both Canada and the United States by the use of scatter diagrams. Because of the sharp change of trend in the United States, the period 1954-1965 was separated into two subperiods, with June 30, 1961, as the dividing line. Quarterly figures were used throughout, and regression lines were determined by the least-squares method.

The chart on this page gives the results for Canada. It shows a fairly close relationship between per capita

money in circulation and per capita consumer expenditures, as indicated by the way in which the plotted data are closely grouped around the regression lines. The slope of the regression line indicates the change in money which accompanies a dollar's change in expenditures. In the first subperiod the slope of the regression line is +.0342, which means that for each increase of a dollar in expenditures, money increased by almost 3½ cents. In the second subperiod the slope of the regression line rose somewhat to +.0462. This indicates a faster growth of money in relation to expenditures. This may well be explained by the fact that the years from 1961 to 1965 were all years of business expansion while the earlier years covered two mild recessions. The change in the slope of the regression lines is substantiated by the annual rates of growth of the two series as shown in Table I. The growth rate for money increased somewhat more than that for expenditures.

Table I
AVERAGE ANNUAL RATES OF CHANGE
CANADA AND UNITED STATES
1954-1965

	Per Capita Money in Circulation		Per Capita Personal Consumption Expenditures	
	1954-1961	1961-1965	1954-1961	1961-1965
Canada	1.6%	4.7%	3.6%	9.2%
U. S.	-0.9%	3.7%	3.3%	4.4%

The chart on page 5 is a scatter diagram of the two series for the United States. It reveals a most unusual statistical relationship and vividly illustrates the sharp difference between the behavior of money in Canada and in the United States. In the first subperiod the "fit" of the regression line to the plotted data was only fair, but in the second subperiod it was quite close—almost perfect, in fact. The startling and puzzling aspect, however, is the sharply different directions of the regression lines. In the first subperiod the line has a *negative* slope of .0297, which means that, on average, for each increase of one dollar in per capita consumer expenditures, per capita money in circulation *declined* by almost three cents. In the second subperiod the line has a *positive* slope of .0758, meaning that for each dollar's increase in per capita expenditures circulating money *increased* by more than 7½ cents. Again, these figures are substantiated by the annual growth rates of the two series as shown in Table I.

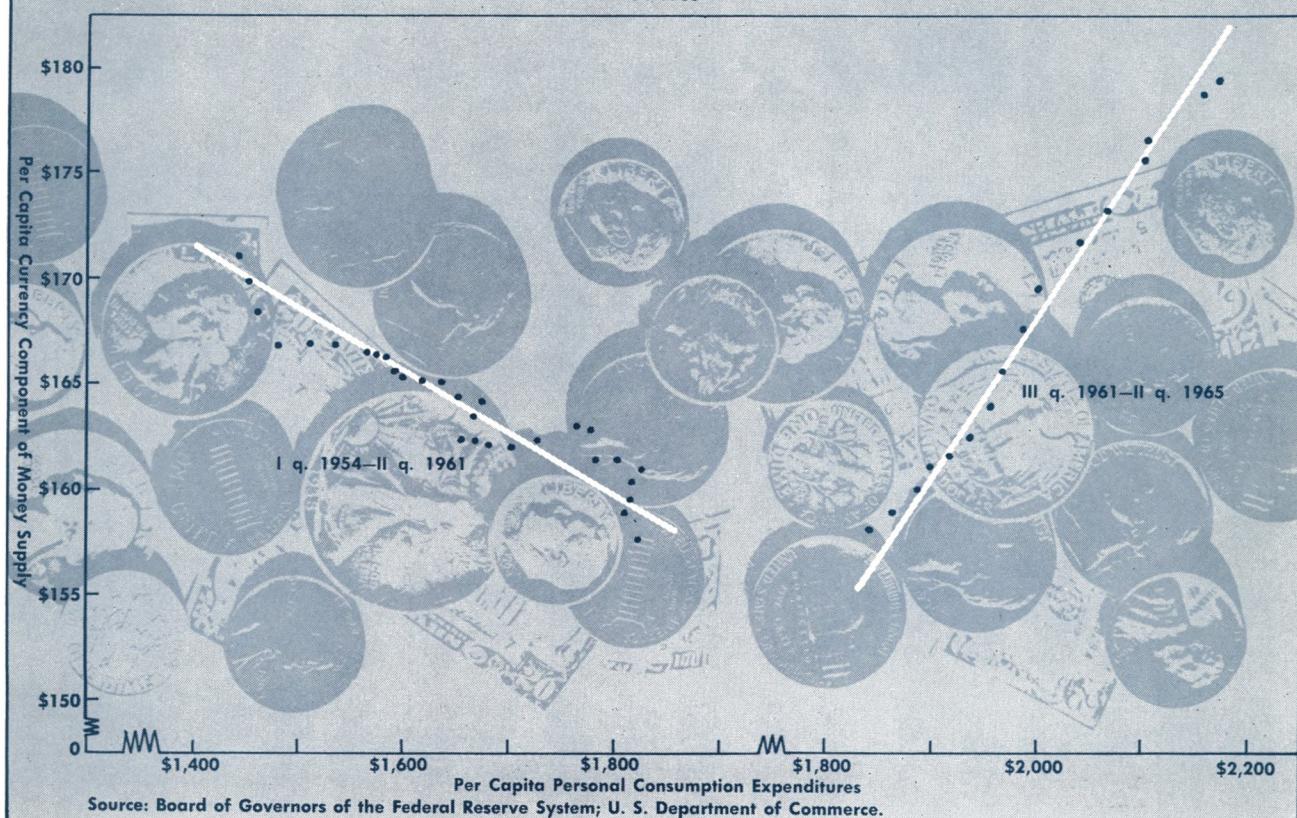
These comparisons reveal the crux of the problem. In the United States, from 1954 to 1961, the relationship between circulating money and its major use

was fairly consistent but on its face logically questionable since the per capita amount of money declined as per capita expenditures increased. Then quite suddenly in 1961 the relationship changed drastically. The new relationship was more consistent than the old and logically more acceptable since per capita money and expenditures increased together. In Canada there was no change in the nature of the relationship between money and expenditures between the earlier and later parts of the period and only a relatively small change in degree. The problem is to account for the unusual behavior in the United States. In these comparisons personal consumption expenditures have been used as the measure of the demand or need for circulating money. Basically the same results would have been obtained if data for GNP, personal income, or retail sales had been used, since all of these series have essentially the same conformation as consumption expenditures.

Canadian Differences It might be well now to take a closer look at the difference between Canada and the United States in the behavior of circulating money. Between 1938 and 1946 (unadjusted figures for end of year), per capita money in circulation in the two countries increased by approximately the same relative amount—somewhat more than 300%. Canada ended up with a little less than \$90 and the United States with a little more than \$185 (see the chart on page 6). Then in the United States the amount began to decline. From June 1947 to June 1951, the decline was 10.5%. After a significant rise during the Korean War, the decline resumed and by 1961 the total drop from 1947 was 13.8%. In Canada, on the other hand, the trend was slowly and erratically upward, with small declines in 1950 and 1954. By 1961 the total *increase* in Canada was 13.2% contrasted with a *decline* of about the same amount in the United States. After 1961 the figures moved up decisively in both countries but a little more sharply in the United States.

From these figures it is evident that over the years per capita money in circulation has grown more rapidly in Canada than in the United States. In 1938 the U. S. figure was 109% above the Canadian; in 1965 it was only 62% greater. In relation to per capita consumption expenditures, the ratio in the United States in 1938 was 9.0% compared to 6.1% in Canada; in the first quarter of 1965 the comparable figures were 8.3% and 7.0%. There are no obvious or apparent explanations for such substantial differences in behavior in the two countries and limitations of time and space preclude further investigation of the question at this point.

RELATIONSHIP OF MONEY TO CONSUMER EXPENDITURES, UNITED STATES
1954-1965

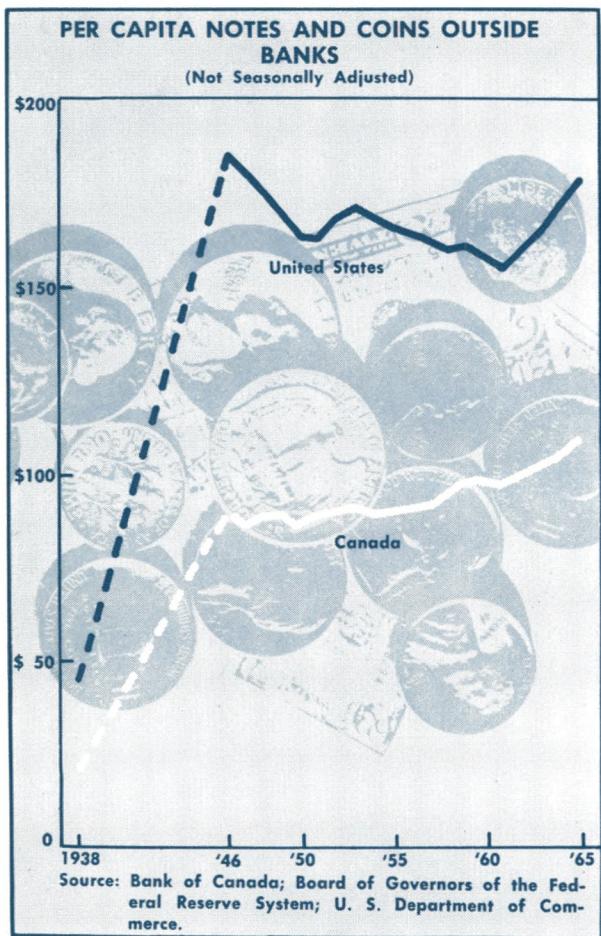


Possible Causes In view of the unusual behavior in the relationship between money and consumer expenditures in the United States as described above, there would seem to be no reasonable prospect for finding any stable or significant relationship between circulating money and other relevant economic or financial series over the whole period under study. On a per capita basis, money reversed its movements sharply in 1961; certainly no other major relevant series had a behavior approaching that. On a gross basis, money first grew slowly and erratically and then in 1961 began a very strong and consistent growth, again quite different from other pertinent series.

A more promising approach might be to regard the relationship between money and consumer expenditures in the 1961-65 period as normal and then investigate to see whether the previous trend might be explained as an aberration or deviation. The 1961-65 relationship between money and consumer expenditures is of the type which would logically be expected, and generally it is in line with the experience in Canada and the United Kingdom. Also, there was a good correlation between the movements of money

and consumer expenditures in this period. On a per capita basis, the simple coefficient of correlation was almost perfect since both series were moving up rapidly and rather steadily. When the effects of trends were removed by the use of first differences, the coefficient of correlation dropped to .52, which is significant at the 5% level.

The unusual relationship in the 1954-61 period was rather clearly due to a continuation of the delayed adjustment to the abnormal developments of World War II and the Korean War. As noted above, per capita money in circulation (currency component of the money supply) increased greatly during the war to approximately \$189.00. Except for the interruption caused by the Korean War, it declined steadily thereafter to reach \$157.30 in 1961. Thereafter a more "normal" relationship prevailed, and by June 1965 the figure stood at \$179.40. (In this connection, the statement in the earlier article that the period 1954-61 was "normal" needs qualification. With respect to business fluctuations, it was "normal" for the postwar period, but the longer view shows that it was not normal for money in cir-



culation because of this delayed adjustment to wartime developments.)

Another way of showing this prolonged period of adjustment is to express money in circulation as a percentage of GNP, personal income, and personal consumer expenditures, as in the chart on page 7. All of the data used here are gross, not per capita. The chart shows the very sharp rise from prewar 1940 to postwar 1946 and then the declines, becoming more gradual, from the peaks. The much flatter trends since 1960 would suggest that the adjustment is about completed. All of the ratios are now well below the 1940 level, which would seem to be logical, since in a high-income economy with well-developed financial institutions, individuals and business units would be expected to hold smaller proportions of total income in the form of cash.

Why the Sharp Change in 1961? The foregoing paragraphs probably provide a reasonably satisfactory general explanation of the change of trend. But they leave unanswered the question why it came so suddenly. As noted in the earlier article, that change

came almost precisely at the middle of 1961. In the 20 quarters before that time, per capita money in circulation declined in 16, including all of the last five. Beginning with the third quarter of 1961, the figure has risen appreciably every quarter and almost every month. Rarely is a major change in an important economic series so sharp as this.

Another aspect of the change worthy of note is the more rapid growth rate in the larger denominations of paper money. Before 1961, \$50 notes had grown at an average annual rate of 0.6%; in 1961-65 they increased at a rate of 5.3%. For \$100 notes the rate increased from 1.1% to 7.1%. In the earlier years notes above \$100 had *declined* at a rate of 5.5% per year; in 1963 and 1964 that decline stopped but resumed in 1965 at a much lower rate.

No precise or statistical reason can be given for the sharp change in 1961. A number of factors were at work, however, and it is probable that, largely by coincidence, many of their effects came to bear just about the time the adjustment described above was being completed. At any rate, such an answer seems to fit better than any other which has been discovered after extensive investigation.

The first and most general explanation is that the middle of 1961 closely followed a trough in the business cycle. Such a cyclical change is almost always followed, with some lag, by a faster rise in circulating money, or a reduction in the rate of decline if a secular decline is in process.

A further explanation is that in this increase, coin made somewhat more than its usual cyclical contribution for reasons noted previously. For the years 1959-61, coin increased at a quite steady pace of about \$120 million per year. For the years from 1962 to 1965, the increases rose from \$190 million to \$495 million for an average increase of \$309 million. While these increases in coin accounted for only a minor part of the total increase, they were an appreciable contribution, and the timing helped to produce the sharp reversal.

Beyond these two fairly definite developments, other possible causes of the great change are more conjectural and less measurable. Some have suggested as a cause the sharp increase in the number of teen-agers as the postwar baby crop moved into this age group. As these youngsters reach the age when they earn money and/or receive allowances, undoubtedly the demand for pocket money increases considerably. Between 1955 and 1960 the number in the 15-19 age group increased by 2.3 million, or 20.3%; between 1960 and 1965 the estimated increase was 3.5 million, or 26.1%. In both periods total population increased by amounts between 8%

and 9%. It is quite likely that this sharp rise in the number of young people contributed something to the increase in the demand for circulating money, but it would be hazardous to venture an estimate of the amount.

Increased travel, both domestic and foreign, also has probably helped to increase the amount of money in circulation. Certainly Americans are a mobile people and the amount of travel mounts year by year. Domestic travel usually entails increased expenditures and, since personal checks are not so readily accepted away from home, the traveler probably carries somewhat more currency when he is on the road.

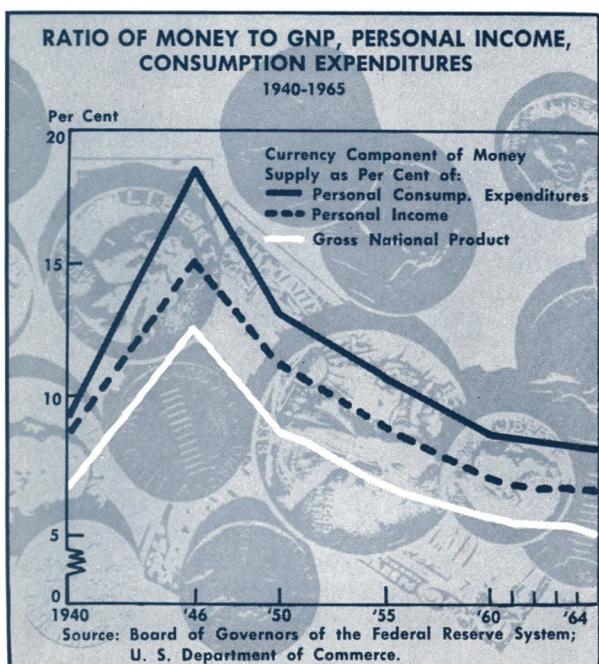
Americans traveling abroad may take considerable amounts of U. S. currency with them since it is readily acceptable in many parts of the world. They may do this for convenience, to avoid the cost of travelers checks, to avoid loss in conversion, and perhaps in some cases because they think they may be able to drive a better bargain by offering U. S. currency in payment. Currency taken abroad may have a significance beyond its monetary total since it is likely that a part of it may be held or hoarded for considerable periods of time, and during such time it is not doing its normal "money work" for this country. The number of U. S. travelers abroad more than doubled between 1955 and 1964, rising from 1,075,000 to 2,220,000. Their expenditures in foreign countries and payments of fares to foreign carriers rose from \$1.4 billion to \$2.9 billion. Unfortunately for the purpose of explaining the 1961 upturn, the

year 1961 was the only one which showed no significant change. Nevertheless, the total increase of almost \$1.5 billion over the period quite likely contributed to the larger demand for currency.

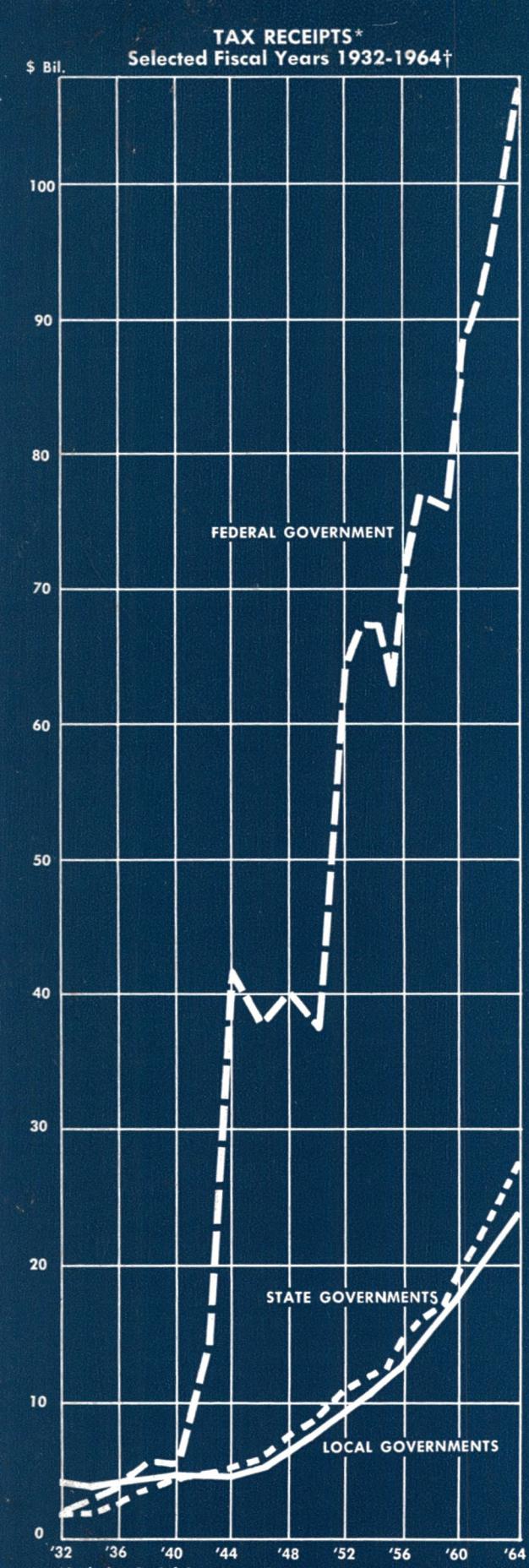
In a broader context, it may be that American currency is playing the role traditionally played by gold as a medium of hoarding in many parts of the world. In recent years a great many new countries have come into existence, and nearly all of them have loosened their connections with the currency of their former governing country and have set up their own central bank or currency board. Confidence in the currencies of such infant countries is likely to be quite shaky. If the individual wishes to have a small store of cash on which he can rely the American dollar is likely to seem the best alternative available to him. In addition to money carried abroad by travelers, there are, at least to some extent, shipments of currency abroad to meet this demand.

Two policies of the Internal Revenue Service may have stimulated the demand for circulating money, especially for the notes of larger denominations. Throughout much of 1960 and 1961 the Service conducted an intensified campaign to enforce the Federal gambling taxes. Also, beginning in the latter part of 1961 the Service began to publicize its coming program to use computers in checking the accuracy and completeness of income tax returns. Persons who were evading the gambling and income taxes may have been sufficiently impressed by these two policies to switch to a currency basis for conducting their business rather than depositing their funds in banks. Tax evasion has long been recognized as a factor in the demand for notes of large denominations. Again, it is impossible to place any numerical value on this demand.

Other factors which have probably influenced the amount of circulating money are the strong and steady increases in personal income, savings, and public holdings of liquid assets. All of these have been rising with few interruptions since World War II, but since 1961 the growth rate has been faster. When individuals have larger incomes and more liquid assets, it is logical to expect that they will hold larger absolute amounts in currency even if relative amounts are smaller. The data on currency and liquid assets support this view. When the currency component of the money supply is expressed as a per cent of total liquid assets less the money supply, the figures show a consistently declining trend with no appreciable change in 1961. The figures declined from 15.0% in the first quarter of 1954 to 10.7% in the second quarter of 1961. Thereafter the



(Continued on page 10)



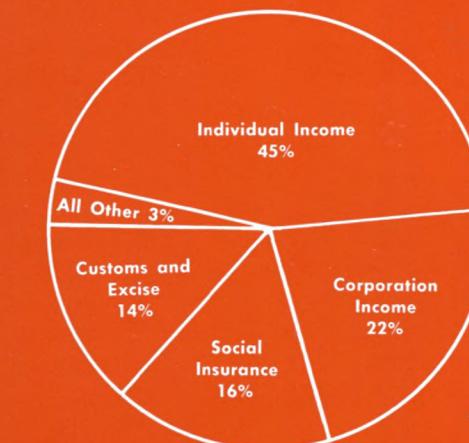
Federal, State and Local Governments

TAX RECEIPTS AND EXPENDITURES

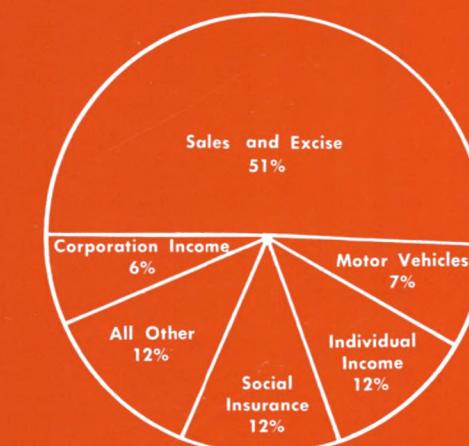
It is not surprising to even the casual observer that the Federal Government is the nation's largest tax collector. In fiscal 1964 the Federal Government collected 68% of all taxes, state governments collected 17%, and local governments 15%. But it was not always so. Before 1941, state and local tax collections exceeded Federal revenues except in time of war. In 1932, for example, local taxes were 54% of the total while the state and Federal shares were only 23% each. During World War II, Federal tax receipts increased sixfold. By 1946 they were more than three fourths of the combined revenues of all governments, but since then have declined to slightly more than two thirds of total tax collections. The Federal Government obtains most of its revenue from individual and corporate income taxes, while state governments rely most heavily on sales and excise taxes and local governments on property taxes. Government spending is concentrated most heavily in three areas: national defense, highways, and education. The chart on the right shows the distribution of outlays among various functions by the three types of government. Expenditures of all governments have doubled since 1960. In recent years, Federal spending has accounted for approximately 60% of total government expenditures, with state and local outlays at under 20% each.

TAX RECEIPTS*
By Source
Fiscal Year 1964

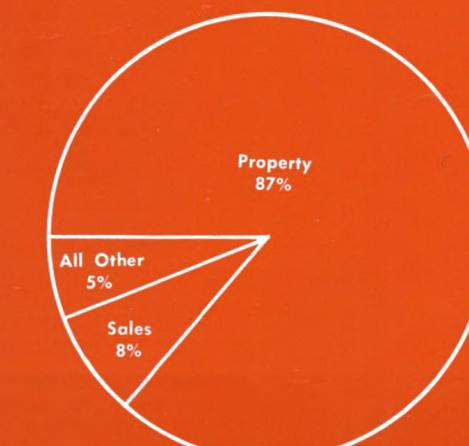
FEDERAL GOVERNMENT



STATE GOVERNMENTS

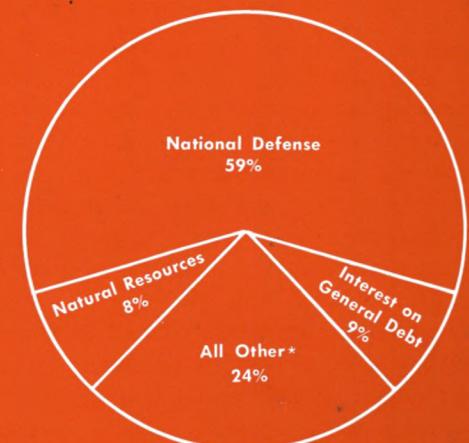


LOCAL GOVERNMENTS

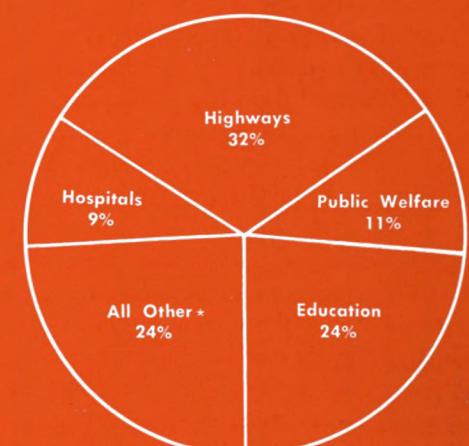


EXPENDITURES
By Function
Fiscal Year 1964

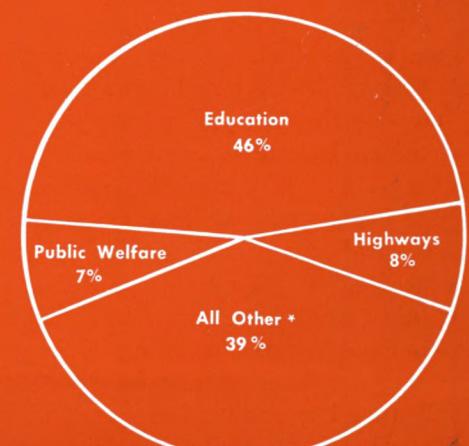
FEDERAL GOVERNMENT



STATE GOVERNMENTS



LOCAL GOVERNMENTS



* Includes Social Insurance Taxes.

Source: U. S. Department of Commerce, Bureau of the Census.

* Each of items included is usually less than 5%.

Source: U. S. Department of Commerce, Bureau of the Census.

FACTORS AFFECTING MONEY IN CIRCULATION

(Continued from page 7)

decline continued but at a reduced rate after the latter part of 1962. The figure for the second quarter of 1965 was 9.0%.

Rising service charges by commercial banks have been suggested as another cause of the rapid increase in circulating money. The reasoning is that the heavier charges may induce some small depositors to close out their accounts and, as a substitute, carry larger balances of currency. It is doubtful whether the validity of this hypothesis can be established statistically but if so it would require a very elaborate and sophisticated analysis, much beyond the possibility of this brief study. The fragmentary information which is readily available does not support the hypothesis. Service charges of insured banks as a per cent of the demand deposits of individuals, partnerships, and corporations (IPC) increased by about 75% between 1954 and 1961. Thereafter the growth rate dropped sharply, rising by only 9% from 1961 to 1964. There was no growth from 1963 to 1964. In insured banks, the number of IPC demand deposit accounts under \$10,000 grew faster than all IPC demand accounts from 1955 to 1964. They increased from 50.9 million, or 97.6% of all accounts in 1955, to 68.4 million, or 97.8% in 1964. The number of these accounts increased by 34.4% while population was increasing by 15.8%. The dollar amount of accounts under \$10,000 rose from 34.8% of the total in 1955 to 36.2% in 1964. Finally, there is one very inconclusive bit of evidence showing that the average size of checks written has been declining. The average dollar amount of all checks cleared by Federal Reserve Banks, excluding U. S. Government checks and postal money orders, declined from \$355.37 in 1956 to \$330.06 in 1961. Since then, however, it has risen, amounting to \$341.52 in 1964, and this may be regarded as some weak support for the hypothesis, especially in view of the earlier trend. At best, however, these figures can be regarded only as inconclusive.

Two developments of recent years should have exerted an influence toward reducing currency balances. They are the growth of credit cards and higher interest rates on time deposits. Perhaps the principal advantage of a credit card is that it reduces the need to carry large amounts of currency. Apparently there are no comprehensive figures on the extent to which credit cards are used but it is evident that they have had a substantial growth. Almost certainly they have reduced the demand for currency below what it otherwise would have been, but the

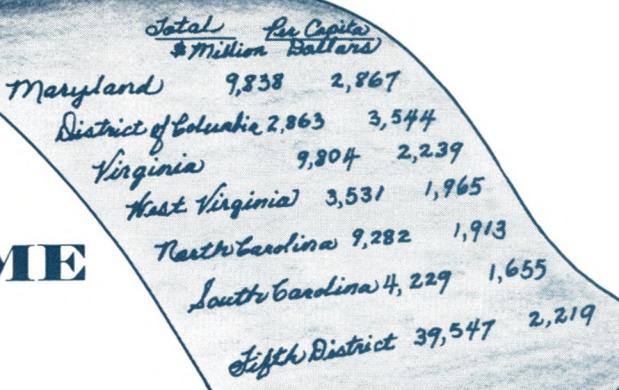
amount of any such reduction is highly questionable.

The rate of interest paid on time deposits—or similar obligations—is probably the principal "cost" of holding currency balances. As interest rates go up, the holder of currency loses, or foregoes, more income which he could be earning if he deposited the currency in a time account. It is well known that interest rates on time and savings accounts have risen substantially in recent years. Between 1955 and 1961 the average rate paid on time deposits by member banks doubled, rising from 1.36% to 2.73%. After 1961 the rise continued at about the same absolute rate—about 0.25%—but at a somewhat slower relative rate, reaching 3.47% in 1964. Dividends on savings and loan rates rose somewhat more slowly but nevertheless quite substantially. There the rate rose from 2.9% in 1955, to 3.9% in 1961, and 4.2% in 1964. Although the growth rates have slowed somewhat in the past few years, both series are on considerably higher levels absolutely, there has been keener competition for funds, and rising rates have attracted much popular attention. For all these reasons the rates have undoubtedly exercised some downward pressure on currency balances but nevertheless money in circulation has shown the great increases already noted. This can mean only that pressures in the opposite direction were much stronger.

Summary In brief, the explanation for the sharp change which occurred in the growth of coin and currency in the United States in 1961 is composed of two major parts. The first, and probably the more important, deals with the supply of money. We were completing a prolonged period of adjustment following the very great increase in the currency during World War II, which left us with a greatly inflated circulation and one much larger than was needed or desired in normal times. With the interruption provided by the Korean War, it required about 15 years for us to "grow up" to the inflated supply.

The second part of the explanation is concerned with the demand for coin and currency. Many significant but often unmeasurable developments have contributed to an increased demand, including the upturn in the business cycle, the abnormal demand for coin, more teen-agers, more foreign travelers, and the efforts of some to evade taxes. No doubt there are many other factors, but the above constitute a logical and, perhaps, adequate explanation.

FIFTH DISTRICT PERSONAL INCOME 1964



The nation's personal income smashed all records again in 1964. Department of Commerce data show that total personal income for the nation rose to \$491 billion last year, more than \$29 billion above the 1963 figure. The District of Columbia and 49 of the 50 states, including all of those in the Fifth District, shared in the 1964 income gain.

Nationally, per capita personal income, advancing beyond \$2,500 for the first time, also set a new record. At \$2,566, the per capita figure was \$118, or nearly 5%, higher than in 1963. Average per person income rose in all except two states, with increases ranging from \$11 in Utah to more than 25 times that amount, or \$277, in Alaska. Rising consumer prices negated part of the income gains, but the figures represent, nevertheless, a substantial increase in real purchasing power per income earner.

District Income Developments Aggregate personal income of Fifth District residents increased \$2.9 billion, or 8%, in 1964, reaching a new high of \$39.5 billion. This sizable addition to personal income in the District accounted for one tenth of the national gain. On a percentage basis, the District's income increase not only topped the national gain but also exceeded that for any of the eight geographic regions covered by Department of Commerce data.

Except for West Virginia, each Fifth District state, as well as the District of Columbia, recorded percentage growth in total personal income well above the national average. Virginia's 10.1% increase was the second largest among the 50 states, outranked only by Alaska's 10.7%. Elsewhere in the District, increases came to 8.2% in the District of Columbia, 7.9% in North Carolina, 7.4% in Maryland, 7.2% in South Carolina, and 5.5% in West Virginia. In absolute terms, growth was largest in Virginia (\$897 million), North Carolina

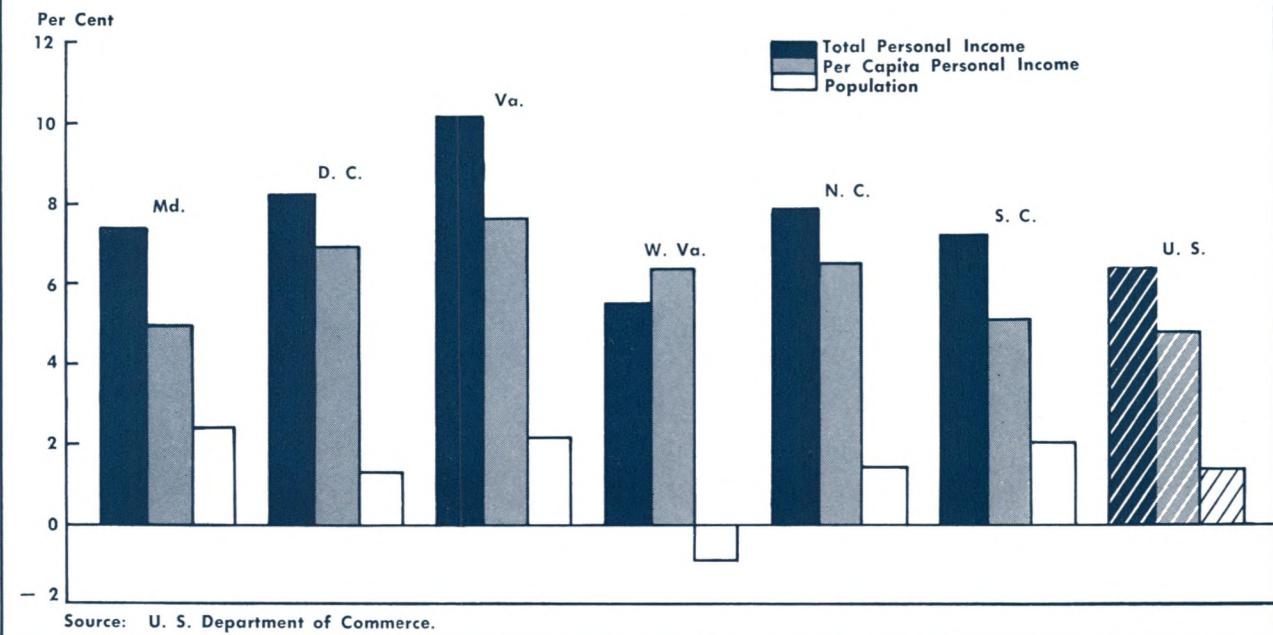
(\$681 million), and Maryland (\$675 million). Other gains were \$285 million in South Carolina, \$217 million in the District of Columbia, and \$183 million in West Virginia.

Per capita personal income also showed substantial growth throughout the Fifth District, reaching new highs in the District of Columbia and in all five states. Income per person in 1964 amounted to \$3,544 in the District of Columbia, \$2,867 in Maryland, \$2,239 in Virginia, \$1,965 in West Virginia, \$1,913 in North Carolina, and \$1,655 in South Carolina. Over-the-year increases of \$229 in the District of Columbia, \$133 in Maryland, and \$159 in Virginia were all above the national average, while West Virginia's \$118 gain was the same as that for the nation as a whole. North Carolina's per capita income advanced by \$116 and South Carolina's by \$80. In percentage terms, per capita income growth exceeded the national average in all parts of the District, with gains ranging from 4.9% in Maryland to 7.6% in Virginia.

In terms of the per person income average, the District of Columbia ranks higher than any of the 50 states, and Maryland is one of the leading states. Per capita income in the District of Columbia last year topped the national average by \$978 or 38%. In Maryland, it was \$301 or 12% higher than the national figure. In other Fifth District states, income per person was below the national level by amounts ranging from \$327 in Virginia to \$911 in South Carolina. For the Fifth District as a whole, per capita income was \$347 below the national average. The gap between District and national per capita income figures has narrowed in three of the past four years and is now smaller than at any time since the mid-1950's.

Sources of 1964 Income Gains With more people employed and pay rates higher, wage and salary pay-

CHANGES IN INCOME AND POPULATION, 1963-1964
Fifth District and United States



ments received by Fifth District residents last year were more than \$2.2 billion larger than in 1963. Government payrolls contributed most to this gain, rising by \$679 million. Some three fourths of this amount represented larger incomes of civilian employees of Federal, State, and local governments. The remaining one fourth was paid to Federal military service personnel stationed in this area. Other especially sizable shares of the wage and salary income gain stemmed from manufacturing, trade, and services. Earnings of employees in manufacturing rose \$549 million, while trade employees experienced a \$367 million gain. Persons employed in services earned \$269 million more than in 1963. Construction workers' earnings, up \$146 million, also represented a substantial portion of the over-the-year increase in income from wages and salaries.

Self-employed individuals and owners of unincorporated enterprises also had a good year. Their earnings, classified as proprietors' income by the Department of Commerce, grew by \$279 million, with one half of that amount coming from nonagricultural pursuits and the other half from farming. Property income, comprised of rents, dividends, and interest, also rose sharply, adding \$289 million to the Fifth District's total personal income gain. In addition, other labor income and transfer payments, made up of such items as unemployment compensation, social

security benefit payments, and veterans' pensions, made smaller contributions.

INCOME GROWTH, 1960-1964

In the four years 1961 through 1964—years characterized by recovery from recession and subsequent economic expansion—Fifth District total personal income rose 29%. Gains of 30% or better occurred in Maryland, Virginia, and North Carolina, while increases in South Carolina and the District of Columbia were not far below that figure, coming to 28% and 25%, respectively. Income moved up in West Virginia as well, but at a considerably slower pace.

Government a Potent Force The largest boost to Fifth District income, \$1.7 billion, came from wages and salaries paid to civilian employees of Federal, State, and local governments. Adding earnings of resident Federal military personnel—and they are of considerable importance to the economies of Virginia and the Carolinas in particular—brings this figure to an even more impressive \$2.1 billion. This amount accounted for nearly one fourth of the four-year increase in Fifth District total personal income and for almost a third of the four-year gain in wages and salaries.

By far the largest share of the increase in Federal

civilian payrolls went to residents of Maryland and Virginia, many of whom are employed in the nation's capital. Both states also received substantial amounts from the rise in military pay, as did North Carolina with its several training centers. By 1964, Federal Government wage and salary payments to Fifth District residents made up 13.3% of their aggregate income, up from 12.9% in 1960.

The upturn in wages and salaries originating in State and local government employment amounted to \$803 million. Income derived from this source rose almost equally in Maryland (\$212 million), Virginia (\$210 million), and North Carolina (\$214 million). While dollar increases were considerably smaller in the District of Columbia, West Virginia, and South Carolina, they accounted for fairly substantial relative proportions of wage and salary gains in those areas. The contribution of State and local government payrolls to Fifth District total personal income increased from 6.0% in 1960 to 6.7% in 1964.

Manufacturing Payrolls up Sharply Manufacturing payrolls also exerted an exceptionally strong influence on the uptrend in Fifth District income over the 1960-1964 period. Rising by \$1.5 billion, they accounted for 23% of the gain in total wages and salaries and 17% of the addition to total personal income.

North Carolina was well ahead of other Fifth District states in manufacturing payroll gains with its \$521 million increase. Income from manufacturing wages and salaries also moved up sharply in Virginia (\$365 million) and in South Carolina (\$301 million). Except for the \$7 million rise in factory payrolls in the District of Columbia where manufacturing is of minor importance, state gains were smallest in Maryland (\$207 million) and West Virginia (\$108 million).

A shade ahead of government as an income source in 1960, manufacturing had slipped into second place by 1964. Last year, manufacturing payrolls made

FIFTH DISTRICT INCOME BY MAJOR SOURCES
1960 and 1964

Source	Amount		Change, 1960-1964		Percentage Distribution of Amount Change in	
	1960 \$ Million	1964 \$ Million	\$ Million	Per Cent	Total Personal Income Per Cent	Wages and Salaries Per Cent
PERSONAL INCOME	30,665	39,547	8,882	29.0	100.0	
WAGES AND SALARIES	21,426	27,920	6,494	30.3	73.1	100.0
Farms	231	219	— 12	— 5.2	— 0.1	— 0.2
Mining	402	403	1	0.2	*	*
Contract construction	1,135	1,571	436	38.4	4.9	6.7
Manufacturing	5,839	7,348	1,509	25.8	17.0	23.2
Trade	3,360	4,315	955	28.4	10.8	14.7
Finance, insurance, and real estate	826	1,119	293	35.5	3.3	4.5
Transportation	1,093	1,265	172	15.7	1.9	2.7
Communications and public utilities	589	738	149	25.3	1.7	2.3
Services	2,102	2,984	882	42.0	9.9	13.6
Government	5,797	7,894	2,097	36.2	23.6	32.3
Federal, civilian	2,606	3,516	910	34.9	10.2	14.0
Federal, military	1,357	1,742	385	28.4	4.3	5.9
State and local	1,834	2,637	803	43.8	9.0	12.4
Other industries	55	64	9	16.4	0.1	0.2
OTHER LABOR INCOME	767	1,044	277	36.1	3.1	
PROPRIETORS' INCOME	3,470	4,018	548	15.8	6.2	
Farm	1,041	1,109	68	6.5	0.8	
Nonfarm	2,430	2,909	479	19.7	5.4	
PROPERTY INCOME	3,520	4,615	1,095	31.1	12.3	
TRANSFER PAYMENTS	2,277	3,102	825	36.2	9.3	
LESS: CONTRIBUTIONS FOR SOCIAL INSURANCE	797	1,154	357	44.8	4.0	

*Less than 0.05 per cent.

Details will not necessarily add to totals because of rounding.

Source: U. S. Department of Commerce.

up 18.6% of total personal income while government payrolls comprised 20.0%.

Trends in Consumer-Oriented Industries The growing affluence of Fifth District residents has had a salutary effect on suppliers of consumer products and services. Wages and salaries paid employees of wholesale and retail trade establishments, for instance, totaled \$955 million more in 1964 than in 1960. Services payrolls moved up \$882 million or 42%. For the finance group—banks, real estate operations, insurance agencies, and similar types of businesses—there was an absolute increase of \$293 million and a relative gain of about 35% in wage and salary payments.

All three types of business activity improved throughout the District. In each of the three, absolute growth in wage and salary payments was largest in Maryland, Virginia, and North Carolina, the three most populous states and those with the highest aggregate incomes. Largest percentage increases in wages and salaries earned by services employees occurred in Maryland, Virginia, and South Carolina. For the finance group, relative gains in employee earnings were highest in the District of Columbia, Virginia, and North Carolina. In the trade sector, proportionate growth in wages and salaries was within a narrow range—between one fourth and one third—for all Fifth District areas except West Virginia where it came to one eighth.

Construction—A Gauge of Prosperity Construction activity, as reflected in wage and salary trends in that important industry, provides a good index of the intensity of the economic rebound following the early 1961 recession low. Construction workers' earnings rose \$436 million, or 38%, from 1960 to 1964. Income gains originating in construction work were largest in Virginia, \$162 million, and in Maryland, \$124 million. North Carolina's increase came to about half that of Virginia, while in other Fifth District areas expansion in construction payrolls was in the neighborhood of \$20 million to \$25 million.

These amounts appear small when compared with those referred to in preceding sections, but they do represent sizable relative growth. Virginia's increase came to 53% and the District of Columbia's to 48%. Gains of other Fifth District states ran from 20% for South Carolina to 37% for Maryland, with West Virginia and North Carolina showing increases of 24% and 35% respectively.

Other Income Trends Income other than wages and salaries rose \$2.7 billion over the four-year

period, receiving its strongest boost from interest, dividends, and rents. Increases of \$479 million in nonfarm proprietors' income and \$825 million in transfer payments accounted for most of the remainder.

Miscellaneous labor income, property income, proprietors' income, and transfer payments were, in the aggregate, relatively most important to income growth in the District of Columbia, where they made up 46% of the total, and in West Virginia, where they comprised 36%. In the other Fifth District states, contributions of these miscellaneous sources to total personal income growth ran from a trifle less than three tenths to slightly more than that proportion.

District's Growth Rates Outpace Nation's The Fifth District's rate of growth in total personal income was above the national average in each year of the four-year period under discussion. As a result, the District's share of the nation's total personal income edged up from 7.7% in 1960 to 8.1% in 1964. Gains over the four years were sufficiently large to move per capita income closer to the national average despite sizable population growth.

The rate of increase in each major component of personal income was also greater for the Fifth District than for the United States as a whole, bringing a larger share of the nation's income from all primary sources to Fifth District areas. Total wages and salaries rose 30.3% in the District compared with 23.4% in the nation as a whole, and the District's share of this important income component increased from 8.0% of the national total in 1960 to 8.4% in 1964. Proprietors' income was 15.8% above its 1960 level in the District, 10.4% higher in the nation. The District accounted for 7.9% of the nation's total of this kind of income in 1964 compared with 7.5% fours years before. Above average growth rates, together with gains relative to national totals, were also evident in miscellaneous labor income, property income, and transfer payments.

Conclusion Large parts of these four-year income gains in the Fifth District are attributable to cyclical recovery from the brief business slowdown which spanned the nine months from mid-1960 through early 1961. The relatively rapid rate of growth in District personal income and all of its major components since then suggests, however, that perhaps as much or more of the growth may have been generated by long-range developmental forces at work in the District for some years.

THE FIFTH DISTRICT



Fifth District business maintained through the third quarter a considerably stronger uptrend than seemed likely earlier in the year. Bank debits rose to a new record in August, one fifth higher than in the same month last year. Nonfarm employment continued to rise and by late summer was 4% above the year-ago level. The latest increases in factory man-hours were the largest in many months, with principal gains occurring in textiles, apparel, foods, tobacco products, paper, and machinery. In agriculture, sales of flue-cured tobacco through mid-September were up some \$30 million, about 11% over the year-earlier figure, as considerably higher prices more than offset slightly reduced volume. Strong automotive sales continued to stimulate the District as well as the national economy. New car registrations have been averaging about one fifth higher than a year ago, and the latest estimates show

July sales of District automobile dealers close to half a billion dollars, up 21% from the previous year and the third highest figure on record, while sales by service stations totaled \$165 million, 6% greater than a year earlier and a new record high.

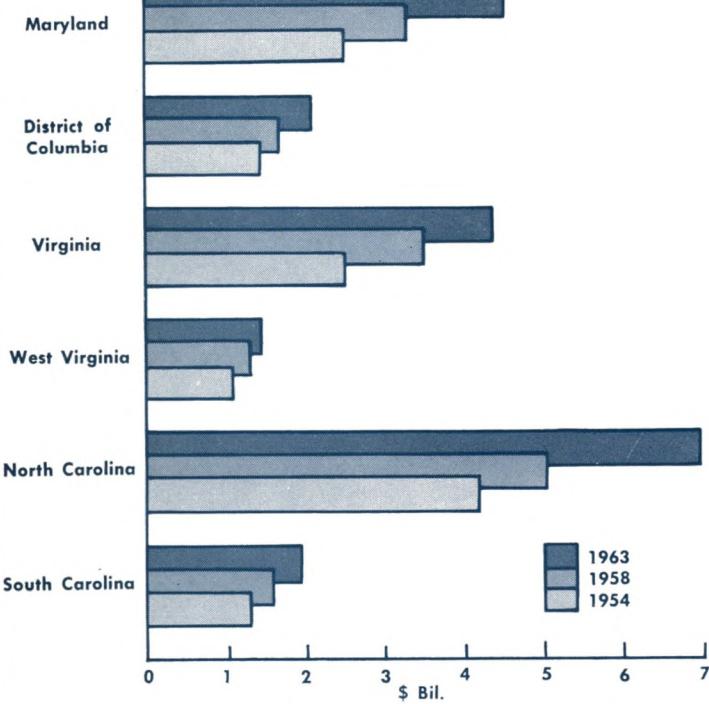
Signals Mixed in Construction District construction statistics show mixed trends so far this year. For eight months of 1965, construction employment averaged 6% above the same period of 1964, and the value of building permits was 4% greater. F. W. Dodge contract awards, however, were a little lower than in 1964.

This year's margin over last year in employment dropped sharply between January and February and has declined irregularly since. Building permits swung from nearly one third above year-earlier levels in January to one fourth below in May and

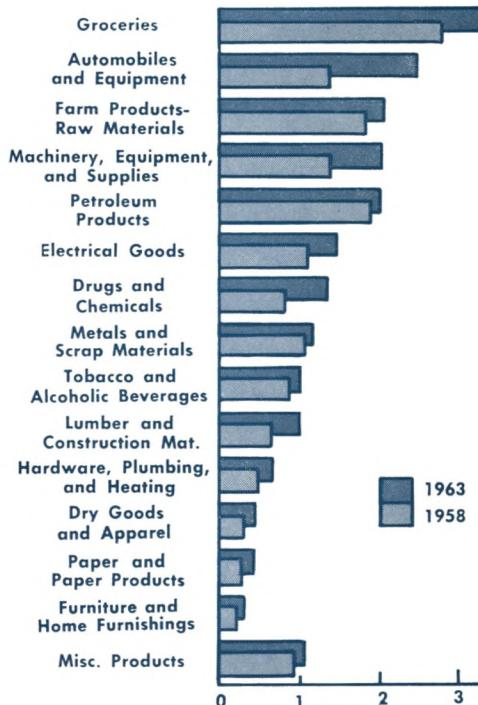
SALES BY WHOLESALE ESTABLISHMENTS

FIFTH DISTRICT

GEOGRAPHICAL



TYPE OF BUSINESS



Source: U. S. Department of Commerce, Bureau of the Census.

back to one eighth above in August. Contract awards ranged from one fourth higher than last year in April to one sixth lower in July.

Housing has remained the principal source of strength. Residential contract awards reached an all-time high in April and for seven months averaged 6% above 1964. Public works and utilities awards were also strong in April but since then have fallen far below last year's levels, while awards in other nonresidential categories have averaged slightly under year-earlier levels. By historical standards, however, total contract awards still look quite strong.

Trade Activity at a New High Fifth District department store sales set new records in August, and estimates of total District retail trade indicate that the July volume was one tenth greater this year than last. Employment in trade, furthermore, has increased steadily all year and reached a record level in August. Gains over year-earlier levels occurred in all parts of the District except West Virginia. The largest increase was in Maryland, where the number of jobs in distribution increased 5% over last year's figure. Distributive employment rose 3%, the same as the District average, in Virginia, slightly less than that amount in the Carolinas, and considerably less in the District of Columbia.

Patterns of Wholesale Trade Notable differences exist between wholesale and retail trade. Retail trade distributes goods to actual consumers, and its volume tends to be roughly proportional to personal income over broad geographical areas. Wholesale trade, on the other hand, encompasses sales of consumer goods, intermediate goods and materials, and machinery and equipment to retail establishments and to institutional, industrial, commercial, and professional users. Patterns of wholesale trade, therefore, reflect a wide variety of economic factors including location of suppliers and customers and availability of transportation and storage. These patterns for the Fifth District are shown in the chart on page 15.

Maryland's high level of wholesale trade results from a concentration of goods produced in or shipped into the Baltimore area and distributed to markets in Maryland, Pennsylvania, Delaware, and Virginia. In the Washington area production is limited, but the growth of local and neighboring markets has fostered such an expansion of wholesaling in general that Washington passed Baltimore between 1958 and 1963 to become the District's most important wholesaling center. Virginia, by contrast, has a number of distribution centers headed by Richmond, Norfolk, Roanoke, and Lynchburg. Northern Virginia, of

course, is served by the Washington area while some southern parts of the state are reached by wholesalers in North Carolina. West Virginia and South Carolina also are served to some extent by out-of-state dealers, some based outside the District.

The regional importance of wholesale trade may be roughly indicated by its relationship to retail volume. Nationally in 1963, sales at wholesale surpassed retail sales by 47%. Wholesale exceeded retail sales in Maryland, the District of Columbia, and North Carolina, but fell short in Virginia, West Virginia, and South Carolina. Wholesale sales ranged from 45% above retail sales in the District of Columbia to 22% below in West Virginia.

Growth of Trade The chart shows the distribution and growth of wholesale trade geographically in the left-hand panel and according to type of business on the right. Wholesale trade grew more rapidly in the District than in the nation as a whole, up 30% between 1958 and 1963 here compared to a 25% rise nationally. Within the District, North Carolina exhibited the fastest growth and accounted for the largest share of the District total. Sales by wholesale establishments rose 39% in North Carolina compared to 35% in Maryland, 25% in Virginia, 24% in South Carolina, 23% in the District of Columbia, and 6% in West Virginia. The type of wholesale business which grew most rapidly was motor vehicles and equipment. The increase between 1958 and 1963 was more than \$1 billion, four fifths of the 1958 figure. The automotive sector grew considerably everywhere but was especially significant in Maryland where volume more than doubled.

Local Growth Patterns Data for Standard Metropolitan Statistical Areas show local growth. Baltimore sales actually increased only 17% in the recent period, half as much as in Maryland as a whole. Similarly, sales rose 56% in Metropolitan Washington, more than twice the rise that occurred in the District of Columbia only. Trade centers in Virginia showed more modest gains ranging from 36% in Newport News-Hampton to only 5% in the nearby Norfolk-Portsmouth area. Increases were generally larger in North Carolina, and the Charlotte area set the fastest pace not only for the Tar Heel State but for the entire Fifth District. Charlotte's wholesale volume rose more than \$1 billion, nearly 60%, between 1958 and 1963, and accounted for over one eighth of the District's 1963 volume compared to one sixth for Washington and one seventh for Baltimore. Richmond, fourth among District metropolitan areas in wholesaling, had little more than half of Charlotte's volume.