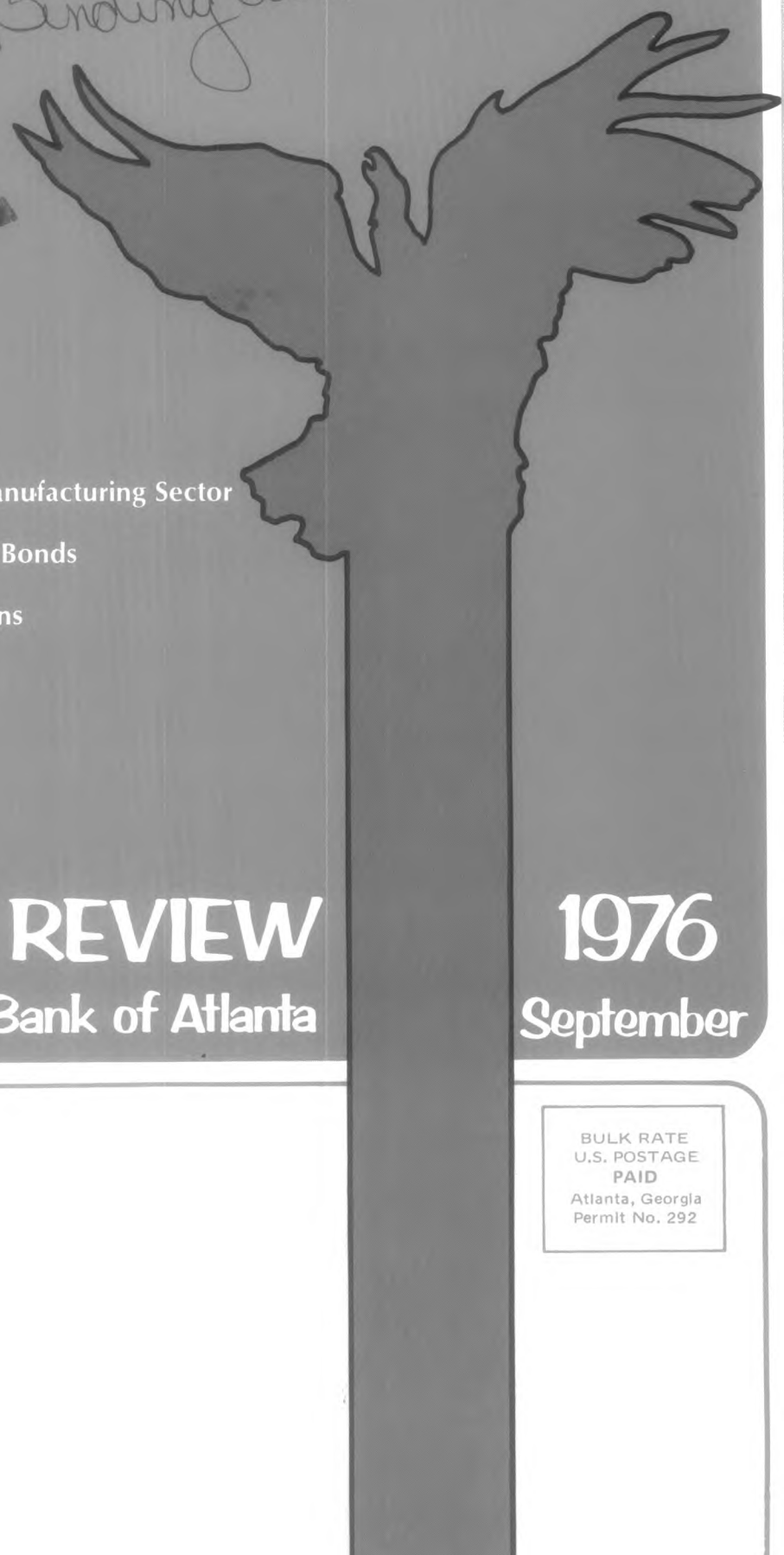

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Productivity and Change in the Southeast's Manufacturing Sector

by William D. Toal

Output of goods and services grows through one of two ways—more inputs are used or the way inputs are combined is changed, affecting efficiency. The most important input in the production process is labor. Changes in other inputs (e.g., physical and human capital) and changes in the way these inputs are combined influence the amount of output that a unit of labor can produce. This is called labor productivity. Labor productivity, as we might expect, has a direct bearing on real wages. High or rapidly growing labor productivity generally implies high real wage levels or large increases in wages.

There are regional differences in average levels of well-being as measured by income or wages. There are also distinct differences in regional growth patterns. The Southeast, in particular, has been struggling to close the wage or per capita income gap between itself and the rest of the nation. How much have labor productivity trends in the Southeast influenced the closing of this gap and the gap that remains? Is labor productivity lower in the Southeast than it is nationally? Has it grown more or less in this region? This article examines labor productivity in the Southeast (i.e., Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee) and its relation to the region's growth and development. The analysis is primarily descriptive, leaving for future examination the forces behind changes in labor productivity. While studies have documented the Southeast's rapid economic growth over the last quarter century, few have analyzed the factors in this growth. Examining regional labor productivity will help us see regional growth more clearly.

Note: William Schaffer, Fred Tarpley, and R. L. Yobs of the Georgia Productivity Center at the Georgia Institute of Technology contributed helpful comments and provided some data for this article. The Georgia Productivity Center, under the direction of Mr. Yobs, is also analyzing labor productivity in Georgia industries.

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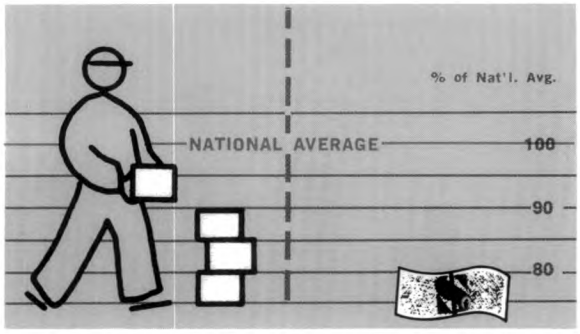
Manufacturing output is an important part of total economic activity. In the Southeast, that sector accounts for nearly one-fourth of all nonfarm jobs, a percentage only slightly lower than nationally. The **Census of Manufactures** has developed information on labor inputs and total manufacturing output by states and regions of the nation. These data allow us to focus on labor productivity in Southeastern manufacturing, although in a limited way. The absence of actual regional output data for nonmanufacturing makes extending this study to other sectors difficult.[1] However, the region's manufacturing has been a prime ingredient in the Southeast's rapid growth. This justifies examining the influence of labor productivity trends on this sector.



Labor productivity in Southeastern manufacturing is 5 percent lower than nationally . . .

. . . but average wage levels are nearly 20 percent lower.

The Southeast's Productivity Gap

In 1972, output per man-hour for Southeastern manufacturing was about 95 percent of labor productivity for the nation's manufacturing sector.[2] Thus, as late as 1972, there was a gap in labor productivity between the Southeast's and the nation's manufacturing sectors. While there may be many reasons, including industry mix, for this on an aggregate basis, labor appears to produce less per unit of service in this region.

It is interesting to compare the difference in labor productivity between the Southeast and the nation with the region's famous wage gap.[3] While labor productivity differs approximately 5 percent, the manufacturing wage gap between the Southeast and the nation is 19 percent, nearly three times as large in relative terms. Generally, there is thought to be a correlation between labor productivity and the wage rate. In fact, a recent government study used regional earnings per worker as a proxy for labor productivity.[4] Why then does a large disparity exist between these two measures? First, real, not nominal, wages should be used in determining the wage gap. If price levels differ among regions, nominal wage levels should differ by more than differences in labor productivity. Also, the industry mix differs substantially between this region and the nation. As a result, demand for products and production relationships probably differ substantially at this aggregate level. To thoroughly analyze the disparity between productivity and wages, it would be necessary to look at individual manufacturing industries, labor productivity, and wages in both the Southeast and the nation.[5] Such detailed analysis of wage levels and labor productivity will be left for future study.

Trends in Southeastern's Labor Productivity

Equally important as the level of labor productivity is its growth. The evidence suggests only a very uneven trend toward convergence of Southeastern and national labor productivity since 1929. The erratic upward movement in average labor productivity contrasts with the steady convergence of Southeastern average manufacturing incomes and per capita personal incomes to national levels (see chart).[6] However, as late as 1972, the wage and per capita personal income gaps between the Southeast and nation remained larger than the labor productivity gap.

Looking specifically at the period since 1958, output per man-hour has grown at a 4.4-percent

[1]Several economists have recently estimated Gross State Product for nonmanufacturing sectors. These estimates can be used to examine productivity in sectors outside manufacturing. See Albert W. Niemi, Jr., **Gross State Product and Productivity in the Southeast,** The University of North Carolina Press, Chapel Hill, 1975.

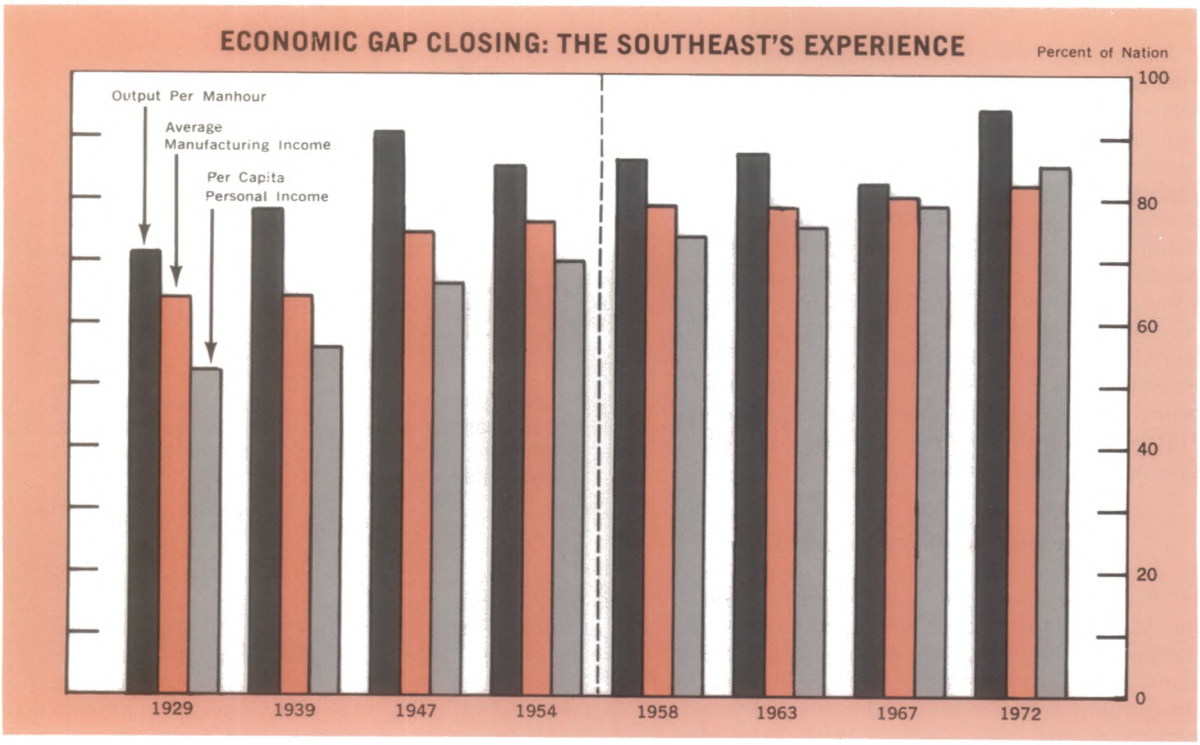
[2]Appendix A describes the method of estimating output per man-hour, or labor productivity. Appendix B presents tables summarizing the data.

[3]For example, see Lowell E. Gallaway, "The North-South Wage Differential," **The Review of Economics and Statistics,** Vol. 45, No. 3, August 1963, pp. 264-272.

[4]See "The BEA Economic Areas: Structural Changes and Growth, 1950-1973," **Survey of Current Business,** November 1975, p. 19.

[5]Also, standard price theory says that wages should be related to marginal labor productivity, not average labor productivity, as developed in this study. To relate average labor productivity to wage levels, we must assume that labor's share of output is the same in both the Southeast and the nation; this may not be true.

[6]Value added, not deflated for price changes, divided by total manufacturing employment was used as the measure of labor productivity from 1929 through 1954. This is a rough approximation of the measure used from 1958 through 1972, value added deflated for price increases divided by man-hours. The lack of man-hour data made a consistent measure of labor productivity impossible.



annual rate in the Southeast's manufacturing sector, compared with a 3.7-percent rate nationally. In other words, labor productivity was rising approximately one-fifth more rapidly in the Southeast. At the same time, manufacturing jobs have grown approximately 60 percent in the region, nearly three times faster than nationally. These rapid employment gains might have been expected to slow the rise in labor productivity but apparently did not. There are many possible reasons for the Southeast's more rapid growth in labor productivity; certainly one of the most important is the region's high capital spending from 1958 to 1972. In each of these years, plant and equipment spending per manufacturing employee was higher than nationally. Such spending is one way to improve labor productivity, providing more capital goods for each employee and new and improved technology with which to use them.

The growth trend in Southeastern labor productivity was uneven; it did not rise at the trend rate each and every year.[7] Labor productivity was examined over three subperiods—1958-1963, 1963-1967, and 1967-1972. It is clear that there was an acceleration in productivity growth in the Southeast's manufacturing sector from 1967 to 1972; this acceleration is not as noticeable for the U. S. as a whole. It is also clear that deviations around the long-term trend in labor productivity growth are larger in the Southeast than nationally. From 1963 to 1967, output per man-hour actually grew more slowly in the Southeast than nationally but then accelerated to a pace nearly double the national rate from 1967 to 1972. While we will not examine in detail the reasons for this unevenness in the Southeast's labor productivity advance, it is apparent that it would be difficult to forecast accurately the increase in manufacturing output per man-hour from such an erratic trend relationship.

Labor Productivity in More Detail

While the Southeast's manufacturing labor productivity appears lower than the nation's, the reason may simply lie in the different industry mix. But even more detailed analysis confirms labor productivity is lower in the Southeast. In 1972, labor productivity in both Southeastern durable and nondurable manufacturing was below that for the same national industries (about 6 percent lower). It is interesting and somewhat surprising to note that labor productivity in nondurable manufacturing is higher than in durable manufacturing (about 9 1/2 percent more in the Southeast in 1972), both in the Southeast and in the nation. The conventional view of a labor-intensive, low-productivity nondurable sector does not jibe with this

[7] John Kendrick has noted the erratic pattern in labor productivity growth at the national level. See John W. Kendrick, "Productivity Trends: Capital and Labor," **Review of Economics and Statistics,** Vol. 38, 1956, pp. 252-253.

study's findings. In fact, nondurable manufacturing is more capital-intensive than is durable manufacturing. The capital-labor ratio for Southeastern nondurable manufacturing is over 35 percent higher than for durables.[8] Nondurable industries such as chemicals, paper, rubber, food processing, and textiles (as well as petroleum refining) are all very capital-intensive. The idea that nondurable manufacturing is labor-intensive is probably influenced by the apparel industry's capital-labor ratio and labor productivity, the lowest of all major manufacturing. Accepting that capital-intensive industries generally have higher output per man-hour, then higher labor productivity in the nondurable sector is not quite so surprising.[9]

The rise in labor productivity (from 1958 to 1972) was above the national pace for both Southeastern durable and nondurable manufacturers. Labor productivity has grown in the 4-percent range in the region's durable and nondurable manufacturing, with output per man-hour rising slightly more in durables than in nondurables. Again, the region's labor productivity in both these sectors has increased erratically, generally rising at a rate above or close to the nation's from 1958 to 1963, falling below it from 1963 to 1967, and then rising well above the U. S. pace from 1967 to 1972. But the uneven rise in Southeastern manufacturing labor productivity is true in both durable and nondurable goods.

The concept of labor productivity used here is output produced per man-hour employed. Some confusion may arise, since labor productivity can increase both from more efficient production and from more capital input per man-hour. For this reason, economists often advocate a "total factor productivity" concept which relates output to a weighted sum of man-hours and capital services. Total factor productivity supposedly holds constant the impact of a change in the productive factors mix on output. Increases in this productivity measure, at least in concept, measure only higher efficiencies from increased labor quality, technological improvement, and scale economies. Because data on regional capital are skimpy, however, labor productivity must be used. It should be kept in mind that any increase in output per man-hour may result partly from substituting capital for labor in production, as well as from higher efficiencies brought on by technological change, increased scale of operation, or improved labor quality. At least at the national level, substituting capital for labor accounted for only about one-eighth of the rise in labor productivity for the private nonfarm economy, according to one analysis. See Robert M. Solow, "Technical Change and Aggregate Production Function," *The Review of Economics and Statistics,* Volume 39, 1957, p. 316.

Some Industry Differences

Even though Southeastern manufacturing labor productivity does not measure up to national levels, some selected industries show higher output per man-hour in the Southeast than nationally;[10] they include rubber; electrical machinery; paper; furniture; leather; stone, clay, and glass; and textiles. To some extent, these variations in labor productivity stem from the different nature of these industries in the Southeast. For example, the Southeast's textile industry includes carpet manufacturing, which accounts for 30 percent of the region's textile output. Output per man-hour is typically higher in carpet manufacturing than for textiles in general. In the same manner, manufacture of tires and tubes is a very large segment of the Southeast's rubber industry; labor productivity in this sector is above the industry average. Labor productivity is also high in the manufacture of communications equipment, a large chunk of the region's electrical machinery industry.

Each industry's different make-up in the Southeast helps explain some differences in labor productivity, but not all. Other forces, such as different capital intensities, the quality and age of this capital, scale of plant operation, different levels of technology, and differences in quality of management and the labor force also play a part in explaining productivity variations.

Industry Rankings

The Southeast's rubber industry had the highest output per man-hour in 1972, followed by the

[8] 1964 gross book value of depreciable assets was used as the measure of capital. 1964 are the latest data available from the U. S. Census on regional gross book value at the detailed industry level.

[9] It is also interesting to note that the aggregate capital-labor ratio is actually higher in the Southeast than it is nationally. This contradicts the conventional view that the Southeast is a labor-abundant region. This finding is discussed in several articles on regional industry location and comparative advantage. See Edwin F. Estle, "A More Conclusive Regional Test of the Hecksher-Ohlin Hypothesis," **Journal of Political Economy,** Vol. 75, December 1967, pp. 886-888; J. R. Moroney, "Factor Prices, Factor Proportions, and Regional Factor Endowments," **Journal of Political Economy,** pp. 158-164, Vol. 78, January-February 1970.

[10] Industry detail is limited here to two-digit Standard Industrial Classification detail. When comparing these Southeastern industries to their national counterparts, output per man-hour may vary because at this level the industry is not homogeneous in the Southeast and the nation. In these cases, differences in labor productivity between the Southeast and the nation might be explained if 3- or 4-digit industry detail were considered. This study does not attempt such detail.

Table 1

PERCENT OF OUTPUT INCREASE ATTRIBUTED TO RISE IN OUTPUT PER MAN-HOUR

(1958-1972)

	Southeast	U. S.
Total Manufacturing	68.6	77.5
Durable Manufacturing	67.3	72.5
Lumber & Wood Products	100.0	93.3
Furniture & Fixtures	59.6	54.2
Stone, Clay, & Glass	62.3	69.2
Primary Metals	27.2	63.1
Fabricated Metals	53.8	69.4
Nonelectrical Machinery	27.4	65.2
Electrical Machinery	70.6	72.5
Transportation Equipment	63.1	85.2
Nondurable Manufacturing	71.1	83.8
Food & Kindred Products	77.3	100.0
Textiles	86.1	88.5
Apparel	57.8	76.1
Paper	70.9	73.8
Printing & Publishing	55.5	71.4
Chemicals	63.6	82.6
Rubber	72.2	65.2
Leather	35.1	100.0

chemical industry; labor productivity was lowest in apparel, with leather manufacturing only slightly better. These two industries were also at the bottom nationally. Yet in order of labor productivity, the Southeast's industry hierarchy does not perfectly correspond to the nation's. This suggests that it is not always possible to tell whether a Southeastern industry is high or low in labor productivity relative to other industries based on its national ranking.[11]

Industry Labor Productivity Trends

While output per man-hour grew faster in the Southeast than nationally in durables and nondurables, this was not true of each of the 17 industries examined. Five industries—primary metals, nonelectrical machinery, food processing, tobacco products, and chemicals—increased labor productivity more slowly in the Southeast than did their national counterparts from 1958 to 1972.

Again, however, at this disaggregated level, labor productivity advanced very unevenly from 1958 to 1972. All 17 Southeastern industries showed a trend toward faster growth in output per man-hour from 1967 to 1972. The average deviation from growth trend in labor productivity was substantially higher for the 17 industries in the Southeast compared to those same industries nationally. It is also apparent that the more disaggregated the analysis, the more variation there is in labor productivity growth. The average deviations from trend in the 17-industry average are substantially higher, particularly from 1958 to 1963 and from 1967 to 1972, than they are for total durable or nondurable manufacturing. This is true for both the Southeast and the nation.[12]

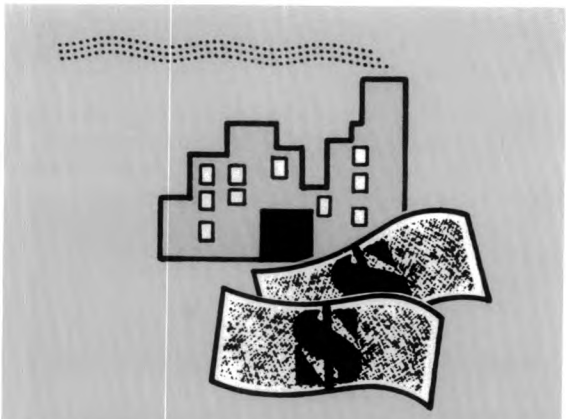
While not all Southeastern manufacturing industries raised labor productivity as rapidly as their national counterparts, the industries with the fastest and slowest gains in output per man-hour from 1958 to 1972 matched up closely in the region's and nation's manufacturing sectors. Lumber and wood products had the largest rise in output per man-hour both nationally and in the Southeast,

[11] One other inference can be drawn about the ranking of labor productivity by industry. There appears to be some correspondence between the industry capital-labor ratios and labor productivity. See Proposition 5 in the box for statistical tests. The industries with higher capital-labor ratios generally have higher labor productivity.

[12] This verifies the statement made by Kendrick that, in general, the greater the degree of industry disaggregation, the greater the variability among subperiods in rates of change in productivity. See Kendrick, p. 252.

though stronger in the region. The same five industries ranked highest in labor productivity gains, both nationally and regionally. Besides lumber, these were rubber, electrical machinery, textiles, and transportation equipment. The industries with the smallest increase in output per man-hour, both nationally and regionally, were leather and primary metals.

Industry differences in the rate of change in labor productivity are not readily explained either by the growth of the respective industries or the relative amounts of expenditures on plant and equipment. Obviously, more information is needed about changes in capital intensity, technological change, and labor quality before these varying rates of change can be explained.



Southeastern manufacturers have spent more on capital equipment per employee than have national manufacturers; this has boosted labor productivity more rapidly in the region.

Labor Productivity and the Growth of Manufacturing

The rise in output per man-hour in the Southeast's manufacturing sector has been a major stimulant to the region's growth; it has helped this region narrow the wage and per capita income gap between itself and the nation. The faster-than-national advance in labor productivity has helped propel the Southeast's manufacturing sector and its entire economy above the national growth rate. Output, measured by real value added, rose faster than nationally in every Southeastern industry except tobacco from 1958 through 1972. How much has the rise in labor productivity contributed to the increase in output?

The concept of growth accounting has been popularized by Edward Denison.[13] He found that approximately one quarter of the rise in national income in the postwar period came from increased use of labor; the remainder came from increased output per man-hour. Growth accounting can be deceiving, however. Gains in output stemming from increased output per man-hour are a residual. Advances in technology, increased use of capital, improvements in organization and management techniques, and improvements in labor quality will each be reflected in higher output per man-hour. Therefore, while approximately three quarters of the rise in national income or output in the post-war period came from advances in labor productivity, it is important to remember that many different factors raised labor productivity.

A recent study estimates that approximately 61.4 percent of the advance in the Southeast's manufacturing output came from gains in output per man-hour (here, the Southeast is broadened to include the Carolinas, Kentucky, Virginia, West Virginia, and Arkansas).[14] However, the manufacturing sector was not analyzed in detail.

Table 1 shows the relative contribution of increased output per man-hour to Southeastern manufacturing industries and contrasts these with those in the nation.[15] Approximately 69 percent of the gain in the Southeast's manufacturing output from 1958 to 1972 was attributed to increased output per man-hour. Nationally, about 78 percent of the output gain came from higher labor productivity. Over this same span, output per man-hour has risen more rapidly in the Southeast. How can the smaller share of the output increase attributed to higher output per man-hour be explained? It is

[13] Edward Denison, **Accounting for United States Economic Growth: 1929-1969,** The Brookings Institution, Washington, D. C., 1974, pp. 127-130.

[14] Niemi, p. 45.

[15] Estimates of the contribution of increases in output per man-hour to output gains were calculated as follows: 1) Calculate a proxy 1972 output figure by multiplying 1958 output per man-hour by 1972 man-hours. $(O/MH)_{1958} \times MH_{1972} = O^P{}_{1972}$ This proxy 1972 output figure shows what output would have been in 1972 if labor productivity had not changed from the 1958 level. 2) Subtract the actual 1958 output figure from this 1972 proxy output figure. This shows the increase (or decrease) in output from 1958 to 1972 related strictly to the change in labor usage. Divide this figure by the total actual change in output from 1958 to 1972. This gives the fraction of total change in output attributed to the change in labor usage. (o^L)

$$(o^L) = \frac{O^P{}_{72} - O_{58}}{O_{72} - O_{58}}$$

3) Subtract the fraction of total change in output attributed to the change in labor usage from one and multiply by 100. This gives the percent of the change in output related to changes in output per man-hour (o^*)

$$o^* = (1 - o^L) \times 100$$

Statistical Analysis

This box tests statistically some of the inferences made in the text of this article. Spearman rank correlations are used to examine whether across the 17 two-digit manufacturing industries the rank orderings of industries, according to specific characteristics, show significant correspondence.

Proposition 1: Is there a correspondence when ranked by level of output per man-hour (1972) between Southeastern and U. S. two-digit manufacturing industries?

Yes, the rank correlation ($r_s = .782$) is significantly different from zero at a high degree of confidence. Although the text mentions that some differences in the rankings of industries according to labor productivity exist between the Southeast and U. S., they are minor.

Proposition 2: Is there a correspondence when ranked by the growth (1958 to 1972) in output per man-hour between Southeastern and U. S. two-digit manufacturing industries?

Yes, the rank correlation ($r_s = .739$) is again significant and verifies the text inference that the industries exhibiting the most rapid output per manhour rises from 1958 to 1972 matched up closely in the region's and nation's manufacturing sector.

Proposition 3: Is there a correspondence, when ranked by capital-labor ratios, between the Southeast's and nation's two-digit manufacturing industries?

Yes, there is a very high rank correlation ($r_s = .832$), suggesting that those industries which are capital- or labor-intensive nationally are also in the Southeast.

Proposition 4: Is there a correspondence in ranking of Southeastern industries by output per man-hour and capital-labor ratios?

Yes, the rank ordering of Southeastern two-digit manufacturing industries according to output per man-hour closely corresponds, according to the rank correlation coefficient ($r_s = .654$), to the rank ordering according to capital intensity. This verifies the inference made in footnote 11 of the text. Futhermore, there is also a similar close correspondence ($r_s = .730$) in U. S. industries ranked according to output per man-hour and capital intensity.

Proposition 5: Is there a close correspondence between the rankings of Southeastern two-digit manufacturing industries by output per man-hour and by average wage levels?

Yes, the rank correlation is strongly significant ($r_s = .649$), indicating that the Southeastern industries with the highest (lowest) levels of labor productivity also have the highest (lowest) average wages. For national two-digit manufacturing industries, the correlation is also significant ($r_s = .605$).

Proposition 6: Is there a close correspondence between the rankings of Southeastern two-digit manufacturing industries by the growth (1958 to 1972) in output per man-hour and by the percent change (1958 to 1972) in average wage levels?

No, the rank correlation ($r_s = .250$) does not indicate that the Southeastern industries with the largest (smallest) increase in labor productivity also had the largest (smallest) increases in average wage levels. The rank correlation ($r_s = .364$) is also not significant for U. S. two-digit manufacturing industries. Other forces are apparently influencing industry wage changes, such as changes in industry prices.

not, as it appears to be, a paradox. Employment and output were simply rising at a faster-than-national clip in the region. Hence, even though labor productivity grew more rapidly here, it still accounted for a smaller slice of the faster-than-national rise in regional manufacturing output. Put another way, the Southeast relied relatively more on increases in labor usage than on gains in labor productivity to boost manufacturing output. But, in an absolute sense, both were greater-than-national gains.

The contributions of output per man-hour gains followed much the same patterns for durable and nondurable manufacturing as for total manufacturing. While labor productivity grew more rapidly in the Southeast than nationally in both sectors, its contribution to sector output gains were somewhat less than national because labor was also growing much more rapidly in the Southeast. Gains in output per man-hour were slightly more important for the nondurable sector, accounting for 71 percent of the rise in output, than for the region's durable goods sector, where 67 percent of the output rise came from increased labor productivity. By industry, output per man-hour gains accounted for all of the higher output for the Southeast's lumber and wood products industry. In this industry, labor employed actually fell from 1958 to 1972. Gains in labor productivity provided the smallest share of output gains in the leather

products, primary metals, and nonelectrical machinery industries. In each case, there was a sharp contrast with these same industries nationally, where labor productivity advances made up over one-half of the output gains. Most notable in these three industries was a significantly lower level of capital spending per employee in the region than occurred nationally from 1958 to 1972. And, as noted earlier, primary metals and nonelectrical machinery had slower-than-national gains in output per man-hour.

Conclusion

We have seen that increased output per man-hour has been a primary ingredient in the growth of the Southeast's manufacturing sector; this, in turn, has stimulated the region's entire economic base and helped wages and incomes approach national levels in this region, though a gap still remains. While labor productivity or output per man-hour grew more rapidly in the region than it did nationally, its percentage contribution to the total manufacturing output gain was less here simply because manufacturing labor employed also has risen at a faster-than-national clip. We have provided few answers why the region's labor productivity rose more rapidly than nationally. These questions remain. Hopefully, further analysis will probe into the impact capital spending, changing capital intensities, improved technologies, and labor quality have had in the Southeast's rise in manufacturing labor productivity. It is worthwhile mentioning once more that the driving thrust behind economic growth is not simply the rise in labor productivity but the basic influences behind this rise. Pushing the analysis a step further, the extent to which the region's commercial banks have financed the capital spending which helped raise Southeastern labor productivity needs to be examined. And finally, and possibly most important of all, to what extent have the gains in the region's labor productivity been translated into higher wages for its working force? We noted here that, while a labor productivity gap does apparently still exist between the Southeast and the nation, it is a much smaller gap than remains in average manufacturing wage levels. Why is this so? Do differences in industry mix, unionization, cost of living, or product demands between the Southeast and the nation explain these differences? These questions demand further analysis.

Appendix A

Calculation of Labor Productivity Measures

Output per man-hour for the Southeast's manufacturing sector was calculated using **Census of Manufactures** data. The output measure used was value added as reported in the Census. Since value added is in dollar terms, some deflation method must be used to obtain a measure of real output. Wholesale price indices were constructed for each two-digit standard industrial classified Southeastern industry. The method used was to weight U. S. three-digit wholesale price indices (published by the U. S. Bureau of Labor Statistics) by the importance of each Sixth District three-digit industry (e.g., broad woven fabrics) in each two-digit industry (e.g., textiles). For the years 1958, 1963, and 1967, 1963 weights were used. However, for 1972, new weights based on 1972 value-added data were used.

This constructed measure of real output suffers from at least two deficiencies. First, the 1963 three-digit value-added weights were used in constructing the 1958 and 1967 two-digit wholesale price indices. While new weights for 1958 and 1967 could have been constructed, the results would apparently have changed very little based on some sample calculations using different weights. Second, wholesale price indices, used in deflating value added, relate to total industry shipments rather than only value added. In industries where materials costs are a sizable portion of the total product, the value of shipments differ significantly from the value added in production. Nevertheless, since it is felt that value added is a better measure of output than are shipments, the technique outlined above was used to obtain real output.

Man-hour data were obtained from the **Census of Manufactures.** Weekly hours' data cover only production workers. To obtain man-hours, these weekly hour data were multiplied by total employment (production workers plus supervisory workers). Thus, it was assumed that the length of the workweek was the same for nonproduction workers as it was for production workers. This is undoubtedly incorrect. But since this method was used for obtaining man-hours for both the Southeast and the nation, the error is a consistent one and should not substantially alter the analysis.

Output per man-hour or labor productivity factors were then obtained by dividing the man-hour data into the deflated value-added data. This was done for each two-digit Standard Industrial Classification. To obtain durable, nondurable, and total manufacturing output per man-hour, data were summed over the appropriate industries and then the summed man-hour data were divided into the summed deflated value-added data.

Appendix B

Table A-1
MANUFACTURING OUTPUT PER MAN-HOUR (1972)

	Southeast as % of U. S.
Total Manufacturing	94.6
Durable Manufacturing	93.3
Lumber & Wood Products	98.4
Furniture & Fixtures	109.0
Stone, Clay, & Glass	104.6
Primary Metals	94.3
Fabricated Metals	88.2
Nonelectrical Machinery	74.2
Electrical Machinery	152.3
Transportation Equipment	85.2
Nondurable Manufacturing	93.6
Food & Kindred Products	81.9
Tobacco Products	44.8
Textile Mill Products	102.5
Apparel and Related Products	83.4
Paper & Allied Products	126.9
Printing & Publishing	82.8
Chemicals	98.0
Petroleum & Related Products	—
Rubber	242.0
Leather	106.8

Table A-2
ANNUAL PERCENT CHANGE IN OUTPUT PER MAN-HOUR

	1958-1972	1958-1963	1963-1967	1967-1972
Total Manufacturing				
Southeast	4.4	4.5	1.4	6.8
U. S.	3.7	4.2	2.9	3.9
Durable Manufacturing				
Southeast	4.6	5.4	0.6	7.1
U. S.	3.5	4.3	2.3	3.7
Lumber & Wood Products				
Southeast	8.5	6.4	3.7	14.6
U. S.	5.0	4.5	2.9	7.1
Furniture & Fixtures				
Southeast	3.9	2.8	1.7	6.7
U. S.	2.2	2.1	2.5	2.2
Stone, Clay, & Glass				
Southeast	3.3	3.0	1.8	4.7
U. S.	2.5	2.7	2.2	2.6
Primary Metals				
Southeast	0.7	4.4	- 6.1	2.8
U. S.	1.6	3.4	1.5	- 0.2
Fabricated Metals				
Southeast	3.4	3.3	2.8	3.9
U. S.	3.3	2.1	4.5	3.6
Nonelectrical Machinery				
Southeast	1.7	5.1	- 3.4	2.6
U. S.	3.4	2.6	2.6	4.8
Electrical Machinery				
Southeast	6.9	3.9	4.6	12.1
U. S.	4.7	6.3	3.7	3.8
Transportation Equipment				
Southeast	4.6	7.0	- 1.3	7.1
U. S.	4.3	6.9	- 0.3	5.5
Nondurable Manufacturing				
Southeast	4.3	4.0	2.1	6.6
U. S.	4.1	4.1	3.8	4.2
Food & Kindred Products				
Southeast	3.3	4.4	2.0	3.3
U. S.	3.5	4.6	2.9	2.8
Tobacco Products				
Southeast	2.3	1.7	3.9	8.2
U. S.	4.4	4.5	3.5	5.1
Textiles				
Southeast	6.3	5.4	6.8	6.9
U. S.	5.3	4.5	5.2	6.1
Apparel				
Southeast	3.8	3.5	1.9	5.7
U. S.	3.1	2.5	2.7	4.1

Table A-2 (cont'd)

	1958-1972	1958-1963	1963-1967	1967-1972
Paper & Allied Products				
Southeast	3.9	4.5	3.3	3.6
U. S.	3.2	3.4	3.1	3.1
Printing & Publishing				
Southeast	2.8	1.1	2.7	4.5
U. S.	2.8	2.3	3.7	2.6
Chemicals				
Southeast	4.1	2.9	- 0.2	9.1
U. S.	5.5	6.2	4.1	5.9
Rubber				
Southeast	7.6	2.5	1.0	17.1
U. S.	4.6	3.9	5.5	4.7
Leather				
Southeast	1.3	1.1	- 1.0	3.5
U. S.	1.1	0.2	2.1	1.2

Table A-3

LEVEL OF OUTPUT PER MAN-HOUR BY RANK (1972)

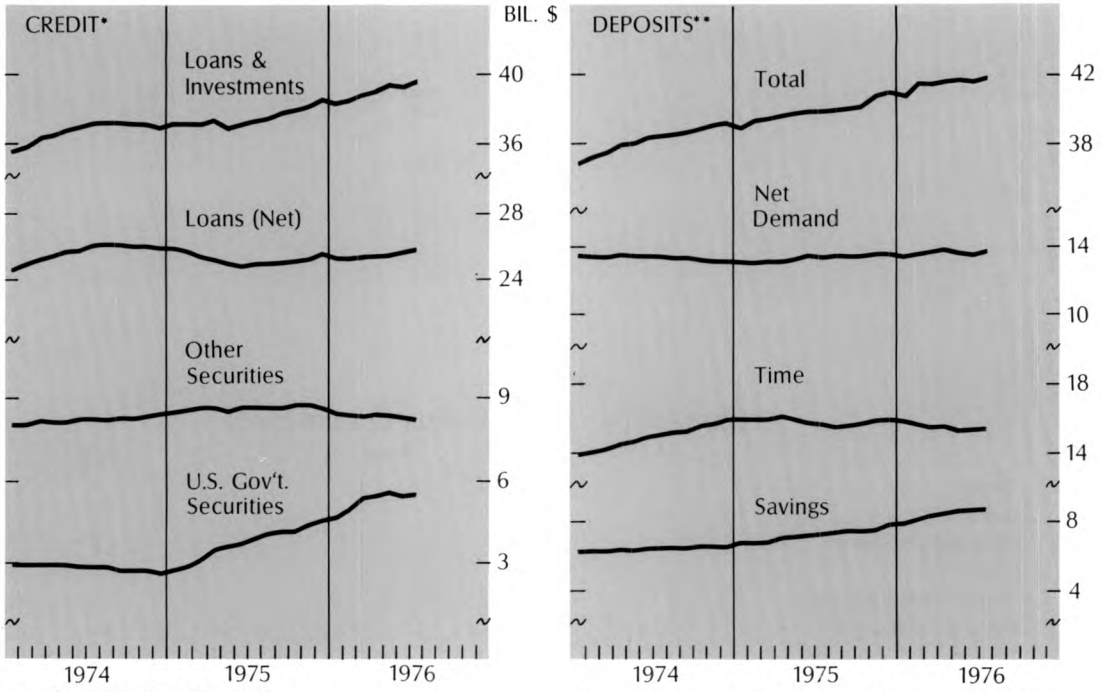
	Southeast	U. S.
Rubber	1	4
Chemicals	2	1
Electrical Machinery	3	8
Paper	4	9
Transportation Equipment	5	3
Stone, Clay, & Glass	6	11
Tobacco	7	2
Printing	8	6
Food Processing	9	5
Primary Metals	10	12
Fabricated Metals	11	10
Textiles	12	13
Nonelectrical Machinery	13	7
Lumber & Wood Products	14	14
Furniture & Fixtures	15	15
Leather	16	17
Apparel	17	16

Table A-4

GROWTH (1958-1972) OF OUTPUT PER MAN-HOUR BY RANK

	Southeast	U. S.
Lumber & Wood Products	1	1
Rubber	2	3
Electrical Machinery	3	5
Textiles	4	4
Transportation Equipment	5	2
Chemicals	6	7
Furniture & Fixtures	7.5	15
Paper & Allied Products	7.5	11
Apparel	9	12
Fabricated Metals	1.0	10
Stone, Clay, & Glass	11.5	14
Food & Kindred Products	11.5	8
Printing & Publishing	13	13
Tobacco Products	14	6
Nonelectrical Machinery	15	9
Leather	16	17
Primary Metals	17	16

BANKING STATISTICS



LATEST MONTH PLOTTED: JULY
Note: Seas. adj. figures covering District member banks.

*Figures are for the last Wednesday of each month
**Daily average figures

SIXTH DISTRICT BANKING NOTES

Banks Reduce Municipal Holdings

INCOME REPORT OF DISTRICT MEMBER BANKS, 1975*

($ thousand)

	Alabama	Florida	Georgia	Louisiana	Mississippi	Tennessee	District
Total operating income	529,724	1,240,911	780,299	453,628	186,091	494,654	3,685,307
Total operating expense	452,464	1,165,254	739,520	393,151	159,663	485,443	3,395,495
Income before income taxes and securities gains or losses	77,259	75,657	40,778	60,476	26,427	9,211	389,808
Interest on obligations of states and political subdivisions	53,933	126,479	42,686	41,235	16,601	36,477	317,411
Applicable income taxes	10,192	− 14,092	− 7,061	9,861	4,012	− 9,061	− 6,149

*12/75 data from Income and Dividends Report

In the early Seventies, District member banks' holdings of municipal obligations advanced at an annual rate of 16 percent. Recently, however, the inability to utilize tax-exempt income has caused banks to reduce their bond holdings in an attempt to generate taxable income to meet higher expenses.

Recent developments continue to point out the recession's severe impact on District banks. The recession sharply reduced earnings, weakened loan demand, and contributed to much higher loan losses. Banks have adjusted to these pressures by making substantial adjustments to both sides of their balance sheets. Municipal bond portfolios reflect just such a change.

During the Sixties and early Seventies, District member banks added large amounts of municipal obligations to their portfolios. In December 1959, they held only $774 million of municipal obligations; by the end of 1974, holdings totaled $6,461 million, an annual increase of 16 percent. Banks had good incentives to buy municipals. Bank profits were rising, and municipal obligations were a source of income exempt from Federal and some state income taxes.

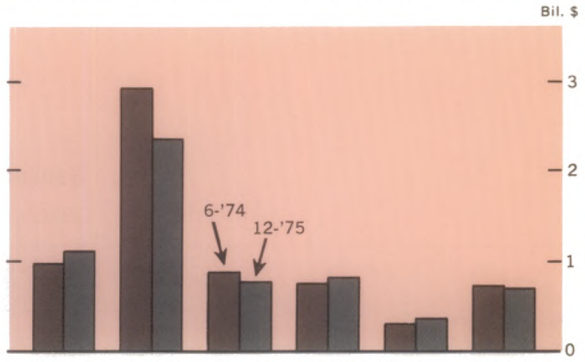
From the end of 1969 to mid-1974, District member banks' holdings of municipals rose $3.5 billion, or 119 percent. Florida banks led the District; their holdings increased $1.7 billion, or 136 percent. These banks accounted for about one-half the total District gain. Mississippi banks added only about $160 million of the bonds. The remaining states each added from $370 million to $510 million in municipals during this period.

The recession that began in 1973 reversed these acquisitions. The growth in banks' purchases of tax-exempt securities slowed in 1973 and peaked in mid-1974. Since then, they have declined nearly 8 percent. In 1974, banks faced strained liquidity positions. Therefore, they reduced their purchases of long-term bonds and even began liquidating some holdings. In 1975, sharply higher provisions for loan losses cut into net income, cutting back the need for tax-exempt income.

The reduction in municipals is centered at Florida banks, where holdings have declined $404 million, or 20 percent. Georgia bank municipal portfolios are down $61 million; those in Louisiana and Tennessee are off much less. Alabama banks have added $112 million of the obligations; and holdings are up $34 million in Mississippi during 1975.

Banks' municipal bond holdings have dropped because tumbling profits have reduced the need for tax-free income. For banks to use municipal bond income to the best advantage, portfolios must generate some taxable income. And in no case does a bank want to use tax-exempt income

Sixth District Member Banks' Municipal Obligations



*District Portion Only

for operating expenses. Generally, a bank will have taxable income if before-tax income and securities gains or losses (i.e., total operating income less total operating expenses) exceed the interest received from municipal bonds.

For Florida, Georgia, and Tennessee banks, this was clearly not the case in 1975; on an aggregate basis, they had no taxable income. And some individual banks undoubtedly faced this same situation in 1974. As a result, they might be expected to reduce their municipal bond holdings and increase other earning assets such as loans or U. S. Government securities. Banks in these three states have decidedly reduced their municipal holdings. In Florida, where the before-tax income and securities gains or losses were $50 million less than the interest on municipals, holdings dropped the most. Obviously, banks in Georgia and Tennessee were less pressed to reduce tax-exempt income and add taxable income; holdings have declined less in these states. However, some individual banks in these two states were likely under considerable pressure.

JOHN M. GODFREY

Sixth District Statistics

Seasonally Adjusted

(All data are indexes, unless indicated otherwise.)

	Latest Month 1976		One Month Ago	Two Months Ago	One Year Ago
SIXTH DISTRICT					
INCOME AND SPENDING					
Manufacturing Income	June	138.1	138.6	136.8	118.2
Farm Cash Receipts	May	326.2	184.8	189.7	199.3
Crops	May	367.2	216.9	292.6	333.7
Livestock	May	292.3	187.3	171.5	94.1
Instalment Credit at Banks*/† (Mil. $)					
New Loans	June	820	812	752	727
Repayments	June	775	748	708	746
Retail Sales	May	143.9	141.5	144.0	128.2
EMPLOYMENT AND PRODUCTION					
Nonfarm Employment	June	106.3	106.9	107.4	104.9
Manufacturing	June	97.7	98.3	98.8	92.8
Nondurable Goods	June	99.0	99.6	100.5	94.0
Food	June	97.9	98.6	98.2	95.9
Textiles	June	95.0	97.0	97.5	88.5
Apparel	June	98.8	98.9	99.0	90.6
Paper	June	99.9	99.8	99.2	93.4
Printing and Publishing	June	105.2	105.0	104.5	103.2
Chemicals	June	104.7	104.8	104.7	100.1
Durable Goods	June	96.1	96.8	96.6	91.2
Lbr., Woods Prods., Furn. & Fix.	June	88.4	89.2	89.4	82.2
Stone, Clay, and Glass	June	89.7	91.6	91.6	91.0
Primary Metals	June	98.2	97.9	96.8	93.1
Fabricated Metals	June	96.1	96.7	96.3	93.6
Machinery	June	108.2	108.4	108.3	103.4
Transportation Equipment	June	91.9	94.8	93.3	88.6
Nonmanufacturing	June	109.0	109.6	110.1	108.7
Construction	June	78.7	81.1	83.3	87.0
Transportation	June	104.2	104.3	104.6	103.5
Trade	June	107.9	108.1	108.6	107.1
Fin., ins., and real est.	June	112.8	113.1	113.4	111.8
Services	June	117.0	116.9	117.3	115.2
Federal Government	June	105.9	105.4	106.2	105.2
State and Local Government	June	117.2	118.9	118.7	115.4
Farm Employment	June	85.1	84.7	82.8	78.5
Unemployment Rate (Percent of Work Force)	June	7.4	8.3	8.1	8.7
Insured Unemployment (Percent of Cov. Emp.)	June	3.9	3.8	3.7	6.5
Average Weekly Hours in Mfg. (Hrs.)	June	40.6	40.9	40.0	39.7
Construction Contracts*	June	183	235	210	205
Residential	June	170	176	180	134
All Other	June	196	292	239	275
Cotton Consumption**	Apr.	75.4	100.8	76.4	56.2
Pertroleum Production */**	June	88.4	88.2	88.5	91.7
Manufacturing Production	May	149.8	150.2	150.4	141.5
Nondurable Goods	May	149.3	150.9	152.2	142.9
Food	May	133.6	133.9	133.7	134.2
Textiles	May	149.9	148.9	152.4	138.7
Apparel	May	135.9	133.8	137.8	119.9
Paper	May	145.6	145.3	144.5	131.1
Printing and Publishing	May	132.0	132.8	133.8	125.9
Chemicals	May	161.8	165.0	165.0	157.6
Durable Goods	May	150.3	149.3	147.4	139.5
Lumber and Wood	May	161.3	161.1	158.1	140.7
Furniture and Fixtures	May	135.8	135.4	137.0	120.7
Stone, Clay, and Glass	May	137.5	136.3	133.1	139.3
Primary Metals	May	102.7	102.5	101.6	99.1
Fabricated Metals	May	112.9	113.0	112.7	111.6
Nonelectrical Machinery	May	161.8	162.9	161.8	148.7
Electrical Machinery	May	254.7	248.7	241.8	241.1
Transportation Equipment	May	146.8	145.4	145.4	126.9
FINANCE AND BANKING					
Loans*					
All Member Banks	June	270	265	264	264
Large Banks	June	219	218	219	224
Deposits*					
All Member Banks	June	237	230	228	220
Large Banks	June	200	187	193	191
Bank Debits*/**	June	343	332	345	306
ALABAMA					
INCOME					
Manufacturing Income	June	139.4	136.4	141.6	117.4
Farm Cash Receipts	May	391.2	227.3	208.3	310.9
EMPLOYMENT					
Nonfarm Employment	June	109.5	109.7	110.4	106.1
Manufacturing	June	98.9	99.5	101.0	95.4
Nonmanufacturing	June	114.2	114.2	114.6	110.9
Construction	June	123.1	123.1	123.0	116.6
Farm Employment	June	83.0	91.9	93.9	72.3
Unemployment Rate (Percent of Work Force)***	June	6.6	7.2	6.8	7.3
Average Weekly Hours in Mfg. (Hrs.)	June	40.8	40.5	40.4	39.1
FINANCE AND BANKING					
Member Bank Loans	June	293	280	279	264
Member Bank Deposits	June	247	241	236	221
Bank Debits**	June	322	316r	327	287
FLORIDA					
INCOME					
Manufacturing Income	June	133.4	136.1	133.5	119.2
Farm Cash Receipts	May	255.7	204.6	255.0	124.5
EMPLOYMENT					
Nonfarm Employment	June	109.4	109.8	110.3	109.8
Manufacturing	June	98.5	99.1	98.1	94.0
Nonmanufacturing	June	111.2	111.6	112.3	112.3
Construction	June	61.2	61.6	63.0	74.8
Farm Employment	June	80.3	75.8	73.8	77.0
Unemployment Rate (Percent of Work Force)***	June	9.6	10.9	11.0	10.4
Average Weekly Hours in Mfg. (Hrs.)	June	40.6	40.9	40.2	39.6
FINANCE AND BANKING					
Member Bank Loans	June	278	280	281	288
Member Bank Deposits	June	258	254	249	244
Bank Debits**	June	346	343r	362	314
GEORGIA					
INCOME					
Manufacturing Income	June	133.0	135.4	129.0	109.6
Farm Cash Receipts	May	261.5	195.2	183.8	197.2
EMPLOYMENT					
Nonfarm Employment	June	102.3	103.0	103.3	100.1
Manufacturing	June	95.7	96.7	96.9	89.0
Nonmanufacturing	June	104.9	105.5	105.7	104.4
Construction	June	70.5	72.5	74.9	76.4
Farm Employment	June	90.4	89.1	84.0	103.7
Unemployment Rate (Percent of Work Force)	June	6.1	6.9	6.8	8.0
Average Weekly Hours in Mfg. (Hrs.)	June	40.2	40.9	39.4	39.2
FINANCE AND BANKING					
Member Bank Loans	June	248	249	250	239
Member Bank Deposits	June	204	194	197	193
Bank Debits**	June	405	408r	417r	361
LOUISIANA					
INCOME					
Manufacturing Income	June	143.9	143.4	142.6	126.4
Farm Cash Receipts	May	596.7	159.3	158.1	323.5
EMPLOYMENT					
Nonfarm Employment	June	105.4	106.6	106.9	104.9
Manufacturing	June	101.1	101.8	101.7	100.4
Nonmanufacturing	June	106.2	107.6	107.9	105.8
Construction	June	105.6	107.4	108.4	104.2
Farm Employment	June	78.4	79.7	79.2	72.6
Unemployment Rate (Percent of Work Force)***	June	7.3	7.8	7.9	7.3
Average Weekly Hours in Mfg. (Hrs.)	June	41.9	41.8	41.1	40.5
FINANCE AND BANKING					
Member Bank Loans*	June	250	240	237	246
Member Bank Deposits*	June	220	216	213	205
Bank Debits*/**	June	295	268	270	271
MISSISSIPPI					
INCOME					
Manufacturing Income	June	153.5	155.8	151.7	128.6
Farm Cash Receipts	May	344.6	194.1	181.7	293.1
EMPLOYMENT					
Nonfarm Employment	June	107.0	107.6	107.7	102.7
Manufacturing	June	101.1	101.6	101.7	92.8
Nonmanufacturing	June	109.8	110.4	110.6	107.5
Construction	June	99.2	102.2	103.0	96.1
Farm Employment	June	64.5	71.3	62.6	59.6

	Latest Month	One Month Ago	Two Months Ago	One Year Ago
Unemployment Rate (Percent of Work Force)***	June	5.5	5.7	5.1	7.5
Average Weekly Hours in Mfg. (Hrs.)	June	39.6	40.2	39.5	39.1
FINANCE AND BANKING					
Member Bank Loans*	June	286	266	252	260
Member Bank Deposits*	June	256	238	232	219
Bank Debits*/**	June	322	303	301	266
TENNESSEE					
INCOME					
Manufacturing Income	June	137.1	136.4	135.2	118.3
Farm Cash Receipts	May	335.0	176.3	182.7	59.1

	Latest Month	One Month Ago	Two Months Ago	One Year Ago
EMPLOYMENT				
Nonfarm Employment	June	103.8	104.2	105.4	102.1
Manufacturing	June	95.6	96.0	97.4	90.9
Nonmanufacturing	June	108.0	108.4	109.5	107.7
Construction	June	67.1	78.1	86.6	90.9
Farm Employment	June	94.3	97.0	99.9	86.6
Unemployment Rate (Percent of Work Force)	June	6.4	7.2	7.0	8.6
Average Weekly Hours in Mfg. (Hrs.)	June	40.8	41.0	39.8	40.0
FINANCE AND BANKING					
Member Bank Loans*	June	277	269	268	271
Member Bank Deposits*	June	235	226	227	218
Bank Debits*/**	June	306	273	281	257

*For Sixth District area only; other totals for entire six states **Daily average basis †Preliminary data r-Revised N.A. Not available
***Seasonally adjusted data supplied by state agencies.

Note: All indexes: 1967 = 100, except mfg. income, employment, and retail sales, 1972 = 100.

Sources: Manufacturing production estimated by this Bank; nonfarm, mfg. and nonmfg. emp., mfg. income and hours, and unemp., U.S. Dept. of Labor and cooperating state agencies; cotton consumption, U.S. Bureau of Census; construction contracts, F. W. Dodge Div., McGraw-Hill Information Systems Co.; pet. prod., U.S. Bureau of Mines; farm cash receipts and farm emp., U.S.D.A. Other indexes based on data collected by this Bank. All indexes calculated by this Bank.

[1]Data have been bench marked and new trading day factors and seasonal factors computed using December 31, 1974 and June 30, 1975 Report of Condition data as bases.

Debits to Demand Deposit Accounts

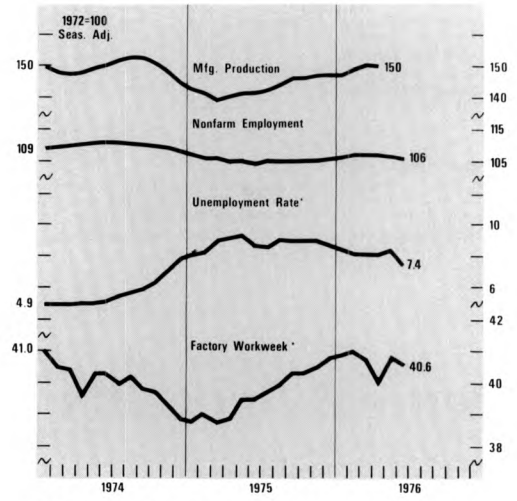
Insured Commercial Banks in the Sixth District

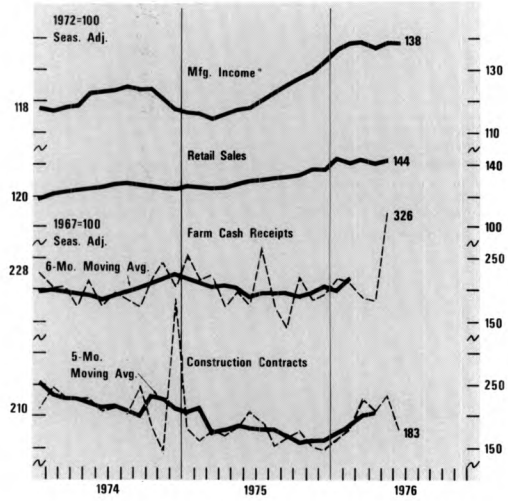
(In Thousands of Dollars)

	June 1976	May 1976	June 1975	Percent Change: June 1976 from May 1976	Percent Change: June 1976 from June 1975	Year to date 6 mos. 1976 from 1975
STANDARD METROPOLITAN STATISTICAL AREA[1]						
Birmingham	5,686,324	5,712,768	5,040,740	− 0	+13	+ 9
Gadsden	133,532	116,749	108,110	+14	+24	+18
Huntsville	499,149	430,353	388,963	+16	+28	+16
Mobile	1,399,821	1,281,138	1,405,973	+ 9	− 0	+ 0
Montgomery	1,063,332	990,783r	808,450	+ 7	+32	+37
Tuscaloosa	302,658	281,667	290,776	+ 7	+ 4	+ 8
Bartow-Lakeland-Winter Haven	970,144	897,504	860,168	+ 8	+13	+11
Daytona Beach	541,357	465,318	504,695	+16	+ 7	+ 4
Ft. Lauderdale-Hollywood	2,224,709	2,304,168	1,918,830	− 3	+16	+30
Ft. Myers	414,637	380,788	429,811	+ 9	− 4	2
Gainesville	323,934	256,675r	255,230	+26	+27	+ 3
Jacksonville	6,341,067	5,638,669	5,175,591	+12	+23	+25
Melbourne-Titusville-Cocoa	513,315	420,796	446,646	+22	+15	+ 3
Miami	8,334,074	7,783,197r	7,122,879	+ 7	+17	+12
Orlando	2,082,657	1,698,816	1,793,555	+23	+16	+19
Pensacola	789,052	694,240	555,674	+14	+42	+37
Sarasota	662,668	573,543	529,270	+16	+25	+ 4
Tallahassee	933,833	1,094,360	923,522	−15	+ 1	+ 2
Tampa-St. Pete	4,712,939	4,317,697r	4,461,600	+ 9	+ 6	+ 8
W. Palm Beach	1,332,697	1,197,159	1,148,943	+11	+16	+ 6
Albany	225,553	193,491	206,184	+17	+ 9	+ 7
Atlanta	24,467,462	22,818,830	21,279,670	+ 7	+15	+15
Augusta	779,746	697,840	635,161	+12	+23	+ 5
Columbus	552,658	516,535	486,451	+ 7	+14	+11
Macon	884,768	792,062	830,340r	+12	+ 7	+ 6r
Savannah	1,578,570	1,298,548	1,032,010	+22	+53	+38
Alexandria	342,602	340,490	325,209	+ 1	+ 5	+ 8
Baton Rouge	2,115,615	1,860,471	2,117,172	+14	− 0	+ 1
Lafayette	490,502	427,304	423,931	+15	+16	+13
Lake Charles	328,959	319,247	279,884	+ 3	+18	+12
New Orleans	6,666,615	5,913,269	5,688,240	+13	+17	+11
Biloxi-Gulfport	390,515	376,749	305,432	+ 4	+28	+21
Jackson	2,170,418	2,014,927	1,678,959	+ 8	+29	+19
Chattanooga	1,396,409	1,402,389	1,237,107	− 0	+13	+ 4
Knoxville	1,905,797	1,499,549	1,493,517	+27	+28	+ 6
Nashville	4,993,958	4,599,211	4,255,918	+ 9	+17	+ 8
OTHER CENTERS						
Anniston	163,532	137,163	123,400	+19	+33	+17
Dothan	228,385	227,625	196,108	+ 0	+16	+21
Selma	101,885	105,772	83,779	− 4	+22	+22r
Bradenton	231,324	197,944	206,629	+17	+12	+ 4
Monroe County	93,975	91,400	111,344	+ 3	−16	−22
Ocala	235,591	210,602	232,388	+12	+ 1	+ 1
St. Augustine	52,996	39,257	45,712	+35	+16	+ 6
St. Petersburg	1,094,095	1,028,625	1,007,793	+ 6	+ 9	+ 9
Tampa	2,528,123	2,318,154	2,397,802	+ 9	+ 5	+ 8
Athens	202,272	170,947	171,838	+18	+18	+15
Brunswick	141,826	126,230	126,361	+12	+12	+ 9
Dalton	233,025	206,803	175,354	+13	+33	+25
Elberton	38,218	31,471	33,915	+21	+13	+25
Gainesville	199,061	180,970	176,753	+10	+13	+15
Griffin	84,838	79,902	68,614	+ 6	+24	+13
LaGrange	41,889	40,074	40,517	+ 5	+ 3	+17
Newnan	58,013	54,176	52,344	+ 7	+11	+14
Rome	179,317	163,228	172,566	+10	+ 4	+13
Valdosta	131,159	117,989	114,581	+11	+14	+11
Abbeville	22,589	20,525	17,843	+10	+27	+ 9
Bunkie	14,702	13,440	15,519	+ 9	− 5	− 4
Hammond	124,181	108,090	109,770	+15	+13	− 5
New Iberia	96,695	99,708	79,719	− 3	+21	+12
Plaquemine	22,228	25,958	31,840	−14	−30	−14
Thibodaux	61,815	69,176	63,106	−11	− 2	− 2
Hattiesburg	171,021	168,937	150,610	+ 1	+14	+17
Laurel	104,366	93,132	76,735	+12	+36	+19
Meridian	139,870	137,983	146,063	+ 1	− 4	+ 8
Natchez	68,726	66,849	57,990	+ 3	+19	+17
Pascagoula-Moss Point	170,601	170,536	178,376	+ 0	− 4	+ 2
Vicksburg	98,585	85,553	78,338	+15	+26	+22
Yazoo City	60,893	42,439	46,321	+43	+31	+11
Bristol	217,439	201,624	160,285	+ 8	+36	+41
Johnson City	182,487	167,585	172,604	+ 9	+ 6	+ 7
Kingsport	413,043	370,279	357,896	+12	+15	+23
DISTRICT TOTAL	107,514,516	99,285,826r	92,868,118r	+ 8	+16	+13
Alabama	12,947,326	12,330,190r	11,290,839	+ 5	+15	+11
Florida	32,566,958	30,149,914r	28,560,313	+ 8	+14	+14r
Georgia	33,246,065	30,881,209r	28,590,053r	+ 8	+16	+16
Louisiana[2]	11,837,690	10,662,298	10,553,298	+11	+12	+ 8
Mississippi[2]	4,477,951	4,095,681	3,587,516	+ 9	+25	+19
Tennessee[2]	12,438,526	11,166,534	10,286,099	+11	+21	+10

[1]Conforms to SMSA definitions as of December 31, 1972.
[2]District portion only.

District Business Conditions





*Seas. adj. figure; not an index

Latest plotting: June, except mfg. production, April, retail sales and farm cash receipts, May.

The economy showed mixed behavior. Most District industries reported job losses, but retail sales increased despite a slight decline in manufacturing income. Inflows of consumer savings slowed and construction activity dipped, but higher crop prices improved the economic outlook for farmers.

Both the unemployment rate and nonfarm employment declined in June. A statistical quirk influenced the change in the unemployment rate. Manufacturing jobs again decreased, with both durable and nondurable industries sharing losses. Only printing and publishing, paper, and primary metals showed job gains. Nonmanufacturing employment was also weak, except for an increase in Federal Government jobs. Weekly earnings declined slightly as the factory workweek became shorter.

Manufacturing income fell slightly during June, but retail sales rose, reflecting strong income gains during previous months. Department store sales declined, and new auto registrations dropped during May. The rise in June's retail sales suggests that strength may have also returned to auto and department store sales.

Consumers' savings deposit inflows weakened at District member banks in June and early July. This is in contrast to nearly two years of strong consumer time and savings deposit gains at District banks. Bank lending maintained a moderate advance at the small- and medium-size banks, while security loans continued to rise at the larger banks. District banks reduced their holdings of securities, mostly Treasury issues, in June.

Increased crop prices and growth in cash receipts from livestock marketings brightened economic prospects for farmers. Crop receipts were raised by recent price hikes for soybeans, cotton, wheat, and vegetables, but the total volume still lagged behind 1975's comparable level. The lag was most severe in Georgia and Louisiana. Production prospects were unusually favorable for all crops except cotton. Broiler placements continued to exceed year-ago levels, but the margin narrowed in late July. At the end of June, bank loans in agricultural areas were one-eighth above year-ago levels.

The value of construction contracts dipped sharply in June. Residential contracts declined moderately for the second month in a row. Of the region's six states, only Alabama showed gains in the value of residential contracts during those two months. Nonresidential contracts fell sharply after jumping in May. Deposit inflows at savings and loan associations slowed in May and June but appear to have come back strongly in July. Residential mortgage rates ceased their upward drift.