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# Manufacturing Growth "Down South"

by William D. Toal

Mentioning the Southeast's industrialization conjures up in the minds of many observers rocket blasts from Florida's East Coast, the rise of metropolitan centers, and the growth of low-wage manufacturing.<sup>1</sup> Although none of these notions are mythical, initial impressions can give an incomplete picture. For example, because of the Southeast's past rural-to-urban migration patterns, one might expect most of the last decade's rapid manufacturing job growth to be located in large cities. Furthermore, one might expect that most of this growth would be centered in low-wage industries. Is this, in fact, the case? Data published by the U.S. Department of Labor and Commerce help us put these initial impressions to the test. The findings, though in many instances confirming our initial impressions, do uncover some surprises.

As many observers have noted, manufacturing growth "down South" has been spectacular, whether one compares this growth with that of the past or with the increase in manufacturing nationally. To illustrate: Based on percentage gains in manufacturing jobs, Southeastern manufacturing during the Sixties experienced faster increases than in the Fifties and growth continued faster than nationally. In fact, the high growth rate in Southeastern manufacturing jobs came close to matching the growth rate in nonmanufacturing jobs; nationally, it was only about one-half as great. Otherwise, the employment patterns followed the trend of the Fifties, with the actual number of farm jobs continuing to fall (Table 1).

Rapid employment gains brought about by the opening of new plants and by the expansion of existing ones are not the only evidence of rapid industrialization in the Southeast. Factory payrolls measure the direct earning power provided by manufacturing activity. By this measure also, Southeastern manufacturing has advanced at a faster rate than nationally in the Sixties as, indeed, it has during the entire postwar period.

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<sup>1</sup>The Southeast is defined here as encompassing those states entirely or partially within the Sixth Federal Reserve District: Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee.

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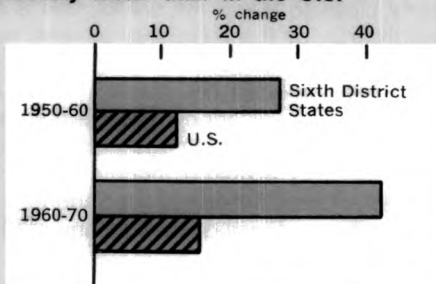
### Manufacturing growth expanded at a vigorous pace through most of the Sixties



Another measure of manufacturing growth is provided by value-added data published in the *Census of Manufacturers*. Simply stated, value added measures the value of output produced minus the cost of materials. The growth of value added thus measures the growth in total output (measured in dollars) generated by the manufacturing sector. As in the Forties and Fifties, the Sixties saw value added in Southeastern manufacturing grow at a more rapid rate than nationally. Again, this confirms our impressions of rapid manufacturing growth "down South."

Of course, this growth in manufacturing did not just happen but stemmed from conditions present in the Southeast that stimulated manufacturing growth. A large pool of labor provided the base

### Southeastern manufacturing jobs increased relatively faster than in the U.S.



for some of this industrial growth. Probably more important, however, are the abundant natural resources that have provided the necessary raw materials. Moreover, as the Southeastern economy expanded, factories have grown and new plants have been built to satisfy the region's own demands for manufactured goods. Each of these influences is inextricably intertwined with the other since the initial expansion of manufacturing-generated income stimulated demand for manufactured goods; this, in turn, caused a further advance in regional manufacturing.

### Growth of Average Manufacturing Pay

Gains in average manufacturing pay (i.e., total manufacturing payrolls divided by employment) are still another gauge of manufacturing growth. Average pay, which is probably most indicative of the standard of living provided by the manufacturing sector, also indicates that Southeastern manufacturing progressed more than nationally in the late Fifties and Sixties.

At the same time, there were large additions to manufacturing capital, judging from heavy increases in expenditures for new plant and equipment. Between the Census (manufacturing) years of 1958 and 1967, annual new plant and equipment spending rose 170 percent in the Southeast; nationally, it rose 127 percent. These expenditures were particularly important in raising Southeastern manufacturing productivity, measured by output per man-hour; this, in turn, fostered large gains in average pay.

Despite this more-rapid-than-national growth, Southeastern manufacturing average pay amounted to only 81 percent of the national total in 1967; in 1958, it was only 72-1/2 percent. Many explanations can be given for these differences in average pay. Variations in the "mix" or importance of manufacturing industries in different parts of the country is possibly one of the more important. Still, adjusting for differences in manufacturing mix raises the average pay in Southeastern manufacturing to only 87 percent of the national figure.<sup>2</sup> Thus, only about 30 percent of the discrepancy between national and Southeastern average pay levels in 1967 can be attributed to the composition of Southeastern manufacturing.

Obviously, then, other influences must be significant in explaining the lower average manufacturing pay in the Southeast. Explanations

<sup>2</sup>The adjustment for manufacturing mix was accomplished by weighting average pay in each Southeastern two-digit Standard Industrial Classification (SIC) manufacturer by the distribution of manufacturing employment that exists at the national level. Of course, differences in mix may exist within each two-digit industry and probably account for a portion of the differences in regional and national average pay for each of these two-digit manufacturing industries. Data restrictions, however, do not allow a more detailed breakdown.

TABLE 1  
EMPLOYMENT  
(Thousands)

Annual Average

	Farm			Manufacturing			Nonmanufacturing <sup>1</sup>		
	1950	1960	1970	1950	1960	1970	1950	1960	1970
Alabama	277	154	90	216	237	324	392	539	682
Florida	107	121	113	98	206	324	595	1,113	1,831
Georgia	320	183	101	284	340	462	503	710	1,083
Louisiana	213	151	76	140	142	175	481	647	870
Mississippi	459	239	139	86	119	181	220	284	395
Tennessee	363	253	153	247	315	466	493	609	861
District States	1,739	1,101	672	1,071	1,362	1,934	2,684	3,905	5,722
United States	9,926	7,057	4,529	14,967	16,796	19,369	29,771	37,438	51,247

<sup>1</sup>Nonmanufacturing industries include construction, transportation and communications, wholesale and retail trade, finance, insurance, and real estate, services, and government.

Source: U. S. Department of Labor  
U. S. Department of Agriculture

that have been offered include lower costs of living, less unionization, and a more available labor supply than for the nation as a whole.

**Whatever the reasons, one thing is clear.**

**The growth in manufacturing has greatly fostered Southeastern economic progress by expanding jobs, payrolls, and output more rapidly than nationally, both in the Sixties and in earlier postwar periods. Manufacturing has thus generated income, which has helped to close the income gap between the Southeast and the nation. As the Seventies rolled around, Southeastern per capita income stood at 82 percent of the nation's; a decade earlier it reached 74 percent; at the start of the Fifties it was only 68 percent.**

#### Importance of Southeastern Manufacturing

One might expect from the picture painted so far, that industry has become a more important activity in the Southeast than in most other regions. But this is not the case; despite its faster growth, manufacturing is still somewhat less important than it is nationally. Employment in this sector accounted for 22 percent of Southeastern nonfarm employment in 1970, compared with 24 percent in the nation. And, whereas manufacturing payrolls, in 1970, amounted to 16 percent of Southeastern personal income, they amounted to 20 percent at the national level.

Besides its direct contribution to employment, payrolls, and output, Southeastern manufacturing is an important stimulus to many nonmanufacturing industries. Between 1960 and 1970, nearly two million new jobs were added in the Southeast's nonmanufacturing sector. A sizable part of this increase was probably related to manufacturing growth. Many nonmanufacturing employers (i.e., services, trades, construction, and government) are supported by this sector. For

example, an accounting firm may handle the book-keeping of several large manufacturers. Moreover, demand generated from manufacturing income stimulates a good bit of growth in nonmanufacturing (as indicated by the growth of retail trade and residential construction activity around major manufacturing areas).

Besides these indirect aspects, manufacturing activity also produces income in the form of rents for leased property, interest payments to lenders, and dividends to owners of industrial firms. By looking at the gain in value added minus payrolls between 1958 and 1967 (the period for which data are available from the *Census of Manufacturers*), we can approximate these additional income contributions.<sup>3</sup> Judging from these figures, rent, interest, and dividend income from manufacturing appear to have gone up at a faster rate in the Southeast than they have nationally, and, percentagewise, more rapidly than Southeastern manufacturing payrolls.

Since these additional income streams may flow to people living hundreds or thousands of miles from where actual production is taking place, the Southeast does not benefit as much from these portions of manufacturing income as it might appear. Although the manufacturing worker must live fairly close to where he works, this is not necessarily true of the recipients of rent, interest, and dividends. Because some of the income generated in the Southeast has flowed out of the region, the region's economy has been stimulated less than it would have been otherwise. (Conversely, rent, interest, and dividend income generated from manufacturing outside of the Southeast flows into this region and may counteract any outflow.)

<sup>3</sup>These additional payments must be made from the portion of value added remaining after direct payment of wages and salaries. Thus, the growth of value added minus payrolls reflects the growth of these other income payments.

## Changing Growth Patterns

Rapid gains have been accompanied by changes in the characteristics of the manufacturing sector. As one might suspect, industry in the Southeast, as elsewhere, has become increasingly capital-intensive. Most major Southeastern manufacturers have shared in this increase in capital intensity, indicated by the sharper increase in value added than in payrolls for most major industries.<sup>4</sup>

Because of this shift to a more capital-intensive type of manufacturing, a rising portion of the Southeastern manufacturing work force is employed in supervisory and clerical jobs and a smaller proportion in production line jobs. (Although these nonproduction line workers moved into the manufacturing work force at a high rate during the Sixties, the pace was less than in the late Forties and Fifties.) Moreover, the average pay of nonproduction workers is approximately 60 percent higher than it is for production workers, thus partially explaining the sharp rise in Southeastern manufacturing payrolls and average pay.

Industrialization has also brought about changes in the location of the Southeast's manufacturing activity among metropolitan and nonmetropolitan areas. In the late Fifties and the Sixties, manufacturing jobs and payrolls grew more rapidly in metropolitan areas. Factory output,

on the other hand, showed larger percentage gains in nonmetropolitan areas. These seemingly confusing growth trends are readily explainable, however, when we note that during the late Fifties nonmetropolitan manufacturing was very labor-intensive, accounting for over one-half of the Southeast's factory jobs but producing only about one-third of its output. Since that time, nonmetropolitan areas, as witnessed by their faster growth of output, have succeeded in acquiring a more capital-dependent type of manufacturing.

As the Sixties progressed, nonmetropolitan manufacturing growth accelerated, whereas the pace of activity in the metropolitan areas expanded at rates near those of the late Fifties and early Sixties. Between 1963 and 1967, manufacturing jobs, payrolls, and output were *all* growing faster in nonmetropolitan areas. Every one of these changes indicate that Southeastern nonmetropolitan areas have become increasingly important as manufacturing centers.<sup>5</sup>

## A Wide Spectrum of Industrialization

A growing diversity has accompanied the changing character of Southeastern manufacturing during the last ten years. Today, a much wider variety

<sup>4</sup>Over the long run, if the payroll portion of output or value added declines, we can generally infer that manufacturing is becoming more capital intensive. This is exactly what happened between 1958 and 1967 in both Southeastern and U.S. manufacturing in general and among most major manufacturing industries.

<sup>5</sup>Since 1958, several Standard Metropolitan Statistical Areas (SMSA's) in the Southeast have been expanded to include neighboring counties; moreover, several new SMSA's have been established. Thus, of the total number of counties and parishes (in the case of Louisiana) in the Southeast, the proportion that are metropolitan has increased. Because of this, the rapid growth of nonmetropolitan manufacturing is all the more remarkable.

TABLE 2  
SUMMARY TABLE  
(Percent Change in Employment, Payrolls, Average Pay,  
and Value Added, 1958 to 1967)

	Employment		Payrolls		Average Pay <sup>2</sup>		Value Added	
	District	U.S.	District	U.S.	District	U.S.	District	U.S.
All Manufacturing <sup>1</sup>	39.9	20.6	107.7	68.7	48.4	40.0	122.1	85.1
Food Processing	11.2	- 4.0	58.2	32.2	42.3	37.7	72.9	50.4
Textiles	11.1	2.9	75.3	49.2	57.8	45.1	104.0	67.4
Apparel	74.5	14.9	148.0	55.6	42.1	35.5	164.8	67.7
Lumber and Wood	-16.6	- 5.4	46.9	39.4	76.2	47.3	65.2	54.8
Furniture and Fixtures	57.3	20.1	113.2	59.7	35.5	33.0	134.3	74.0
Paper	22.0	15.9	69.4	60.8	38.9	38.7	50.9	72.1
Printing	37.6	19.2	80.3	59.3	31.0	33.6	93.4	80.0
Chemicals	33.7	20.5	83.9	63.5	37.5	35.7	127.3	91.3
Petroleum Refining	-19.5	-21.0	9.8	8.9	36.4	37.8	77.5	115.4
Rubber	126.8	48.6	174.3	90.7	21.0	28.4	159.6	107.5
Leather	63.8	- 5.9	132.1	27.3	41.7	35.2	135.8	38.4
Stone, Clay, and Glass	19.5	6.8	72.4	47.9	44.2	38.5	75.4	50.6
Primary Metals	29.3	17.3	65.6	56.8	28.1	33.7	57.0	73.1
Fabricated Metals	60.6	26.5	116.7	71.8	35.0	35.8	140.5	91.1
Machinery, except Electrical	137.2	38.1	186.6	94.5	20.8	40.9	292.5	124.2
Electrical Machinery	212.1	64.3	312.1	125.3	32.1	37.1	306.8	130.5
Transportation Equipment	73.2	17.4	138.3	65.2	37.6	40.7	185.8	84.0

<sup>1</sup>Standard Industrial Classification Manual, 1972 (Washington, D. C., U. S. Government Printing Office, 1972)

<sup>2</sup>Average pay equals total manufacturing payrolls divided by the number of manufacturing employees.

Source: Census of Manufacturers, 1958, 1967

# STATISTICAL DISTRIBUTIONS

Percent Distribution of Employment, Payrolls, and Value Added by Manufacturing Industries, 1958 and 1967

## Employment

	Alabama		Florida		Georgia		Louisiana		Mississippi		Tennessee		District States		U. S.	
	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967
	<b>All Manufacturing</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Food Processing</b>	8.7	8.2	21.3	15.5	13.2	10.8	22.1	18.0	12.1	9.1	10.6	7.8	13.8	10.9	10.7	8.5
<b>Textiles</b>	17.2	13.9	0.5	0.7	30.2	25.8	—	—	4.6	4.1	10.5	7.5	13.7	10.9	5.6	4.8
<b>Apparel</b>	9.6	14.8	3.9	5.8	12.5	15.7	4.0	4.3	22.0	22.2	13.5	16.3	10.9	13.6	7.4	7.0
<b>Lumber and Wood Furniture and Fixtures</b>	10.4	6.8	7.9	4.2	8.4	4.6	12.5	8.5	20.7	12.7	6.2	3.7	9.7	5.8	3.7	2.9
<b>Paper</b>	1.3	1.5	4.0	2.6	2.2	2.2	1.0	0.9	4.5	6.7	4.3	5.2	2.8	3.2	2.2	2.2
<b>Printing</b>	4.3	5.2	7.7	5.7	5.4	5.4	12.3	8.8	4.8	3.5	3.2	3.0	5.7	5.0	3.4	3.3
<b>Chemicals</b>	2.3	2.2	7.5	7.1	3.1	3.0	3.9	3.5	2.0	1.6	4.3	4.2	3.8	3.7	5.4	5.3
<b>Petroleum Refining</b>	3.6	4.1	8.5	7.3	3.1	2.8	11.8	11.6	3.2	3.2	13.5	12.5	7.3	6.9	4.4	4.3
<b>Rubber</b>	0.4	0.3	0.4	0.3	0.2	0.2	10.5	6.0	—	—	—	0.2	1.3	0.8	1.1	0.7
<b>Leather</b>	2.5	2.7	0.4	1.3	0.4	0.9	0.1	0.1	—	2.4	1.8	2.3	1.0	1.7	2.2	2.7
<b>Stone, Clay, and Glass</b>	—	—	0.5	0.9	1.1	1.1	—	—	—	1.6	4.2	4.0	1.3	1.5	2.2	1.7
<b>Primary Metals</b>	3.6	2.9	7.2	4.4	3.1	3.3	4.8	4.4	3.7	3.1	3.7	3.4	4.1	3.5	3.5	3.0
<b>Fabricated Metals</b>	16.5	15.4	0.9	1.1	1.1	1.4	2.6	2.6	0.5	0.8	3.9	3.9	4.7	4.3	6.8	6.6
<b>Machinery, except Electrical</b>	5.4	5.6	8.0	6.9	2.2	3.4	4.3	6.3	2.5	5.1	5.5	5.6	4.6	5.3	6.6	6.9
<b>Electrical Machinery</b>	0.3	3.0	2.3	4.4	2.6	2.7	2.3	3.1	1.9	4.7	2.8	3.8	2.1	3.5	8.4	9.6
<b>Transportation Equipment</b>	1.7	1.9	2.9	8.6	1.2	2.0	0.2	1.6	2.8	6.2	3.8	7.6	2.1	4.8	7.1	9.7
<b>Transportation Equipment</b>	7.5	5.6	5.6	8.8	7.8	10.4	5.1	9.2	10.4	8.4	2.0	4.0	6.1	7.5	9.8	9.5

## Payrolls

	Alabama		Florida		Georgia		Louisiana		Mississippi		Tennessee		District States		U. S.	
	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967
	<b>All Manufacturing</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Food Processing</b>	7.8	7.1	12.8	12.7	12.8	9.9	18.2	14.3	11.5	8.9	11.0	8.2	13.1	10.0	9.7	7.6
<b>Textiles</b>	12.4	11.1	0.2	0.5	25.1	22.3	—	—	3.9	3.6	8.2	6.0	10.4	8.8	3.7	3.3
<b>Apparel</b>	5.6	8.7	1.7	3.5	9.5	10.5	2.3	2.5	15.0	15.0	8.0	10.2	6.9	8.3	4.5	4.2
<b>Lumber and Wood Furniture and Fixtures</b>	5.6	4.6	3.3	2.9	5.3	3.2	7.1	5.4	12.6	11.4	4.0	2.7	5.9	4.2	2.5	2.1
<b>Paper</b>	1.0	1.2	2.1	1.9	2.1	1.9	0.7	0.5	4.3	5.9	3.5	4.2	2.4	2.5	1.8	1.7
<b>Printing</b>	5.8	7.1	6.0	6.6	7.5	7.1	13.7	10.1	11.2	5.0	4.1	3.8	7.8	6.4	3.5	3.3
<b>Chemicals</b>	2.5	2.3	5.5	6.7	4.2	3.7	3.7	3.2	2.3	1.6	5.2	4.6	4.5	4.0	5.7	5.4
<b>Petroleum Refining</b>	4.4	5.0	6.2	7.7	3.9	3.5	15.7	15.4	4.3	4.2	20.4	17.5	10.2	10.1	5.0	4.9
<b>Rubber</b>	0.3	0.4	0.3	0.2	0.2	0.2	15.2	8.7	—	—	—	0.2	2.2	1.2	1.4	0.9
<b>Leather</b>	3.7	3.5	0.1	1.0	0.3	0.8	0.1	0.1	—	3.3	2.3	2.6	1.3	1.8	2.1	2.5
<b>Stone, Clay, and Glass</b>	—	—	0.2	0.5	0.8	0.7	—	—	—	1.3	3.0	3.1	0.9	1.1	1.4	1.1
<b>Primary Metals</b>	3.7	2.9	4.4	3.9	3.1	3.2	4.8	4.3	4.0	3.4	4.1	3.9	4.3	3.6	3.3	2.9
<b>Fabricated Metals</b>	24.6	20.6	0.5	1.0	1.2	1.5	3.6	2.7	0.5	0.8	5.3	5.0	6.8	5.5	8.0	7.4
<b>Machinery, except Electrical</b>	6.5	6.0	5.4	6.7	2.6	3.6	4.8	6.7	2.7	5.6	6.3	6.2	5.4	5.7	6.9	7.0
<b>Electrical Machinery</b>	2.2	3.1	1.5	4.7	3.2	3.1	2.3	3.1	2.4	5.7	3.4	4.4	2.8	3.9	9.3	10.8
<b>Transportation Equipment</b>	1.6	2.1	2.1	9.6	1.7	2.4	0.0	1.4	3.0	5.9	4.4	7.2	2.4	4.9	7.3	9.8
<b>Transportation Equipment</b>	9.8	6.5	3.8	9.8	13.7	16.6	5.5	9.4	17.4	12.6	2.2	4.2	8.4	9.7	11.7	11.5

## Value Added

	Alabama		Florida		Georgia		Louisiana		Mississippi		Tennessee		District States		U. S.	
	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967	1958	1967
	<b>All Manufacturing</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Food Processing</b>	8.6	7.4	22.8	17.0	16.4	11.9	19.4	16.3	15.2	9.6	11.9	9.3	15.2	11.8	12.5	10.2
<b>Textiles</b>	10.1	9.1	0.4	0.3	21.1	21.2	—	—	3.1	3.5	7.1	5.2	8.4	7.7	3.4	3.1
<b>Apparel</b>	5.1	7.2	2.1	2.9	8.3	8.8	1.7	1.6	11.8	10.7	6.2	8.4	5.6	6.6	4.2	3.8
<b>Lumber and Wood Furniture and Fixtures</b>	4.4	4.1	4.0	2.6	4.5	2.9	4.7	3.8	14.4	10.1	3.0	2.1	4.8	3.5	2.3	1.9
<b>Paper</b>	0.9	1.0	2.7	1.7	1.8	1.6	0.5	0.4	4.4	5.6	2.8	3.4	2.0	2.1	1.7	1.6
<b>Printing</b>	6.3	9.2	10.7	7.9	10.9	9.3	13.0	9.1	8.7	4.5	5.0	4.4	8.8	6.0	4.0	3.7
<b>Chemicals</b>	2.5	2.4	7.3	6.1	3.7	3.3	3.3	2.6	2.1	1.5	4.4	3.8	4.0	3.5	5.6	5.5
<b>Petroleum Refining</b>	7.9	11.9	16.5	12.7	6.2	6.6	21.7	24.4	8.4	9.6	24.2	23.5	14.7	15.0	8.7	9.0
<b>Rubber</b>	0.5	0.5	0.5	0.2	0.3	0.3	14.1	12.4	—	—	—	0.2	2.4	1.9	1.8	2.1
<b>Leather</b>	5.5	5.4	0.3	0.9	0.4	1.4	0.1	0.1	—	3.1	3.0	2.4	1.9	2.2	2.3	2.6
<b>Stone, Clay, and Glass</b>	—	—	0.4	0.4	0.7	0.7	—	—	—	1.6	3.3	2.9	1.0	1.0	1.3	1.0
<b>Primary Metals</b>	4.8	3.2	7.5	5.0	3.4	3.4	4.9	3.8	5.6	3.6	4.4	4.0	4.9	3.8	3.9	3.2
<b>Fabricated Metals</b>	26.5	18.1	0.8	1.2	0.8	1.6	5.9	3.9	0.4	1.0	5.5	4.6	7.4	5.2	8.2	7.6
<b>Machinery, except Electrical</b>	6.1	6.1	7.4	6.1	2.3	3.2	3.7	4.8	3.1	6.5	5.0	4.8	4.7	5.0	6.7	6.9
<b>Electrical Machinery</b>	0.2	2.9	2.0	5.7	3.2	2.9	1.8	2.2	2.8	6.6	3.0	4.0	2.2	3.9	8.8	10.6
<b>Transportation Equipment</b>	1.9	2.0	2.7	7.6	2.0	2.7	0.1	1.1	4.3	5.9	5.6	9.7	2.8	5.1	7.5	9.4
<b>Transportation Equipment</b>	5.9	4.6	4.0	7.2	12.2	15.8	3.5	6.2	11.0	7.6	2.0	3.8	6.1	7.8	10.8	10.8

SOURCE: Census of Manufacturers, 1958 and 1967

of products is being produced in this region of the country, ranging from ladies' unmentionables to industrial chemicals.

The strong expansion of almost all major Southeastern manufacturers lends evidence to this broadening of the industrial base. Then, too, manufacturing expansion has not been centered only in what have been traditionally called "low-wage industries"—apparel, leather, lumber, textiles, and furniture. As Table 3 points out, lumber, textiles, and furniture were far from being rapidly growing Southeastern industries. Indeed, lumber employment declined and even fast-growing apparel and leather ranked behind machinery, rubber, and transportation equipment in employment increases between 1958 and 1967.

Actually, between 1958 and 1967, every major Southeastern industry except two—lumber and petroleum refining—showed employment gains. Each of these, except lumber, had larger percentage gains in employment and payrolls or smaller losses (in the case of petroleum employment) than their national counterparts. Except for paper, petroleum refining, and primary metals, output (measured by value added) advanced at a faster rate than nationally.

As shown on page 134, in the late Fifties, food processing was the Southeast's most important manufacturer in terms of employment, payrolls, and output. Food processing also ranked at the top nationally.

Changing demand patterns and growth of technology have caused the rise and fall of many manufacturers. (A popular example of these changing conditions is that the buggy whip manufacturer is less important than he was fifty years ago.) Consequently, the industrial mix gradually changed throughout the Sixties. By 1967, apparel had become the most important Southeastern employer. The production of men's and boys' furnishings, along with work clothing, provided the largest portion of these jobs. Food processing and textiles were the next most important employers. But in terms of payrolls generated and value added, chemicals had become the most important industry, with food processing ranking second and transportation equipment, third. Industrial chemicals (i.e., alkalis, chlorine, industrial gases, pigments, and coal tars) made up the lion's share of Southeastern chemical production.

Nationally, in the late Sixties, food processing was replaced as the most important industry by equipment and machinery (i.e., electrical and nonelectrical machinery and transportation equipment) in terms of employment, payrolls, and output. These industries also have become more important in the Southeast. Thus, the picture is one of growing diversity, with the relatively capital-intensive chemical industry becoming the

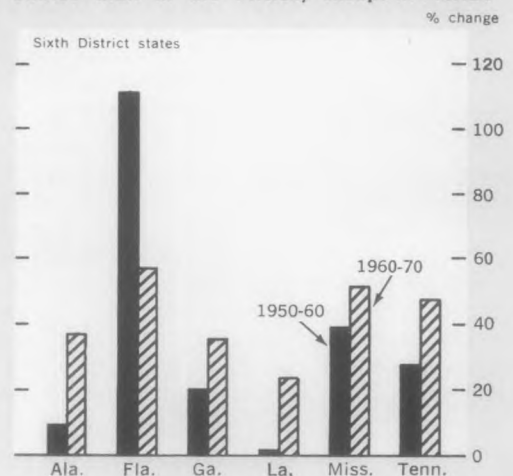
dominant Southeastern manufacturer, based on value added and payrolls, and the relatively labor-intensive apparel industry developing into the Southeast's largest manufacturing employer. (Rankings of manufacturing industries according to 1971 employment data are substantially the same as in 1967. Complete distributions of manufacturers by employment, payrolls, and value added are given on page 134.)

### Growth Among the States

As one might suspect, manufacturing growth has not been evenly distributed among all Southeastern states. Rather, a mixed pattern of expansion has prevailed as manufacturers took advantage of the diverse bounties of natural resources, labor, and markets in the individual states. Whenever we speak of growth of any sort, Florida usually leads the way; manufacturing growth was no exception. In terms of either jobs, payrolls, or output, Florida's manufacturing growth was the Southeast's fastest in the Sixties, as it was in the Fifties. But for the second consecutive decade, Louisiana lagged behind the other Southeastern states in expanding manufacturing employment, payrolls, and output. However, even the Bayou State exceeded national manufacturing growth.

Despite slower rates of expansion, Tennessee and Georgia were still able to rank at the top in providing the Southeast with manufacturing jobs. The two states switched rankings between 1960 and 1970, with Tennessee gaining the number one spot in 1970 (see Table 1). The only other changes taking place were among the smaller Southeastern manufacturing states, where Mississippi moved

Manufacturing jobs increased at a faster rate in the Sixties than in the Fifties, except in Florida



**TABLE 3**  
**Both High- and Low-Wage Manufacturing Have Shown Rapid Growth**

	Employment		Average Pay Per Employee	
	Percent Change 1958 to 1967	Rank (Measured by Growth)	\$ Amount in 1967	Rank in 1967
Electrical Machinery	212.1	1	5,726	10
Machinery, except Electrical	137.2	2	6,158	6
Rubber	126.8	3	6,115	7
Apparel	74.5	4	3,390	17
Transportation Equipment	73.2	5	7,198	3
Leather	63.8	6	3,876	16
Fabricated Metals	60.6	7	5,933	8
Furniture and Fixtures	57.3	8	4,317	14
Printing	37.6	9	5,902	9
Chemicals	33.7	10	7,275	2
Primary Metals	29.3	11	7,036	5
Paper	22.0	12	7,137	4
Stone, Clay, and Glass	19.5	13	5,654	11
Food Processing	11.2	14	5,053	12
Textiles	11.1	15	4,475	13
Lumber and Wood	-16.6	16	3,998	15
Petroleum Refining	-19.5	17	8,644	1

NOTE: A Spearman rank correlation test was performed to examine any correlation that might exist among industries between manufacturing employment growth and average payrolls. No significant correlation was found between the industry rankings of employment growth and 1958 average pay (not shown here) or employment growth and 1967 average pay. Source: Census of Manufacturers, 1958, 1967

ahead of Louisiana in the size of its total manufacturing work force.

Part and parcel of these different rates of expansion are the variations in manufacturing mix among the individual Southeastern states. Apparel, the Southeast's overall most important manufacturing employer, is the largest job provider in only Mississippi and Tennessee. The rapid expansion of Georgia's carpet industry has maintained textiles as the state's largest employer. In Florida and Louisiana, food processing continues to be the biggest. Florida's citrus industry, along with canning vegetables, provides the most jobs in that state's food processing industry. Primary metals is Alabama's largest employer; the steel plants and foundries around the Birmingham and Gadsden areas account for most of these jobs. Indeed, manufacturing is truly a many-faceted sector in the Southeast.

### First Impressions and the Seventies

Have our first impressions about the advance of Southeastern manufacturing been incorrect? Certainly, growth has been more broadly based than one might have initially expected. A growing diversification has brought about rapid gains in all types of manufacturing—both low-wage and high-wage. For the most part, this progress has been more rapid than nationally. Along with this has come a greater reliance on office and supervisory labor and more capital-intensive manu-

facturing. In other words, Southeastern manufacturing is becoming more mechanized. The greater emphasis on nonmetropolitan manufacturing that had developed by the mid-Sixties was probably more surprising, although this will probably continue in the Seventies.

What about the Seventies? As the Southeastern economy slid into the 1970 national recession, the manufacturing sector suffered steady job losses, and this situation did not begin to reverse itself until the latter half of 1971. And as the Seventies progress, Southeastern manufacturing should be ripe for further rapid advances. Whether this growth will match that of the Sixties is debatable. Simply extrapolating past growth forward can often lead to erroneous forecasts, since conditions often change and alter long-run growth paths. For example, the large supply of labor, which has been a stimulant to manufacturing growth in the past, may not be so readily available in the future.

Despite these warnings, several characteristics of the Southeast still augur for a continuation of rapid manufacturing growth: The Southeast still contains a bounty of natural resources; the non-metropolitan areas as they develop should continue to provide choice location sites; and, the lower average pay that still exists in Southeastern manufacturing (even after removal of industry mix effects) should encourage further expansion of Southeastern manufacturing.■



# Petroleum: A Gusher for the Southeast

by **Brian D. Dittenhafer**

From a distance it looks like a giant insect, nodding methodically. Not far away, a maze of valves, pipes and gauges stand a silent vigil. The scene for some science fiction movie in the making? No, the scene at an oil field in the Southeast.<sup>1</sup> The "giant insect" is a pump, methodically producing oil from a stripper well, an oil well that does not have enough natural pressure to move the oil to the surface without the aid of the pump. The maze of valves and pipes, known as a "Christmas tree" to the people who live and work near oil fields, is used to control the flow of oil and natural gas coming from the well, particularly during the early or "flush" phase of production when natural pressure moves the oil to the surface.

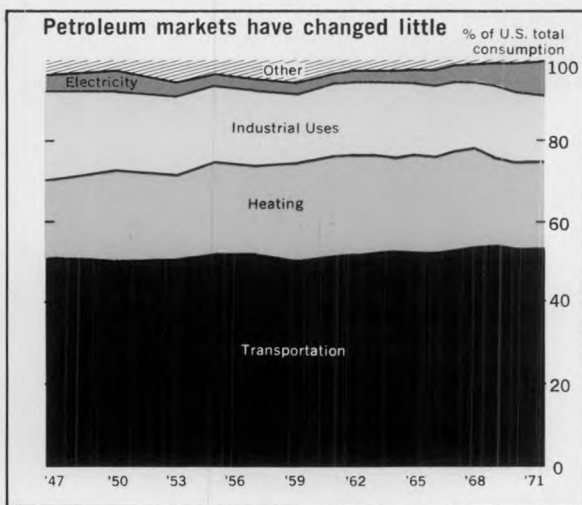
Producing oil in many parts of the Southeast is an old and lucrative business. Crude oil was being produced in Tennessee as long ago as 1860, and continuous production has taken place since 1916. Louisiana has had an oil industry since 1902, while Florida, Alabama, and Mississippi entered the oil business only in the late Thirties and early Forties. Georgia has no oil production within her borders, but exploration is still taking place.

The petroleum industry in the United States began in Titusville, Pennsylvania, with the completion of E. L. Drake's oil well in 1859. That well was the first to prove that oil could be obtained in large quantities by drilling methods. Early crude oil was desired primarily as a source of kerosene, to be used for lighting purposes, because kerosene was far superior to the whale oil then used as a source of light. Besides, with overhunting of whales, the supply of whale oil was running out.

Increasing amounts of oil and grease were also necessary to lubricate the burgeoning numbers of machines coming into use, but it was not until the early 20th Century and the widespread use of the automobile with an internal combustion engine that a huge new demand for a product called

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<sup>1</sup>For the purposes of this article, the Southeast includes those states partially or wholly within the Sixth District: Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee.



gasoline became important. Almost simultaneously, the need for kerosene declined with the invention of the electric light bulb.

The use of distilled fuel oil in home heating opened up another new market for crude oil products during the 1930's, and eventually fuel oil and natural gas almost completely displaced coal as a fuel source for home heating. The transportation demand for petroleum products virtually exploded after World War II, when diesel fuel replaced coal as the source of power for the railroads and as military and civilian aviation began gobbling huge amounts of high octane gasoline and jet fuel.

Thus, the petroleum industry in the U. S. has undergone almost continuous expansion, its growth being only briefly interrupted during the depression of the 1930's. Consumption of crude oil in the United States has more than doubled over the last 25 years, to 208 percent of the 1946 level. During the same period, domestic production has increased only 92 percent. Immediately after World War II, the U. S. produced more oil than it consumed, even though some oil was imported. But, since that time, consumption of petroleum products in this country has increasingly outpaced growth in domestic production. Imports of both crude oil and refined products have been used to make up the difference, increasing from 8 percent of U. S. petroleum consumption in 1946 to 25 percent of consumption in 1971. The United States has thus become more and more dependent upon imports of oil to meet its domestic needs.

### Why Do We Need All That Oil?

Automobile gasoline is the largest single product of the industry, and demand for it has

been the mainspring of the growing demand for oil. Of course, other uses of petroleum products are important, too. But the markets for crude oil products have been expanding at about equal rates, so there has been no shift in the importance of the different uses of petroleum. About 90 percent of the crude oil consumed in the U. S. is used to create energy to provide us with heat, power, and transportation. Usage as a raw material for manufacturing purposes, primarily chemicals, accounts for the rest. Of course, changes in the specific composition of end-use products have taken place within the broad energy and nonenergy sectors. For example, the greater importance of the household and commercial market reflects the more important role fuel oil has assumed in space heating.

Supplying fuel for electric generators has been a minor market for crude oil for many years. This market regularly accounted for 3 to 4 percent of U. S. consumption of petroleum products. Since 1964, however, utility use of residual fuel oil, the main product burned, has increased substantially, particularly on the East Coast. Import controls on cheaper foreign fuels were relaxed in 1964, accounting for much of this increased consumption. Many municipalities have become concerned with pollution caused by coal and other fuels with a high sulphur content. This has spurred the use of petroleum in electricity generation. There is as yet no commercial way to remove sulphur from either the coal to be burned or from the gases generated in the combustion process. On the other hand, sulphur can be easily removed from petroleum fuels used to generate electricity. Therefore, as more and more cities have placed restrictions on the sulphur content of fuels burned within their jurisdiction, the use of residual and distillate fuel oil has increased. In the five-year period between 1966 and 1971, the usage of petroleum fuels for generation of electricity more than doubled, both in absolute amount of fuel used and in the proportion of the market. Thus, petroleum fuel oils are moving into one of coal's major markets as a direct result of the antipollution laws.

Nonenergy use of crude oil products has also increased over the years, even though the proportion of crude oil consumed in this way has remained relatively stable. The end products for which petroleum is a raw material range from basic road asphalt, the demand for which varies with road building activity, to medicine. About half of the crude oil used for raw materials is used as "feedstock" for the petrochemical industry. This industry rearranges the molecules of petroleum raw materials it uses to produce thousands of different products, most of which

are raw materials for further processing. The bulk of the petrochemical manufacturing capability of the United States is located along a 700-mile strip of the Gulf Coast between Brownsville, Texas and New Orleans, Louisiana. This area is especially suited to the production of petrochemicals, since good water transportation, refining facilities, and the raw materials (crude oil and natural gas) are located nearby.

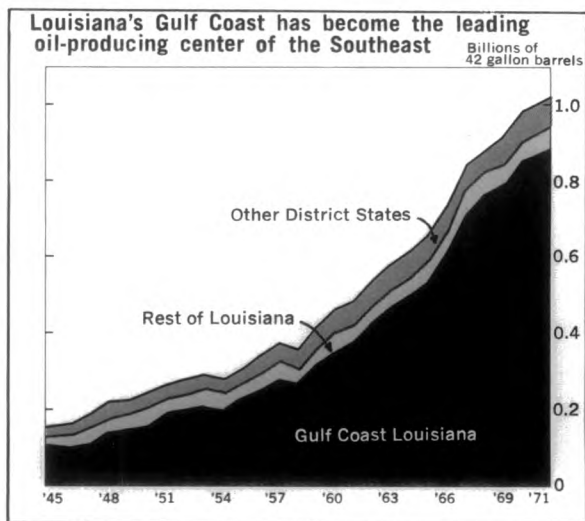
### "In the Sixth District. . ."

Production of crude oil in the states of the Sixth District has more than kept pace with national production since the end of World War II. District output increased more than fivefold during the past thirty years and now supplies 29 percent of U. S. production. Most of this expansion has taken place along Louisiana's Gulf Coast. Louisiana is the second leading oil-producing state in the nation, trailing only fabled Texas in its output. In 1971, Texas accounted for 36 percent of U. S. crude oil production; Louisiana, for 27 percent; and California, the third ranked state, only 11 percent. While Louisiana's production is still going up, the rate of increase in production has slowed markedly in recent years.

Mississippi is the second-largest producer of crude oil in the Southeast and ranks ninth in the nation. Its production has grown at about the national pace, and, consequently, Mississippi has supplied about 2 percent of the nation's output for many years.

Production increases in the other District states have been much less exuberant than in Louisiana and not nearly so steady as in Mississippi. For example, Alabama had a steady expansion of crude oil production until 1964. Since that time, production has lacked expansive thrust and in 1971 was more than 10 percent below the peak level. Tennessee's production, though expanding significantly in the last few years, began from so small a base that it is still not a major industry for that state nor a large factor in either District or national production.

A major new discovery of oil has been made on both sides of the Florida-Alabama border. Geological reports assert that the "Little Escambia Creek" oil field in Alabama and the "Jay" field in Florida produce from the same underground reservoir of crude oil. Final reports are not yet in on the total reserves of this reservoir, but the strike is being hailed by some as the most significant in the continental United States during the last few years. Production in the Jay and Little Escambia Creek fields was delayed by lack of adequate treatment facilities for the "sour" crude that is produced from these wells. Sour crude oil contains high levels of sulphur, and



before the oil can be marketed, the crude must be treated to remove the sulphur. According to industry sources, the sulphur that is reclaimed by this process has almost enough market value to offset the cost of the processing. Several treatment plants are now on stream and more are scheduled for completion shortly, thereby allowing greater production levels in the two adjacent fields. Exploration activity continues at high levels in the area, so prospects for expanded production in Florida and Alabama appear to be very good.

### But Does It Provide Jobs?

Production of crude oil and natural gas is a capital-intensive industry. After a well is "brought in" and "completed," very little labor is required to maintain a steady stream of output. Most of the work is performed by machines, and, therefore, while the number of people employed in the industry in the Southeast is not overwhelming, the Southeast has more than twice its share of the nation's employment in the industry. Employment in exploration and drilling for crude oil and natural gas in the Southeast totaled 47,000 workers in 1970, with more than \$400 million paid in wages. If we include workers engaged in refining and transportation of petroleum and its products, and the petrochemicals industry, then employment was more than 180 thousand workers in 1970, with payrolls amounting to \$1.5 billion. Louisiana and Mississippi accounted for 96 percent of this combined petroleum employment and earnings in the District.

Despite the industry's importance in Louisiana, persons engaged in petroleum production and exploration make up only 5 percent of the State's nonfarm work force and earn about 8 percent

of its taxable nonfarm payroll. But quite aside from the direct employment, petroleum is important to Louisiana because many jobs are created that are related to petroleum production. Most of the 33,000 people employed in the refining and petrochemicals industries in Louisiana would not have jobs in that industry if petroleum supplies were not located nearby. Employment directly related to the production and transformation of petroleum products in Louisiana totaled more than 78,000 people in 1970, or nearly 10 percent of the State's private, nonfarm labor force. This part of the work force earned nearly 11 percent of the nonfarm, taxable payrolls in the State.

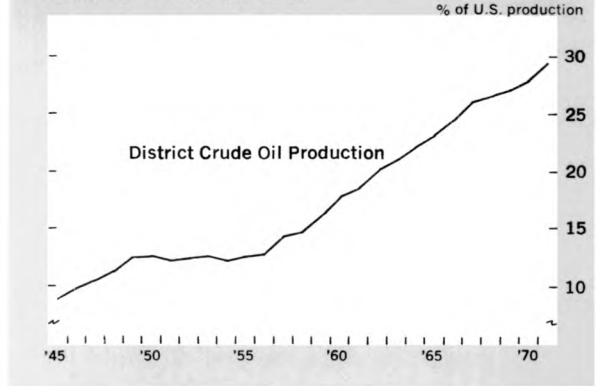
Mississippi was the only other state in the District in which employment in production of petroleum and natural gas exceeded one percent of industrial employment, amounting to 4,700 workers in 1970. These workers earned 1.6 percent of Mississippi's taxable payrolls. Adding petroleum-related employment to direct employment, we find a total of 7,000 jobs and 2.6 percent of the State's industrial payrolls directly dependent upon petroleum production.

Oil and gas are produced in every District state except Georgia, but aside from Louisiana and Mississippi, the employment, revenue, and tax impact are extremely limited. Taxes paid by the industry are substantial in Louisiana and Mississippi. In Louisiana, the severance taxes and licensing fees that the petroleum industry paid simply to take oil and gas from the ground accounted for 27.5 percent of the State's total revenue in 1971. Similar taxes amounted to 3 percent of Mississippi's tax revenues.

### "Oil On My Land?"

Of course, employment, payrolls, and tax payments are not the only ways in which the impact of the industry on the Southeast can be measured. Before any exploration activity can take place, permission must be secured from the owner of the land. In 1971, 13 percent of the total land area of the Sixth District was under lease for oil and gas exploration. A lease is really a contract between the landowner and the oil company, giving the oil company the right to conduct tests and drill wells in the search for oil. Most leases have three- to five-year terms, with an option to renew if either oil or gas is found. The lease is renewable as long as commercial production continues. If oil is found on your land, you might expect a "bonus" of \$50 per acre, simply for signing the lease. Furthermore, you might receive a \$25 to \$50 per year rental payment for the rights to explore for oil. When and if production begins, your lease would require

**The Southeast becomes an increasingly important source of oil for the U.S.**



the oil company to pay you a royalty of one-eighth to one-quarter of the value of production. These figures are, of course, generalizations, and the exact amounts paid for leases and royalties vary according to the prospects for finding oil or gas and the bargaining power and ability of the individuals and companies. An estimate of the amount paid for leases in the Southeast for 1971 shows that at least a half billion dollars was paid for the right to explore for oil and natural gas. It is estimated that an additional half billion dollars was paid in production royalties during the year. We cannot, of course, say precisely how much of this money was retained in the Sixth District or even how much of it went to companies or individuals in the Southeast. These figures however, do give some further indication of the industry's importance to the Southeast.

### How Does Banking Fit In?

District banks have been involved in financing the oil industry ever since oil prorationing made production stable enough to provide collateral for loans based on production reserves. Several large banks in the District have departments devoted to making loans to the petroleum industry and to the service industries that have grown up around production and exploration for oil and natural gas. The service industries are particularly important to the banks in southern Louisiana, because production and exploration in the coastal and offshore areas require more service equipment than onshore drilling. For example, specialized industries have grown up in the area of building offshore drilling platforms and servicing such platforms after they are in place.

Large banks active in this field handle both production loans and equipment loans, but at least one large bank specializes in making loans on equipment to the service industry. Small banks

in the District make loans on equipment, but the vast majority shy away from production loans. Most equipment loans that are made run for three- to five-year terms, with eight years as the usual maximum. Equipment loans are secured by mortgages on the equipment itself, with the maximum loan being 50 to 70 percent of its value.

Production loans are made on the basis of known reserves of oil in the ground, based on estimates made either by a bank geologist or by an outside consulting firm. Loans are made up to one-half the estimated value of the reserves in the well, and only a few are made upon the basis of only one producing well. A minimum of three—and, more likely, five or more wells—is usually required as collateral for a production loan. The reason for such caution is that if an oil well goes bad, it is usually a catastrophic loss rather than a minor setback. Requiring the production of several wells as collateral for loans spreads the risk of serious setbacks over several facilities and reduces the risk of overestimation of reserves. Production loans are made for periods ranging from one to two years at some banks to a maximum of five years at other banks. Depending upon the balance sheet of the company, these loans are made at a rate of 2- to 3-percent above prime. In some cases, these loans are made with a floating interest rate tied to the prime rate. In practice, some of these loans become open-ended, with the borrower drawing upon a line of credit secured by producing wells. Repayment is constantly being made, and, from time to time, the amount of the loan is increased as the capital needs of the borrower grow.

The loss experience of the District banks on loans to the petroleum industry has been extremely good, perhaps because the banks in the past looked upon the petroleum industry as a risky business and therefore made the terms on these loans especially stringent. On production loans in particular, the banks have attempted to capture 70 to 80 percent of the cash flow from an operation, thereby ensuring fast repayment. This practice also requires the operator to clear any new ventures with the bank and ensures that no risky ventures are undertaken.

Capital needs in the petroleum industry are high and come in large packages. Even an onshore drilling operation in the Jay field, for example, will cost from \$500 thousand to \$800 thousand. When offshore drilling operations are considered, the capital requirements for a single rig runs into the tens of millions of dollars. (For example, \$20 million per exploration drilling ship is not uncommon.) The capital needs of the service portion of the industry have grown as equipment has become more sophisticated. For example, the ships that deliver men and supplies to offshore

drilling rigs were at one time simply barges that were pushed to the drilling site with tugs. They evolved into ships when bow and stern were attached and when the barges were made self-propelled. Now these rigs cost \$3-to \$5 million and are sophisticated ocean-going vessels with special equipment such as bow and stern thrusters. These thrusters give the ship the capability of moving from side to side in maneuvering close to rigs. As another example, the largest private helicopter fleet in the world specializes in ferrying men and supplies to the offshore drilling rigs. These changes were necessary in the service industry because drilling is taking place further and further out in the Gulf.

When capital needs of individual companies become too high for an individual bank to handle, it turns to its larger correspondent bank to participate in the loans. Even most of the larger banks in the District make arrangements with banks in other financial centers to participate in loans made to their customers. Some banks also refer large customers to nonbank sources, such as insurance companies, for longer-term funds that the banks are either unable to provide because of lending limits or unwilling to provide as a matter of business practice.

### What of the Future?

The U. S. is the largest oil-producing nation in the world, making up 22 percent of the global total in 1969. We are also the largest oil-consuming nation in the world, and therein lies a problem. We use more than we produce. For example, we had to import 25 percent of the 5.5 billion barrels of petroleum products we consumed in 1971. Since 1959, the United States has used quotas to limit the quantity of oil imported into the United States. The purpose of the oil import quotas is to protect the domestic petroleum market from lower priced foreign oil imports. This restriction in supply allows domestically produced oil to be sold at a higher price than could otherwise be obtained. The higher price is designed to cover both the higher average cost of production of U. S. crude oil and to encourage further exploration and development of domestic sources and reserves. The desired result of this restriction is to encourage domestic production so that the United States is not dependent upon foreign sources of supply for this vital energy source. The question of whether or not the import quotas have been doing the job expected of them can be debated from both sides.

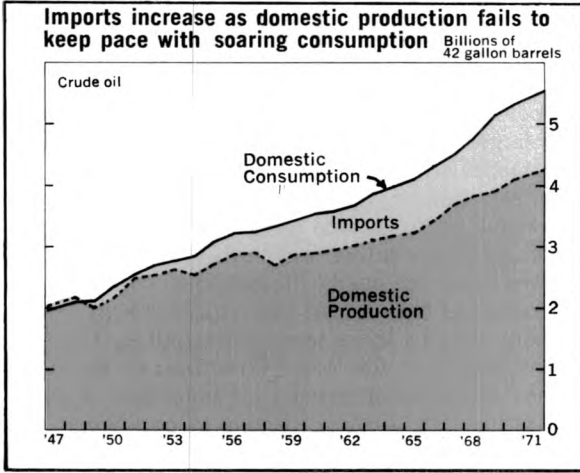
In practice, the oil import program has been modified severely by the inability of the U. S. to produce the amounts of petroleum products it requires within the bounds of efficient production

practices. Thus, importing crude oil or refined products, such as heating oil for the Northeast, is expected to increase, just as it has been since 1945. Huge increases in import quotas are under

consideration to meet the energy needs of our rapidly expanding economy.

The demand for crude oil and natural gas energy in the United States is growing at more than 4 percent per year, while production has leveled off. The ratio of proved reserves to consumption has fallen almost continuously since 1945, even though the total amount of proved reserves has increased. The addition of the reserves in the Alaskan oil fields, about which the pipeline controversy still rages, has provided a brief boost in the amount of proved reserves.

The need for further exploration activities in the U. S. is undeniable, and the most productive places to drill are located in the Southeast, primarily in the Gulf of Mexico. Fears of oil spillage have interrupted the normal flow of lease sales, drilling, and production in the Gulf, with consequent interruption of work flow and loss of jobs. But the need for oil and gas is such that exploration and development must take place, and the future of the industry in the Southeast seems assured. ■



# Bank Announcements

July 3, 1972

**WARREN COUNTY BANK**

*McMinnville, Tennessee*

Opened for business as a nonmember.

July 7, 1972

**BANK OF STUART, NATIONAL ASSOCIATION**

*Stuart, Florida*

Opened for business as a conversion of the Bank of Stuart, Stuart, Florida. Officers: Robert E. Greene, chairman; J. T. Williams, president; A. J. Wehrman, executive vice president; C. R. Harris, vice president; Jean Sempey, James Barefield, and Steven C. Shakley, assistant vice presidents; Wilda Dailey and Charlene Waxler, cashiers; and Helen Bernard

and Roberta Smith, assistant cashiers. Capital, \$577,500; surplus and other capital funds, \$1,031,500.

July 13, 1972

**BANK OF PELHAM**

*Pelham, Alabama*

Opened for business as a nonmember. Officers: L. G. Horton, president; and Manson K. Roper, vice president. Capital, \$200,000; surplus and other capital funds, \$300,000.

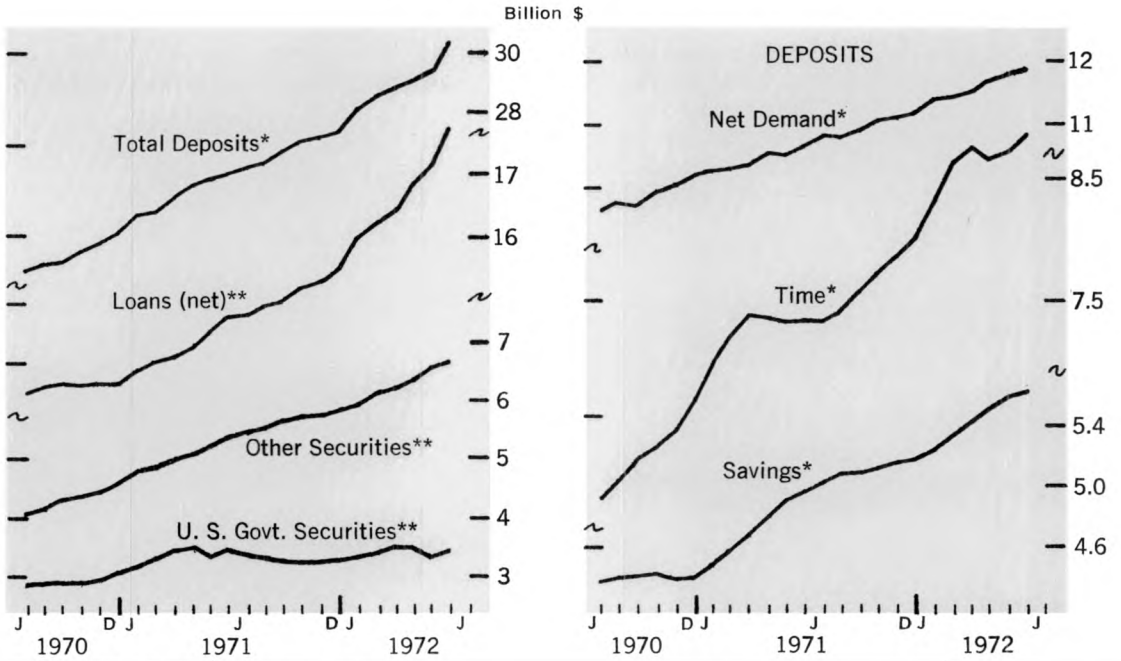
July 19, 1972

**BANK OF HOLIDAY**

*Holiday, Florida*

Opened for business as a member. Officers: William M. Register, Jr., chairman; Jerry C. Evans, president; Chester L. Crimmins, Jr., executive vice president; Lynn A. Younger, vice president and cashier; and Kenneth L. Larson, assistant vice president. Capital, \$960,000; surplus and other capital funds, \$288,000.

## BANKING STATISTICS



LATEST MONTH PLOTTED: JUNE

Note: All figures are seasonally adjusted and cover all Sixth District member banks.  
 \*Daily average figures \*\*Figures are for the last Wednesday of each month.

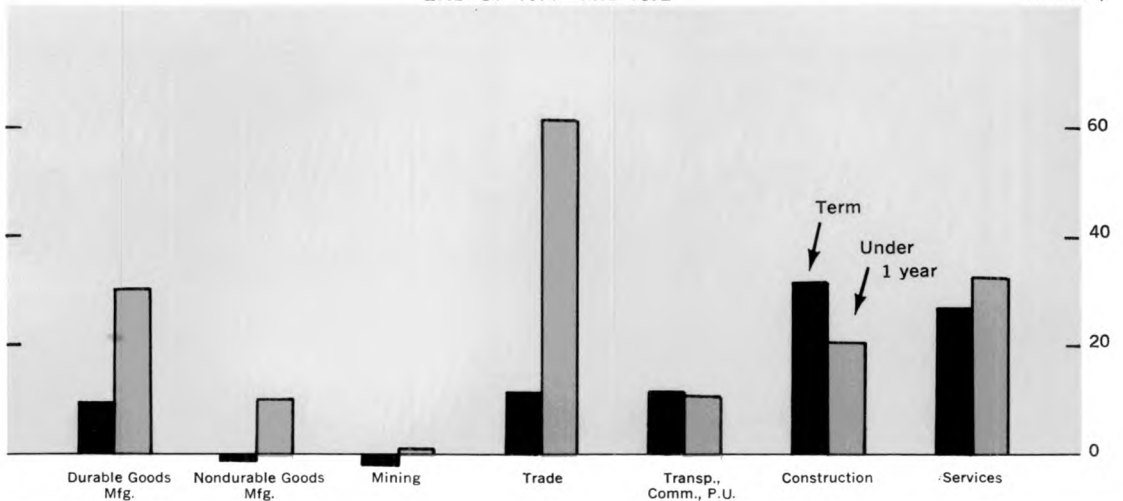
SIXTH DISTRICT

# BANKING NOTES

## CHANGES IN MATURITY OF COMMERCIAL AND INDUSTRIAL TERM LOANS

END OF 1971—MID-1972

Million \$





## TERM CREDIT IS ON THE RISE AT THE LARGEST DISTRICT BANKS

Business activity in the Southeast has now strengthened to the point that business firms are requiring more long-term bank credit. As a result, the largest banks are reporting a stepped-up pace in term lending to commercial and industrial firms. (Term loans are those commercial and industrial loans with an original maturity in excess of one year.)

The volume of term credit that businesses "take down" at banks is particularly sensitive to the overall pace of business activity. For example, term loans increased \$92 million at the District's largest banks during the first six months of this year when economic activity was rising strongly. In contrast, term loans rose only \$40 million during the entire year of 1971, a period when business activity was just beginning to pick up, and term loans actually declined \$27 million in 1970 when economic activity was weak.

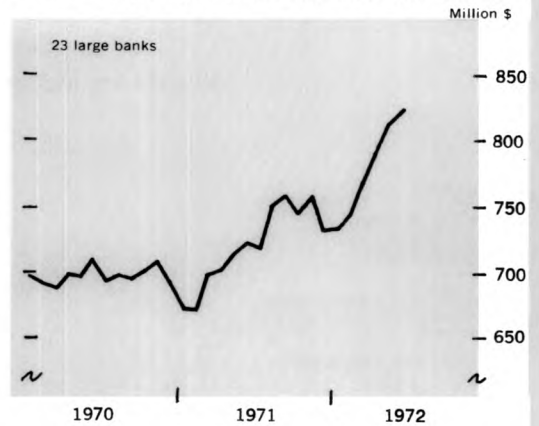
The delayed response to a stepped-up pace of economic activity is typical of business borrowing through bank term loans. At first, business financing needs are for seasonal inventories and other short-term working capital purposes. These financial requirements can be met largely by the business' own increased cash flow and short-term bank loans. But, as the current period illustrates, business firms use bank term credit more after the economy has advanced for some time and after short-term loans have been used extensively. Short-term commercial and industrial loans have been strong since late last fall and increased \$167 million, or 8.9 percent, during the first half of 1972. In contrast, term loans have advanced nearly 13 percent.

Feeling this past year's strength in the economy, construction firms and those related to consumer spending have relied heavily on term credit from the large District banks. With building activity of all kinds booming, construction firms have increased their term bank borrowing by \$31 million, whereas their short-term loans increased by a lesser amount—\$20 million.

Increased consumer spending has also raised the demand for term bank credit by trade and service firms for financing their longer-term inventories and accounts receivable. Advancing in all states except Florida, trade loans were up nearly \$11 million, and most of the increase was in wholesale trade borrowing. Loans to the service industries were up \$27 million, and all states except Louisiana experienced increases in this fast growing sector of the economy.

Manufacturing firms are one of the last sectors of the economy to "take down" additional term

### COMMERCIAL AND INDUSTRIAL TERM LOANS



bank credit, but as the pace of the economy strengthens, manufacturers make increasing use of bank term credit. Therefore, not unexpectedly, durable goods manufacturers boosted their bank credit \$10 million during the first half of the year. Machinery loans rose \$6 million—mostly in Alabama and Tennessee. Primary metals were up \$2.9 million, advancing in Alabama, Florida, and Georgia.

Nondurable goods manufacturing firms, on the other hand, decreased their term loans with these large District banks slightly, although borrowing by food, liquor, and tobacco products firms rose \$2 million, especially in Florida, southern Louisiana, and Tennessee. Textile and apparel firms reduced their borrowing in most states. The large Atlanta banks accounted for nearly all of the gain in term loans to chemical and rubber producers. Outside the manufacturing field, large term loan repayments to Alabama and Florida banks accounted for the drop in borrowing by mining and petroleum and natural gas exploration firms.

As economic activity continues to gain momentum in the region, more business firms can be expected to use the larger District banks for part of their intermediate- and long-term credit needs. And, given the still relatively liquid position of these banks and their ability to attract additional funds, they should be able to accommodate this stronger loan demand.

**JOHN M. GODFREY**

# Sixth District Statistics

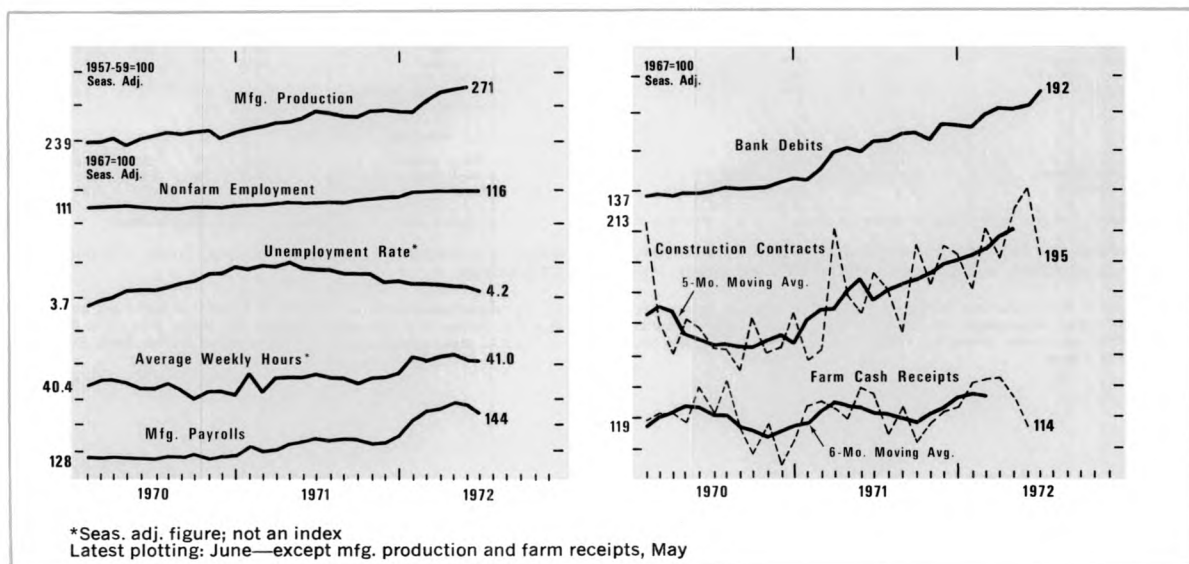
## Seasonally Adjusted

(All data are indexes, unless indicated otherwise.)

	Latest 1972	Month Ago	One Month Ago	Two Months Ago	One Year Ago		Latest 1972	Month Ago	One Month Ago	Two Months Ago	One Year Ago
<b>SIXTH DISTRICT</b>						<b>Unemployment Rate</b>					
<b>INCOME AND SPENDING</b>						<b>(Percent of Work Force)</b>					
Manufacturing Payrolls	June	144	145	149	135	<b>Avg. Weekly Hrs. in Mfg. (Hrs.)</b>					
Farm Cash Receipts	May	114	133	146	139	June	41.7	41.0	41.2	41.2	
Crops	May	151	140	193	198	<b>FINANCE AND BANKING</b>					
Livestock	May	107	139	143	134	Member Bank Loans	June	176	174	172	150
Instalment Credit at Banks* (Mil. \$)						Member Bank Deposits	June	160	162	157	142
New Loans	June	452	465r	450	379	Bank Debits**	June	166	166	169	143
Repayments	June	391	404r	380	361	<b>FLORIDA</b>					
<b>EMPLOYMENT AND PRODUCTION</b>						<b>INCOME</b>					
Nonfarm Employment	June	116	116	116	113	Manufacturing Payrolls	June	143	144	147	136
Manufacturing	June	108	108	108	106	Farm Cash Receipts	May	140	131	175	192
Nondurable Goods	June	108	108	108	107	<b>EMPLOYMENT</b>					
Food	June	102	103	104	101	Nonfarm Employment	June	126	126	125	122
Textiles	June	106	105	104	103	Manufacturing	June	111	110	110	108
Apparel	June	106	105	106	106	Nonmanufacturing	June	129	129	128	124
Paper	June	111	110	109	110	Construction	June	132	132	135	129
Printing and Publishing	June	115	115	114	114	Farm Employment	June	85	96	97	101
Chemicals	June	105	105	104	105	<b>Unemployment Rate</b>					
Durable Goods	June	107	107	107	105	<b>(Percent of Work Force)</b>					
Lbr., Wood Prods., Furn. & Fix.	June	102	102	102	98	June	3.5	3.7	3.9	4.2	
Stone, Clay, and Glass	June	110	111	112	107	<b>Avg. Weekly Hrs. in Mfg. (Hrs.)</b>					
Primary Metals	June	104	106	106	105	June	41.1	41.2	41.6	40.9	
Fabricated Metals	June	117	118	118	115	<b>FINANCE AND BANKING</b>					
Machinery	June	124	123	122	117	Member Bank Loans	June	196	194	190	169
Transportation Equipment	June	101	101	102	105	Member Bank Deposits	June	185	186	178	168
Nonmanufacturing	June	119	119	119	115	Bank Debits**	June	219	210	208	185
Construction	June	109	111	113	107	<b>GEORGIA</b>					
Transportation	June	115	116	116	112	<b>INCOME</b>					
Trade	June	119	119	125	115	Manufacturing Payrolls	June	144	144	145	132
Fin., ins., and real est.	June	125	125	124	121	Farm Cash Receipts	May	132	128	136	84
Services	June	124	123	123	119	<b>EMPLOYMENT</b>					
Federal Government	June	98	100	100	99	Nonfarm Employment	June	115	115	115	113
State and Local Government	June	125	125	125	120	Manufacturing	June	105	105	105	104
Farm Employment	June	86	90	89	86	Nonmanufacturing	June	120	120	120	117
<b>Unemployment Rate</b>						<b>Construction</b>					
<b>(Percent of Work Force)</b>						<b>Farm Employment</b>					
June	4.2	4.3	4.3	4.8	June	80	87	86	82		
<b>Insured Unemployment</b>						<b>Unemployment Rate</b>					
<b>(Percent of Cov. Emp.)</b>						<b>(Percent of Work Force)</b>					
June	2.4	2.3	2.3	2.9	June	3.7	3.8	3.7	3.8		
<b>Avg. Weekly Hrs. in Mfg. (Hrs.)</b>						<b>Avg. Weekly Hrs. in Mfg. (Hrs.)</b>					
June	41.0	41.0	41.3	40.7	June	41.1	40.8	41.2	40.4		
Construction Contracts*	June	195	238	224	183	<b>FINANCE AND BANKING</b>					
Residential	June	247	259	282	192	Member Bank Loans	June	179	174	167	148
All Other	June	143	217	167	175	Member Bank Deposits	June	148	152	146	133
Electric Power Production**	Mar.	168	176	170	165	Bank Debits**	June	203	197	193	172
Cotton Consumption**	May	86	85	91	89	<b>LOUISIANA</b>					
Petrol. Prod. in Coastal La. and Mis.**	July	123	124	112	124	<b>INCOME</b>					
Manufacturing Production	May	277	269	268	254	Manufacturing Payrolls	June	136	134	137	129
Nondurable Goods	May	233	234	231	219	Farm Cash Receipts	May	106	120	122	94
Food	May	186	185	184	177	<b>EMPLOYMENT</b>					
Textiles	May	268	266	264	243	Nonfarm Employment	June	107	107	107	104
Apparel	May	286	290	287	278	Manufacturing	June	101	102	102	100
Paper	May	215	215	211	200	Nonmanufacturing	June	108	109	109	105
Printing and Publishing	May	163	164	164	166	Construction	June	86	90	93	83
Chemicals	May	297	299	294	261	Farm Employment	June	75	85	82	75
Durable Goods	May	318	311	314	296	<b>Unemployment Rate</b>					
Lumber and Wood	May	193	193	190	174	<b>(Percent of Work Force)</b>					
Furniture and Fixtures	May	184	183	179	177	June	5.9	5.7	5.7	6.6	
Stone, Clay, and Glass	May	181	185	187	166	<b>Avg. Weekly Hrs. in Mfg. (Hrs.)</b>					
Primary Metals	May	205	200	202	211	June	42.2	41.9	42.5	42.4	
Fabricated Metals	May	270	267	266	241	<b>FINANCE AND BANKING</b>					
Nonelectrical Machinery	May	409	398	396	386	Member Bank Loans*	June	159	154	154	138
Electrical Machinery	May	708	650	652	614	Member Bank Deposits*	June	153	154	150	141
Transportation Equipment	May	407	413	425	389	Bank Debits**	June	161	151	149	143
<b>FINANCE AND BANKING</b>						<b>MISSISSIPPI</b>					
Loans*						<b>INCOME</b>					
All Member Banks	June	181	177	173	154	Manufacturing Payrolls	June	165	163	164	143
Large Banks	June	169	165	159	143	Farm Cash Receipts	May	140	169	162	139
Deposits*						<b>EMPLOYMENT</b>					
All Member Banks	June	165	166	160	149	Nonfarm Employment	June	114	114	114	111
Large Banks	June	146	149	143	136	Manufacturing	June	120	119	119	113
Bank Debits**	June	192	184	182	164	Nonmanufacturing	June	111	112	112	110
						Construction	June	92	95	96	90
						Farm Employment	June	88	91	88	90
						<b>ALABAMA</b>					
						<b>INCOME</b>					
						Manufacturing Payrolls	June	144	141	151	134
						Farm Cash Receipts	May	62	165	171	166
						<b>EMPLOYMENT</b>					
						Nonfarm Employment	June	108	108	108	107
						Manufacturing	June	106	107	106	107
						Nonmanufacturing	June	109	109	109	107
						Construction	June	95	97	96	100
						Farm Employment	June	76	81	82	81



# District Business Conditions



The Southeastern economy continues to march along at a lively pace. Strong expansion in manufacturing output has been accompanied by a drop in the unemployment rate. Picking up a substantial volume of demand deposits, banks supported expanding consumption by further increasing consumer credit. Agriculture continued to show considerable strength. Only construction appeared to recede from record levels achieved earlier this year.

The unemployment rate dropped to 4.2 percent in June, as the labor force and unemployment grew at slower than seasonally anticipated rates. Small gains in manufacturing jobs offset fractional employment losses in the nonmanufacturing sector. Average factory hours held steady. Manufacturing production expanded in May, with special strength in the durable goods sector. Production in both durable and nondurable industries has advanced strongly since mid-1971.

Large increases in all consumer instalment loan groups at commercial banks in June sent the total outstanding to a record level. Both auto loans and personal loans, showing notable strength, surged upward for the fifth consecutive month. June auto sales displayed unusual vigor. Gains during the past three months pushed sales of domestically produced autos to new record levels for the first half of the calendar year.

Member banks experienced strong demand deposit gains in early July. Larger banks offset a slower pace of consumer time and savings deposit in-

creases by selling more "money market" CD's to businesses and state and local governments. Bank lending, based on preliminary data for most of July, appeared to advance less rapidly than it has during most of this year.

Despite substantially lower grain and citrus prices, prices received by farmers in June edged up from May and remained above year-ago levels. Preliminary July data indicate that tobacco prices reached a record level and livestock prices maintained their previous gain. Farm cash receipts advanced to a level substantially above that of a year earlier; Florida's rate of gain was nearly double that for the District as a whole. Through May 1972, farmers made much more liberal use of credit than during the year-ago period.

The value of construction contract awards fell in June. Residential awards declined for the second month in a row, and nonresidential awards retreated from May's record level. Florida still continued to post large gains in construction activity. Residential mortgage rates remained stable.

Note: Data on which statements are based have been adjusted whenever possible to eliminate seasonal influences.