

Lumber on the Rebound

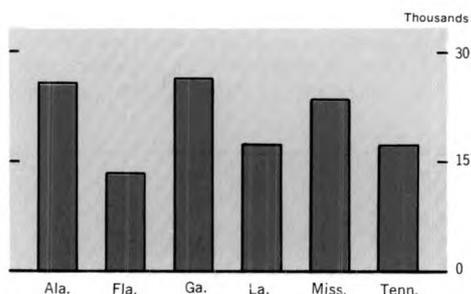
The 1960's marked the end of a long-term decline in Southern lumber production. With virtually no change in employment or man-hours worked, the production of lumber and wood products in the Southeast soared more than 70 percent since 1958. Nationally, the industry is producing only 10 percent more than it did in the late 1950's.

In the South, lumber has always been extremely competitive and its fortunes have been inextricably tied to shifting national as well as regional demands, fluctuating prices, and cost pressures. The incentive to modernize, therefore, has been a question of survival. As a result, plant expansions and innovations in machinery have improved labor productivity in the South and have helped firms to operate on a more efficient scale. This ability to constantly adapt to a changing business environment has been of paramount importance. The consistent increase in productivity evident throughout the 1960's has been a salient feature of the continually rising output of lumber in that decade. And the expansion has generated financing needs which banks have been called upon to accommodate.

The production of lumber and other forest products is found in Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee—states that lie wholly or partially within the Sixth Federal Reserve District. Ample rainfall and a long growing season make the region particularly adaptable to the production of the raw materials for forestry products.

The Lumber Industry

In a generic sense, the lumber industry encompasses loggers, sawmills, planing mills, millwork



Lumber is produced in all District States, but most of the employment in 1969 was in Alabama, Georgia, and Mississippi.

and veneer plants, box plants, and wood preserving plants. A particular firm might be involved in one or more of these activities, but for the purpose of this article, the discussion will be largely confined to logging and sawmill operations. The principal product in most of the District is yellow pine lumber, but hardwoods predominate in some areas, such as Tennessee and the Mississippi Delta.

Lumber production is relatively more important in the Southeast than it is in the nation as a whole. At the national level, lumber shipments account for only about 2 percent of total manufacturing shipments, whereas they account for nearly twice that much in the District. In 1967, the District states accounted for over \$1.5 billion in lumber shipments—about 3.5 percent of total manufacturing shipments in the six states. In that same year, payrolls were \$400 million, a little over 4 percent of the District's total factory payrolls.

The District lumber industry employs approximately 125,000 persons, about 6.5 percent of the nearly 2 million workers on factory payrolls. Thirty percent of all manufacturing establishments in the District produce lumber and wood products, and at least four-fifths of these are unincorporated enterprises. In total manufacturing, about half of the establishments are unincorporated.

Moreover, lumber is a highly labor-intensive industry. At the District level, the lumber industry's labor costs amount to a little over 50 percent of value added, compared with a little over 45 percent for all manufacturing and well under 30 percent for chemicals.

There is also a great deal of activity in the District's furniture and paper industries, both important lumber products customers. Lumber, furniture, and paper accounted for about 13 percent of value added and for about 15 percent of factory employment in 1967.

The typical sawmill in the South still produces only 3 million board feet or less of lumber per year, and average employment per sawmill is still small. However, the average plant size is increasing, with the result that sawmills producing over 10 million board feet a year make up a third of total output.

The typical established sawmill today has somewhere between \$100,000 and \$200,000 invested in plant and equipment, but the trend in new mills is to start with an outlay of approximately \$750,000 or more. Such a mill will produce at least 25 million board feet a year and employ 20 to 30 persons. There are only a few mills in the District producing more than 100 million board feet and employing several hundred persons. Since the District lumber industry consists of a large number of small firms, it is much more subject to competitive forces than are other industries.

Trends Affecting Lumber

Moreover, because of competition from producers in other parts of the country, the lumber industry is affected by many economic forces that are at work throughout the nation. The lumber industry is cyclical because construction is cyclical. Shifts in demand for construction materials invariably exert upward and downward pressures on prices, but the greater effect is on production which must undergo fairly abrupt alterations in order to prevent even more drastic changes in inven-

tory levels and prices. Lumber prices have generally behaved the same as other industrial prices. However, lumber prices climbed much more dramatically in 1968 and early 1969. Later, they tumbled back to early 1968 levels.

Another problem facing lumber producers in the South and in other parts of the nation is the competition from other industries (e.g., cement and steel) that also vie for customers among building contractors. For example, competition from other building materials that affect the producers of Douglas Fir and Ponderosa Pine also affect Southern Pine and, less directly, Southern Hardwoods.

In spite of recent innovations, the lumber industry is still seasonal in nature. This is especially true in the Mississippi Delta where, even with the most modern equipment, the forested hinterlands become an inaccessible bog in the dank months of winter. Southern Pine production is less seasonal than much of the hardwood production because pine is generally situated so that it can be more readily reached even during the winter rains. It is noteworthy that District production undergoes less severe seasonal gyrations than does national production. This seems to be related to the South's climatic superiority and longer harvesting season. Construction activity is also seasonal and thus contributes to the seasonality in lumber production.

How the South is Different

The Southern lumber industry has some characteristics that are unique. First, trees are more numerous in the South than in many other parts of the country. At the same time, however, the trees are small and, consequently, expensive to process. Because of this there are many small sawmills that are unable to operate with the scale and efficiency of the larger mills in the West. Southern sawmills have, therefore, had more of a need to modernize, and that is exactly what they have been doing during the last few years.

New machinery, recently developed by equipment manufacturers, and the competitive nature of the sawmill industry have forced smaller producers to give up and larger producers to modernize and expand capacity and efficiency. The debarker and chipper enable a mill to produce three-fourths of a cord of chips per 1,000 board feet of output, and with lumber prices sometimes reaching no higher than \$90 per thousand board

feet, the up to \$25 per cord that paper mills offer for chips can make the difference between survival or failure.

Meanwhile, the number of sawmills in the District has decreased from 2,718 in 1963 to 2,278 in 1967. This has been a function of technological innovation and mechanization. The firm that is to survive the rigors of competition must purchase, among other things, expensive debarking and chipping equipment. The inexorable march of progress has brought the chain saw in the late 1940's, the debarker and chipper in the early 1950's, and rubber-tired log skidders in the early 1960's.

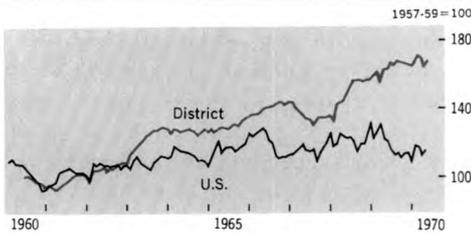
But even with the declining number of sawmills, the lumber industry still has far more firms than any other manufacturing sector. The industry is, therefore, still highly price competi-

tive. Also, the Southern mills still have difficulty competing with those of the Northwest. Douglas Fir even finds its way into the sunny South to compete in Yellow Pine's own primary market areas.

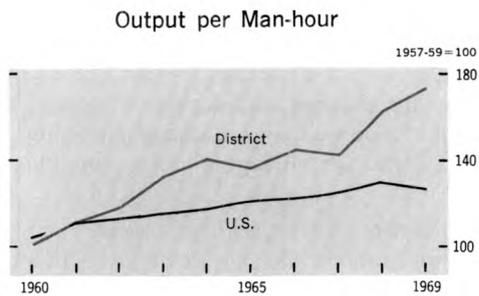
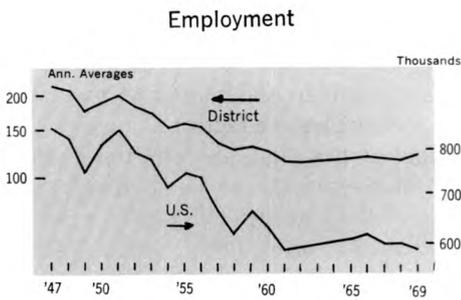
Spectacular Increase in Productivity

The Southern lumber industry has been able to expand its output in spite of competition from Western mills and from other construction materials such as steel and cement. Even in the face of declining stumpage quality, progress has not been blocked. Tremendous strides in productivity have made this expansion possible.

First, there has been technological innovation and mechanization. Back in the good old days, the procedure was for a couple of lumberjacks,

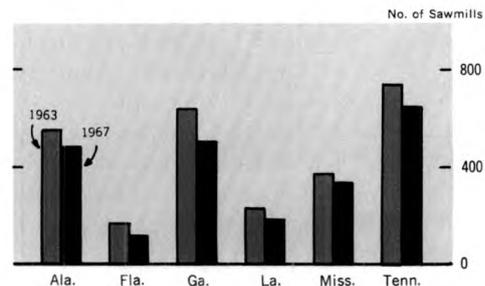


The long-term decline in Southeastern lumber production reversed itself in the 1960's, and since then regional lumber production has grown faster than in the rest of the nation.



Employment, however, has not increased, but stabilized well below postwar peaks. Output per man-hour, therefore, has sharply increased.

Lumber is now produced in larger quantities and by fewer mills, but the industry is still the most highly competitive of all manufacturing sectors.



armed with axes and a crosscut saw, to attack a tree, fell it, and saw it into logs. At the sawmill, the logs were sawed into square cants and then further processed into lumber. The slabs, including bark, were either discarded, burned along with the sawdust, or sold for fuel.

The end of an era is marked by the demise of the peckerwood mill. The days are numbered for the rugged operator who could throw his sawmill onto the bed of a truck and follow the tree harvest.

Then in the late 1940's, the chain saw came into general use and modernized logging operations. In the early 1950's, the debarker and pulpwood chipper came into vogue. This permitted more complete utilization of by-products and today can mean the difference between survival or failure for a mill. In the early 1960's, the advent of rubber-tired, log-handling equipment caused more forests to become all-weather sources of raw material and helped to smooth seasonal patterns of production. Hardwood logging in the Mississippi Delta, however, is still highly seasonal, since operations get bogged down in the winter months.

In the latter half of the 1960's, tree length logging became popular. This freed the sawmill to determine its own board lengths, rather than letting the logger determine them.

Also, a good many improvements have occurred within the sawmills themselves. Automated lumber and log handling equipment have increased productivity and permitted mills to save on labor costs. The profile chipper eliminates a step in the production of wood chips. Instead of chipping the sawed-off slabs, this machine chips the log into a squared cant.

The upshot of all this is that sawmill investment, while still small compared with heavier manufacturing, has been increasing with the corresponding increase in the size of the average firm. And the medium-sized sawmill today may require several hundred thousand dollars worth of equipment in the form of debarkers, headsaws, chippers, profile chippers, gang saws, and conveyor systems. The incinerator is declining in importance as less and less residue is wasted. Slabs can be chipped; sawdust can be compressed into particle board; and even the bark can be used as mulch.

Financing Requirements

Needs for financing occur at several stages in the process of production. First, the stumpage

must be acquired. Many larger sawmills own their stumpage, which they use largely as an emergency source of supply. Next, the trees must be harvested and brought to the mill. Finally, inventories and accounts receivable must be carried. Also, equipment must be acquired by loggers and sawmills. Therefore, banks have made specific arrangements in accordance with the specific needs.

In the matter of stumpage procurement, sawmills generally buy trees from the owner of the land and the trees must be paid for in advance. This often requires a bank loan with a 12- to 18-month repayment period. These loans generally require personal endorsements by sawmill owners. The bank may take a mortgage on the timber, but this practice seems to be waning. Typically these loans are repaid as the timber is cut.

Often sawmill operators are asked to co-sign a bank loan to a logger for the purchase of a skidder, loader, or truck. In some cases, the sawmill lends directly to the logger.

The logger has to have about \$100,000 invested in a skidder, loader, and truck. His equipment purchases may be financed by the manufacturer and, in some cases, by the sawmill. Such a loan is generally paid out in five years or less. Also, manufacturers finance equipment purchases by sawmills.

Inventories and accounts receivable are frequently financed by a short-term bank loan. The bank may take an assignment on the asset. Sometimes receivables are factored.

There is little seasonal pattern in loan demand—except in hardwoods, where the lending takes place in autumn before the rains and is repaid in the spring when activity picks up.

Postscript

The Southern lumber industry has fared remarkably well during the last decade. Technology and innovation have enabled productivity and output to increase rapidly, in spite of sluggishness at the national level and quality declines in raw material. The optimum size of firms has increased, but lumber is still a highly competitive and atomized industry. Most firms are still unincorporated and have financing problems.

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