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Business aspects of the Mid-South forest economy

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Introduction

Timber resources and related economic activity are substantial in the Mid-South states of Tennessee, Alabama, Mississippi, Louisiana, and Arkansas. Most of us are aware that timber is an important aspect of our regional economy. We observe many stands of timber and often see it being harvested and transported to shipping points and manufacturing facilities. Many, however, do not fully appreciate the absolute size of the Mid-South's forest resources, nor their relative importance to states within the region. The Mid-South forest economy is described in two sections: (1) forest resources in general and (2) timber manufacturing or processing. Value added and employment and wages for Mid-South forest industries are considered in the analysis. These aspects of the forest products industry allow us to compare states within the region, to characterize the Mid-South's position in the national forest economy, and to show the importance of forestry to Mid-South businessmen.

Forest Resources of the Mid-South

The Mid-South is heavily forested. Woodlands occupy over one-half of the area of each state in the region, ranging from just over 50.0 percent of Tennessee to 66.0 percent of Alabama. On average, forests cover 56.0 percent of the region's land area.

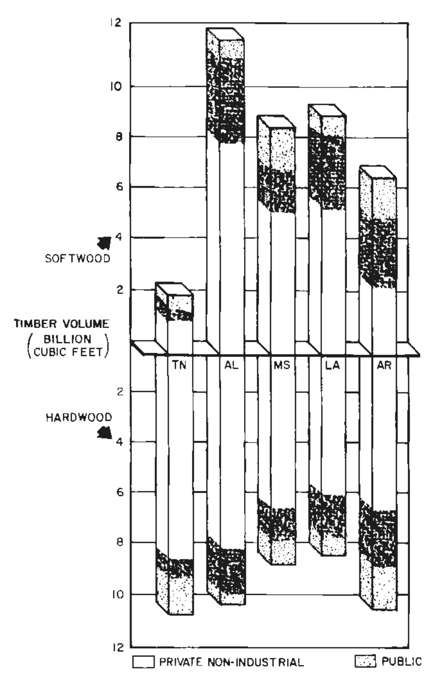
The type of forests in each Mid-South state varies. Forests are commonly divided into two major timber groups: softwoods (various pines and evergreen trees) and hardwoods (broadleaved trees like oak and gum). Hardwoods dominate the region's timberland, occupying 64.0 percent of the forested acreage. On the basis of timber volume, hardwoods comprise 59.0 percent of the region's total.

Longleaf and slash pine forests dominate the Mid-South's lower coastal plain. Loblolly and shortleaf pine extend northward to Tennessee and the lower two-thirds of Arkansas. Upland hardwoods are common in the region, especially in Tennessee and northern Arkansas. Bottomland hardwoods are generally found along rivers and streams and, of course, the areas bordering the Mississippi River contain particularly large volumes of bottomland hardwood.

The Mid-South contains about 42.0 percent of the South's standing timber. Each state in the region has a significant part of the Mid-South's timber inventory and growth. Specifically, Alabama produces about 25.0 percent of the region's volume; Tennessee, 15.0 percent; and the remaining three states about 20.0 percent each. Alabama, Mississippi, and Louisiana each have about one-half softwood and one-half hardwood. Arkansas' timber is about 64.0 percent hardwood and Tennessee's about 84.0 percent hardwood (Figure 1).

Figure 1

TIMBER VOLUME FOR FIVE MID-SOUTH STATES, BY SPECIES GROUP AND OWNERSHIP CATEGORY



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Harvest levels for the region generally parallel the standing timber inventory. The Mid-South, for example, accounts for one-half the South's sawtimber harvest. Tennessee produced only 6.0 percent of the region's sawtimber output, while each of the remaining four states produced between 20.0 and 25.0 percent. About 84.0 percent of Tennessee's sawtimber harvest was hardwood, while the average for the Mid-South is only about 30.0 percent.

Who controls the Mid-South's vast and valuable timber resources? Approximately 70.0 percent of the region's forest land is controlled by private non-industrial landowners, 20.0 percent by the forest industry, and 10.0 percent by public agencies (Figure 1). Except for Arkansas and Tennessee, the individual states follow regional averages. Tennessee, for example, has about 80.0 percent private non-industrial forest land and about 10.0 percent forest industry land. In Arkansas, however, only 62.0 percent of forest lands are private non-industrial, while about 16.0 percent are publicly owned. The forest ownership pattern in the Mid-South is typical of the eastern United States.

Non-industrial private owners are expected to continue to be the major supplier of timber in the Mid-South. Although the ownership objectives of this diverse group of forest landowners do not always include timber production, long-term timber supply in the region greatly depends on their present actions. This helps explain state and federal government assistance for non-industrial private landowners in replanting or reseeding harvested forest land. A federal incentives program applies to all non-industrial forests in the U.S., while within the region Mississippi has a state-operated assistance program. Such programs recognize the importance of maintaining and developing our commercially productive forest resources.

Timber Processing Industries

Timber processing industries can be divided into three broad groups: lumber and wood products; wood furniture and fixtures; and pulp, paper, and allied products. Important aspects of these industry groups in the Mid-South during the late 1970s are summarized. Original data were largely complied by the Forest Industries Committee on Timber Valuation and Taxation, as reported by the American Forest Institute [1]. Other sources of Mid-South forestry data are also listed in the references.

Regional Value Added

Value added is a very useful measure of the economic contribution of an industry to a region. It reflects the increased value of inputs attributed to particular stages of production and thereby measures the total income created by an industry in a region.

Lumber and wood products; wood furniture and fixtures; and pulp, paper, and allied products industries in the Mid-South annually account for $6.5 billion in value added. Total value added for these industries in the Mid-South is greater than that of 11 New England and Mid-Atlantic states combined. Half of the value added in timber processing in the Mid-South is provided by the paper and allied products industry group. Income created by timber processing varies a great deal, however, between industries and between the five states in the Mid-South region.

Value Added by States

Leading states in the lumber and wood products industries are Alabama, Mississippi, and Arkansas, each with over one-half billion dollars in value added. The income created through lumber and wood products industries in these states reflects high volumes and values for softwood lumber and veneer products and high quality lumber and veneer from southern bottomland hardwoods. The upland hardwood forests common to Arkansas, Tennessee, and northern Alabama and Mississippi are not used for highly valuable lumber and wood products, but contribute significantly to the Mid-South's economy through the furniture and fixtures industries.

In furniture and fixtures, Tennessee dominates the Mid-South's value added with over $400 million. Between-state variation is great for value added in this industry group, however. While Tennessee had over $400 million in a particular year, for example, Louisiana had less than $20 million in income created through wood furniture and fixtures. This industry group largely relies on hardwood raw materials, and Tennessee has more hardwood raw material than any other Mid-South state (Figure 1). Hardwood furniture and flooring industries are particularly prominent in Tennessee. These industries use both old and new technologies to produce relatively valuable furniture and flooring from the state's abundant hardwoods. All stages of manufacture, from raw material to finished product, are therefore often provided within the state, capturing all of the income created in certain areas of the furniture and fixtures industry group.

For pulp, paper, and allied products, value added in the Mid-South is over $3.0 billion. Alabama, Louisiana, and Tennessee account for over 75.0 percent of the income created by this group in the region. In general, pulp and paper industries are located close to their raw material sources, in areas with abundant water and power supplies, and close to the major markets for pulp and paper products in the eastern U.S. The Mid-South therefore has distinct advantages over other regions of the U.S. for pulp and paper facilities. Small, pulpwood-sized timber abounds; water, labor, and electricity are relatively plentiful; and transportation and shipping to eastern cities is relatively inexpensive. The relative importance of Tennessee is an interesting aspect of the Mid-South's pulp and paper industry. Seventy-five percent of the Mid-South's pulping capacity relies on softwoods, and Tennessee does not have significant softwood resources. Most softwood pulpwood used in Tennessee is therefore shipped from northern Mississippi and Alabama, demonstrating the importance of raw materials shipments in the region's interrelated forest economy.

Employment and Wages

Recent figures show a civilian labor force of about 8.0 million people in the Mid-South [10]. Of this group of potential employees, over 200,000 work for forest industries. Forestry employment ranges from 30,000 people in Louisiana to near 60,000 in Tennessee.

Across industries, forestry employers pay over $2.5 billion to their workers in the Mid-South each year. Alabama and Tennessee have the highest annual payrolls at about $600 million each. The other three states each have over $400 million in forest industry wages. Paper and allied products industries have the greatest payroll in Tennessee, Alabama, and Louisiana, while in Mississippi and Arkansas the lumber and wood products industries are greatest. Wage differences between industry groups are apparent from income and employment in recent years. In Tennessee, for example, 23,100 workers earned $209.6 million in wood-based furniture and fixtures industries, or an average salary of $9,074. At the same time, 16,500 people earned $241.2 million in the paper and allied products industries in Tennessee, an average salary of $14,618.

Discussion and Outlook

Forests occupy over half the land in the Mid-South, and timber-related processing accounts for $6.5 billion in value added by manufacture each year. Over 200,000 people earn $2.5 billion annually from forest industry jobs, and when added to the number of people who could derive income from selling timber on their lands, over 1.0 million people in the Mid-South are directly affected by forestry. The Mid-South's forests are vitally important to the region's economy and are likely to become even more important.

The USDA Forest Service has made detailed projections of the nation's forest economy to the year 2030 [19]. The demand for most timber products is projected to rise rapidly for the remainder of the century. Demand is actually expected to double over the next 50 years. Net imports of timber products should increase, but the major portion of this increased demand must be satisfied from domestic forests.

The projected demands for timber products are rising much faster than projected timber supplies. The result, according to the USDA Forest Service analysis, will be rising relative prices of timber products and "a growing economic scarcity of a basic raw material" [19]. However, tremendous opportunities exist to increase and extend timber supplies. These opportunities would require society to make a substantial investment in forest capital.

The USDA Forest Service has identified 168 million acres nationally that have a potential for increased timber production. These economic opportunities include regenerating non-stocked areas, harvesting and regenerating mature stands, and converting current forest stands to more productive tree species. All these investments are estimated to yield a real rate of return over 4.0 percent.

The South Central region (defined by the Forest Service as the Mid-South, southeastern Oklahoma, and east Texas) has 38.0 percent of these economic opportunities. The South Central region has the largest number of economic opportunities in the nation, whether measured in acres or in potential timber supply increases. The real rates of return that can be expected from forest investment exceed 10.0 percent in most cases, the highest nationally, and over 70.0 percent of the opportunities are on non-industrial private forest land. The Mid-South has the greatest potential for increased timber supply in the nation and, if national economic scarcity of timber is to be avoided, substantial forest investment is necessary in the region.

In the Mid-South only Tennessee currently has sufficient timber reserves to continue to attract new forest industry into the 21st century. The remaining states certainly will not run out of timber, but if increasing national timber products demand is to be filled in the Mid-South, more investment is needed in forestry. The region is often referred to as a "wood basket" and, with investment in its forest capital, the Mid-South can continue to attract forest industry.

The importance of the Mid-South to the nation's timber production is well-recognized. For example, in 1979 the federal government spent $14.5 million in a single national program to assist private landowners in timber production (the Forestry Incentives Program). Nearly one-third of the program's incentives were invested in the Mid-South. Mississippi considers forestry investment important enough to offer state incentives in addition to the federal program (the Forest Resource Development Program).

The availability of adequate timber supplies, when combined with a favorable business climate towards the forest products industry, makes future expansion of the Mid-South's timber-processing industry a certainty. The economic importance and growth of the forest industry in the Mid-South will continue to be great. Analysts, planners, and businessmen should be aware of the relative prominence of forestry and forest industries, recognizing their important role in the present and future development of our regional economy.

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