

# Houston Business

A Perspective on the Houston Economy

## Forest Products Unify East Texas Economy

**T**he Piney Woods, a region of East Texas comparable in size to the state of Indiana, encompasses nearly 12 million acres of commercial forests. These pine forests shape the map of modern East Texas and unify the economy of a region that stretches from Houston, east to Orange and north to Texarkana. Lumber and paper are the most important manufacturing industries in East Texas and among the most important in the state.

Houston sits on the western edge of the forests, marking not just the end of the Texas woodlands but the end of a southern U.S. pine belt that stretches from the Atlantic Seaboard. Post oak and other hardwood growth continue into the Texas Hill Country, and some pines follow the rivers westward for many miles, but to the north, by Dallas the landscape turns into prairie. It is the prairie that dominates the popular image of Texas; the Piney Woods is among the state's least known regions.

### HISTORY SHAPES EAST TEXAS GEOGRAPHY

The earliest East Texas cities—San Augustine, Nacogdoches and later Tyler—were founded on the sandy, red, iron-rich soil that marks the region's best farmland. For 40 years or more after the founding of the Republic of Texas, heavily timbered land was regarded as a liability since it could not be cultivated.

The early models for East Texas lumber operations were taken from the Great Lakes region and New England. Rivers were the key feature of northern lumbering, essential to collecting logs at the sawmills and shipping cut lumber downstream to customers. In contrast to rivers in the North, Texas

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rivers were unreliable, often running too high or low and filled with sandbars. The first steam-powered sawmill in Texas was built in 1830 at Harrisburg (now part of modern Houston) on the region's most reliable watercourse—Buffalo Bayou. Texas' first great sawmill center, however, was in the Beaumont/Orange area. The densest forests in the state are found in southeast Texas, and both the Neches and Sabine rivers provided transportation to the mills.

Lumber from East Texas and cotton farming to the west of Houston promoted a pattern of smaller inland towns and cities that often served as river ports, while larger cities on the Gulf of Mexico were processing and distribution centers. This pattern persists today in lumbering, with southeast Texas from Nacogdoches to Beaumont containing the state's heaviest concentration of primary processing of pine lumber, veneer and plywood. However, 40 percent of Texas' forest-based industry is in Dallas, Houston, Beaumont and Orange; secondary millwork, pallets, structural wood members, and converted paper and paperboard provide these urban jobs.

The period 1875–1925 is often called the bonanza era of Texas lumbering. Although four mills operated in the Beaumont/Orange area in 1875, East Texas forests were virtually untouched. Two Pennsylvanians, Henry J. Litcher and G. Bedell Moore, transformed Texas lumbering by bringing hands-on experience with larger northern operations, and their mill in Orange ratcheted upward the scale of Texas lumbering. Their logging operations extended many miles up both sides of the Sabine. Almost simultaneously, railroads began to replace the rivers as the primary means of transportation. Just as had happened along the rivers, new towns, villages and logging camps sprang up along the rails. The Houston, East and West Texas Railroad was the first to penetrate the Piney Woods, and Lufkin was founded as a key stop along its route. (The HE&WT acronym came to be read by Houstonians as “Hell either way taken.”) Company towns, owned entirely by the lumber companies and often served by a single railroad, sprang up throughout the Piney Woods. They include such familiar place names as Diboll, Camden and Kirbeyville.

## MANAGING THE RESOURCE

In 1880, the 14 million to 18 million acres of pine forests in Texas seemed inexhaustible. But

the combination of increased lumbering and rail access to the entire forest took its toll. The last great stand of East Texas longleaf pine fell in 1917, and by the end of the 1920s, only a million acres of forest were left uncut. In each of three years between 1907 and 1916, more than 2 billion board feet of lumber were cut, but by 1932 the cut had fallen to 402 million board feet. Slack demand for lumber in the Great Depression and the decline of timber resources led many to predict the death of the Texas lumber industry.

Indeed, the industry philosophy of the 1930s was often summarized as “cut out and get out,” and many companies moved on—especially to the Pacific Northwest—as East Texas pine supplies dwindled. But the Texas lumber industry did not die. Efforts to convert clear-cut forestland to other uses—ranches, farms, orchards, vineyards—uniformly failed because of the poor, sandy East Texas soil. Indeed, the best use for this soil turned out to be growing trees, and second-growth forests on cut-over land demonstrated a remarkable ability to recover and thrive.

This recovery was aided by a growing awareness of resource conservation and the development of professional forestry. In 1936, the federal government purchased 660,000 acres of cut-over land from the lumber companies of East Texas to create the Angelina, Davy Crockett, Sabine and Sam Houston national forests; by 1940, various New Deal programs had planted 72 million new trees in Texas and built thousands of miles of forest roads and other infrastructure.

However, state and federal ownership make up only 7 percent of the timber in East Texas, with the remainder split between companies in the forest products industry (owning 32 percent) and private, nonindustrial owners (61 percent). The forest products industry manages its timberlands to assure low-cost supplies of wood to their mills and to protect its massive capital investment in lumber and paper mills. The industry's reforestation efforts were sporadic and depended on natural regeneration through the 1950s, but since 1965, its pine plantations have been the main vehicle for replanting East Texas forests. Private owners outside the forest industry—individuals, farmers and other businesses—are not as diligent in replanting efforts. For a number of years they have lagged not only the Texas forest industry in replanting but their counterparts in other southern states as well. One estimate from the late 1980s indicated these



owners replanted at a rate of only 1.5 acres for every 10 acres of harvested pine timberland; in contrast, the Texas forest industry was replanting 9.3 acres per 10 acres harvested. Pine removals in East Texas exceeded new growth in 14 of the past 17 years, and the inventory of growing stock has fallen most sharply in the southeastern part of the state.

As a cash crop, timber is consistently among the top four in Texas, with a delivered value of about \$500 million in recent years. Its value typically lags Texas cotton but is in the same range as sorghum, nursery products, wheat and hay. With only 14 percent of the state forested, the importance of the crop is greatly magnified within East Texas.

### PAPER AND THE MODERN INDUSTRY

The final piece of the modern Texas forest products industry fell into place in 1940 with the construction of Southland Paper Mills in Lufkin, a plant that came to provide most of the newsprint for Texas newspapers. Until that time, the high resin content of southern pine produced only a dark-colored paper suitable for kraft mills and applications such as shopping bags; northern and Canadian pine were the only acceptable sources of newsprint. However, chemistry made possible good newsprint from southern pine in the 1930s, and Ernest L. Kurth, an established Texas lumberman, assumed the substantial risk of the first large-scale commercial operation at Lufkin. The success of the venture quickly spawned many imitators throughout the southern United States. Texas wood pulp mills are located today in Evadale, Diboll, Orange, Pasadena, Sheldon, Lufkin and south of Texarkana at Atlanta; Louisiana, Arkansas and Oklahoma all have mills located close to the Texas border.

Today, 107 substantial forest product establishments operate in East Texas: sawmills, plywood mills, waferboard and hardwood veneer mills, chip and pulp mills, and wood treating plants. Lumbering operations directly provided 8,000 jobs in 1990. The jobs are widely distributed throughout East Texas, but the highest concentration of facilities and jobs is where the woods are densest, particularly in southeastern counties such as Cherokee, Nacogdoches, Angelina, San Augustine, Jasper and Newton. The Texas paper industry provides more jobs (9,700 in 1990) than lumber, but the location of these jobs is far more concentrated, as only

seven East Texas counties register significant employment in paper. Wood furniture production accounts for another 2,500 jobs.

Based on estimates of the direct and indirect effect of industry expansion, the paper industry has more extensive linkages to regional suppliers and local personal income than lumber or furniture. Using input-output methods that measure the ripple effects of industry expansion, the Department of Agriculture estimates that a new job in the Texas lumber and wood products industry will induce 1.3 new jobs in other sectors—either through growth in suppliers or by generating new income; a new job in the paper industry similarly induces 1.9 jobs in other industries. However, these estimates are *state-wide* employment multipliers, and as discussed earlier, much downstream processing and employment in lumber and paper is not in rural East Texas but in the state's urban areas. Altogether, only about 37 percent of the state's jobs in lumber, paper and wood furniture are in East Texas counties.

### THE EAST TEXAS ECONOMY

There is more to East Texas, of course, than forests. The great East Texas Oil Field was one of the largest discovered anywhere, and a regional oil industry has grown up around it. In the fertile parts of the region, agriculture is important, particularly around Tyler, where a nursery products industry developed, but much of the region's farm and pastureland is submarginal and probably better converted to pine plantations. The forest itself is providing new opportunities in recreation and tourism. The low cost of living and rural setting have made it a center for retirement living.

Indeed, the forests continue to provide regional unity and identity. The industrial pattern set 150 years ago persists, with primary forest industry operations in East Texas and value-added processing done on the periphery. Raw materials are massed for wholesaling in Houston and Dallas; substantial processing may also be done on the Gulf Coast or in Dallas, and these goods then move into sophisticated distribution channels. East Texas remains an early link in a long and valuable economic chain of wood products.

NOTE: Jisoo Noh, a student at Rice University, contributed to this article.

**T**he latest data for Houston indicate continued slow business conditions with few apparent strengths. Summer employment gains can be attributed to seasonal factors, although the important mining, construction and manufacturing sectors are no longer losing jobs and show early signs of turnaround. Most Beige Book respondents described business conditions as being in a holding pattern.

### RETAIL SALES AND AUTOS

Back-to-school sales were lukewarm, with discounters reporting the best results. Reports for the market as a whole were mixed, with more stores lagging their own projections than not. Auto sales in August were 6 percent ahead of August 1992, the first time since March that Houston posted a better month than last year. For the year to date, however, auto sales are still only 1 percent behind those of 1992.

### OIL AND NATURAL GAS

Oil prices remain volatile, rising briefly to levels near \$18.50 per barrel on rumors of labor strife in Africa, then falling to \$17 on speculation that Iraq could reenter oil markets. OPEC is overproducing, and global demand is weaker than expected. Natural gas prices, in contrast, have remained steady at high levels. Gas prices have been supported by increased electric utility demands attributable to the heat wave, nuclear plant outages and the disruption of coal shipments by Midwest flooding.

The domestic rig count has responded favorably to current prices and is more than 150 rigs above the depressed levels of a year ago. Drilling is rising faster and ahead of levels dictated by normal seasonal patterns. Offshore drilling remains strong. The international rig count is well below year-ago levels, and revenue losses have offset many of the gains enjoyed at home by oil service companies.

### PETROCHEMICALS AND REFINING

Refining margins improved over the summer on the basis of better product prices. Gasoline

consumption is above levels of a year ago, with continued bargain prices for gasoline contributing to demand growth. Margins remain below 1992 levels and are barely covering operating costs. Several very large refining projects have broken ground and will boost Houston construction jobs in the months to come.

Commodity petrochemical demand is stable and strong, but price remains depressed. The glut of chemicals on the market was not improved by at least two large new facilities coming online in recent weeks.

### LUMBER AND PAPER

After some weakness early in the year, the pulp and paper segment has shown increased strength in employment and orders. East Texas lumber has improved along with statewide residential construction.

### REAL ESTATE

New-home sales improved nicely from June to July but still trailed those of July 1992 by 6 percent. For the first seven months of 1993, sales were off about 4 percent. Builders have cut back sharply on starts, and inventories have fallen below the three-month level. Existing home sales in July were even with July 1992 sales. For the first seven months, they were up 8 percent from the same period last year. Inventory fell 7 percent over the summer. Consumer interest in both new and existing housing is very strong, with high levels of traffic and inquiries.

The market for office space remains weak, with rents and occupancy still deteriorating. The weakness apparent downtown and in the Galleria area since last winter is now spreading to suburban locations as well. Rents and occupancy in the apartment market remain flat, and industrial real estate is described as dormant. The retail market remains stable, with modest improvement in rents and occupancy possible over the next few months, according to one respondent.

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