

Economic Impact of the Texas Forest Sector, 2021



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HIGHLIGHTS 2021

- The Texas forest sector directly contributed \$21.4 billion of industry output to the Texas economy, employing over 68,000 people with a payroll of \$4.3 billion.
- Including direct, indirect, and induced effects, the Texas forest sector had a total economic contribution of \$41.6 billion in industry output, supporting more than 172,000 jobs with \$10.5 billion in labor income.
- On average, every dollar generated in the Texas forest sector contributed an additional \$0.95 to the rest of the Texas economy.
- Every job created in the forest sector resulted in another 1.54 jobs in the state.
- Texas forest landowners received an estimated total stumpage revenue totaling \$331.2 million.
- Secondary forest products manufacturing industries contributed over two-thirds of the Texas forest sector's total industry output and employed 66 percent of the forest sector workforce.
- The forest sector in East Texas directly produced \$6.6 billion worth of goods and services, supporting more than 21,000 jobs with \$1.4 billion in labor income.
- Seventy-seven percent of the industry output from forestry, logging, and the primary solid wood products industries was from East Texas.
- Texas forest products firms exported \$1.2 billion worth of forest products to foreign countries in 2021.
- Compared to 2009, the 2021 Texas forest sector total industry output and employment decreased three percent and increased four percent, respectively.

INTRODUCTION

Texas has more than 62.1 million acres of forestland — 12.0 million acres in East Texas and 50.1 million acres across the rest of the state (USDA Forest Service, 2021). Of the 62.1 million acres, timberland accounts for 22 percent, or about 13.5 million acres, and the majority of it — around 87 percent — is located in East Texas. Figure 1 shows forest coverage across the state.

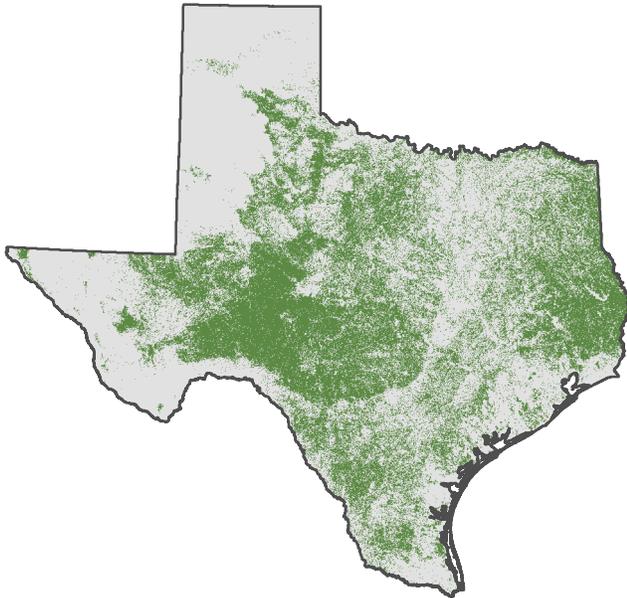


Figure 1. Forestland in Texas

In East Texas about 90 percent of the timberland is privately owned. Family forest landowners are by far the largest group of private owners, accounting for about 50 percent of all timberland. In the past decade most timberland held by corporations that own wood processing facilities has transferred to corporations that do not own wood processing facilities such as TIMO's (Timberland Investment Management Organizations) and REIT's (Real Estate Investment Trusts). They currently account for about 38 percent of timberland in East Texas. Other private ownership classes (i.e. nonindustrial corporate excluding TIMO's and REIT's, unincorporated, Native American, and non-governmental organizations) account for slightly more than 2 percent of all timberland. About 10 percent of timberland is publicly owned. There is an estimated 19.2 billion cubic feet of volume on timberland in East Texas. Softwood species account for 60 percent and hardwoods account for 40 percent of the total (USDA

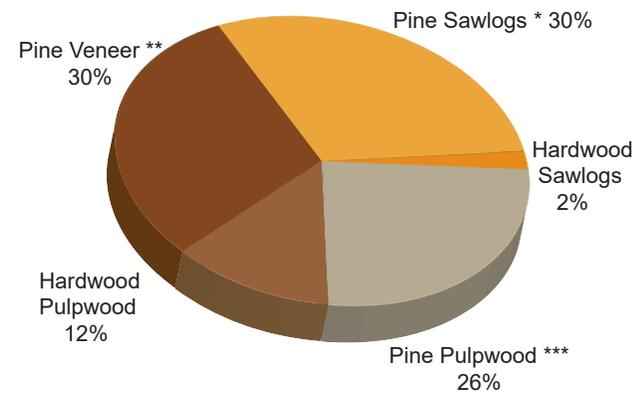
Forest Service,2021).

Only 1.7 million of the 50.1 million acres (4 percent) of forestland outside of East Texas is considered productive timberland, which by definition , has the capacity of producing at least 20 cubic feet per acre per year. Mesquite is the most abundant forest type in Central and West Texas. Juniper-pine, oak, and other hardwood forest types are also abundant. Oak is a common type in the West Central and North Central regions. Timber growing stock outside of East Texas was estimated to be 945.5 million cubic feet in 2019, predominantly in hardwoods which make up 81 percent of the total, Only 19 percent is from softwoods (USDA Forest Service, 2021)

In 2019, total removals of growing stock in East Texas including pine and hardwood, increased 4.5 percent from the previous year. The total volume of growing stock removed was 542.9 million cubic feet, compared to 519.7 million cubic feet a year earlier. Industrial roundwood harvest in Texas, the portion of total removals that was subsequently utilized in the manufacture of wood products, totaled 484.8 and 81.3 million cubic feet for pine and hardwood, respectively. Pine industrial roundwood harvest was up 6.0 percent, and hardwood roundwood harvest was down 1.9 percent from a year earlier. The combined harvest increased 4.8 percent to 566.2 million cubic feet in (Stottlemeyer et al.2021)

In 2019, Texas mills produced 1.5 billion board feet of lumber, a decrease of 3.5 percent from a year earlier. Production of pine lumber declined 2.7 percent to 1.4 billion board feet and hardwood lumber production increased 16.1 percent to 76.0 million board feet. Production of structural panels, including plywood and OSB, was up 14.3 percent to 3.1 billion square feet (3/8-inch basis). Production of paperboard, fiberboard, and market pulp was down 9.6 percent to 2.4 million tons compared to 2018 (Stottlemeyer et al.2021).

The forest sector makes considerable contributions to local and regional economies. In 2021, wood-based industries continued to be one of the top ten manufacturing sectors in the state. Texas was the largest of the thirteen southern states in terms of total employment, economic output, and labor income in the forest sector between 2004 and 2009 (Brandeis et al. 2012). The value of harvested timber ranked seventh among Texas top agricultural commodities in 2021, be-



* includes chip-n-saw

** includes panel roundwood

*** includes posts, poles and pilings

Figure 2. Industrial roundwood harvest by product, 2019

hind cattle and calves, milk, broilers, cotton lint, miscellaneous crops, and corn. This study evaluates the Texas forest sector's economic contributions to local economies in 2021, foreign exports, and the impacts of the 2008 financial crisis on the sector. The impacts are further divided to capture variations across sub-industries and regions. The multipliers published in this study can be used to assess the economic contributions individual sub-industries may make to the local economy.

DATA AND METHODS

The IMPLAN input-output modeling system and associated 2019 databases from the Minnesota IMPLAN Group (MIG) were used in this study to estimate direct and total economic contributions of the Texas forest sector in 2021. The input-output analysis examines how direct effects (e.g. operation expenditures and employment) generate additional indirect effects (e.g. purchases by supporting industries and their employment) and induced effects (e.g. household spending by direct and indirect employees) that result in the total impact on the local economy. The multipliers used in this study are Social Accounting Matrix (SAM) multipliers, which capture expenditure linkages between industries and other economic agents, such as households and government. The databases used by the IMPLAN system were compiled by MIG based on data from various U.S. federal agencies such as Bureau of Economic Analysis, Bureau of Labor Statistics, Census Bureau, Department of Agriculture, and Geological Survey (MIG, Inc. 2000). All values estimated here are

in 2021 dollars unless stated otherwise.

Economic contribution analysis is used to estimate the contribution that Texas forestry-based sectors have on the state's overall economy. Specifically, the contribution analysis estimates the reduction in economic activity that would occur in a particular region if the forestry sectors ceased to exist. The Texas forest sector is divided into six sub-industries: forestry, logging, primary solid wood products, secondary solid wood products, primary paper and paperboard products, and secondary paper and paperboard products. Each sub-industry includes several IMPLAN sectors as defined by MIG (see Appendix). Consistent with previous studies, IMPLAN sector 141 "Manufactured home (mobile home)" is excluded from the secondary solid wood products sub-industry. All results are based on multi-industry contribution analysis.

RESULTS

STATEWIDE CONTRIBUTIONS

The Texas forest sector directly produced \$21.4 billion of industry output in 2021 (Table 1). Value-added accounted for 29 percent (\$6.2 billion) of the industry output. Note that value-added is the contribution of industries to the state's output, also known as Gross State Product (GSP). It equals industrial output minus intermediate inputs.

Direct employment of the Texas forest sector was more than 68,000 workers with \$4.3 billion in wages, salaries, and benefits in 2021. The sector's average annual labor income (including wages, benefits, taxes paid to the on behalf of employees, and proprietor income) was \$62,344 in 2021, about 16 percent higher than the state average across all sectors.

The impacts of the forest sector are transferred to other sectors of the economy through purchasing inputs from other sectors in the state as well as household spending with subsequent rounds of additional spending. Including direct, indirect, and induced effects, the Texas forest sector contributed \$41.6 billion in industry output to the state economy in 2021. Value-added was \$16.5 billion, 40 percent of the total industry output. The Texas forest sector generated 172,730 jobs and created \$10.5 billion in labor income. These impacts were estimated based on SAM multipliers for output, value-added, employment, and labor income in Table

1. On average, every dollar generated in the Texas forest sector contributed an additional \$0.95 cents to the rest of the Texas economy. Furthermore, every job created in the Texas forest sector resulted in 1.5 additional jobs in the state economy.

CONTRIBUTIONS BY SUB-INDUSTRY

Economic contribution varied across sub-industries in the Texas forest sector. The Secondary solid wood and secondary paper and paperboard products were the largest two sub-industries in the Texas for-

est sector (Table 1). The secondary paper and paperboard products sub-industry produced the largest industry output while secondary solid wood products produced the largest value-added, employed the most labor force, and generated the highest labor income in the forest sector. The majority (52 percent) of the forest sector workforce — 36,095 workers — was employed in the secondary solid wood products sub-industry. The secondary paper and paperboard products sub-industry employed 14,520 workers, accounting for 21 percent of the total direct employment of the forest sector.

Primary wood products sub-industries (solid

Table 1. Direct and total economic contributions of the Texas forest sector, 2021

Sub-industry	Industry Output (million \$)	Value- Added	Employment (jobs)	Labor Income
Direct Impact				
Forestry	263.86	210.60	2,490	95.58
Logging	290.76	150.81	4,259	156.99
Primary Solid Wood Products	2,969.52	958.01	7,668	494.71
Secondary Solid Wood Products	6,956.27	2,432.34	36,095	1,921.88
Primary Paper & Paperboard Products	3,437.64	786.30	3,885	455.15
Secondary Paper & Paperboard Products	7,438.64	1,694.75	14,520	1,172.31
Total	21,356.69	6,232.81	68,917	4,296.61
Total Contribution				
Forestry	429.95	304.63	3,848	157.59
Logging	667.38	369.79	8,139	306.38
Primary Solid Wood Products	6,052.82	2,525.19	25,120	1,476.99
Secondary Solid Wood Products	13,879.82	5,979.90	71,906	4,069.87
Primary Paper & Paperboard Products	7,144.77	2,661.38	21,522	1,579.75
Secondary Paper & Paperboard Products	13,413.85	4,652.09	42,194	2,942.49
Total	41,588.59	16,492.98	172,730	10,533.08
SAM Multiplier				
Forestry	1.68	1.45	1.55	1.65
Logging	2.30	2.45	1.91	1.95
Primary Solid Wood Products	2.04	2.64	3.28	2.99
Secondary Solid Wood Products	2.00	2.46	1.99	2.12
Primary Paper & Paperboard Products	2.08	3.38	5.54	3.47
Secondary Paper & Paperboard Products	1.80	2.75	2.91	2.51
Total	1.95	2.65	2.51	2.45

Numbers in columns may not sum to totals due to rounding. . Economic impacts are based on multi-industry contribution analysis of 2019 IMPLAN data and reported in 2021 dollars.

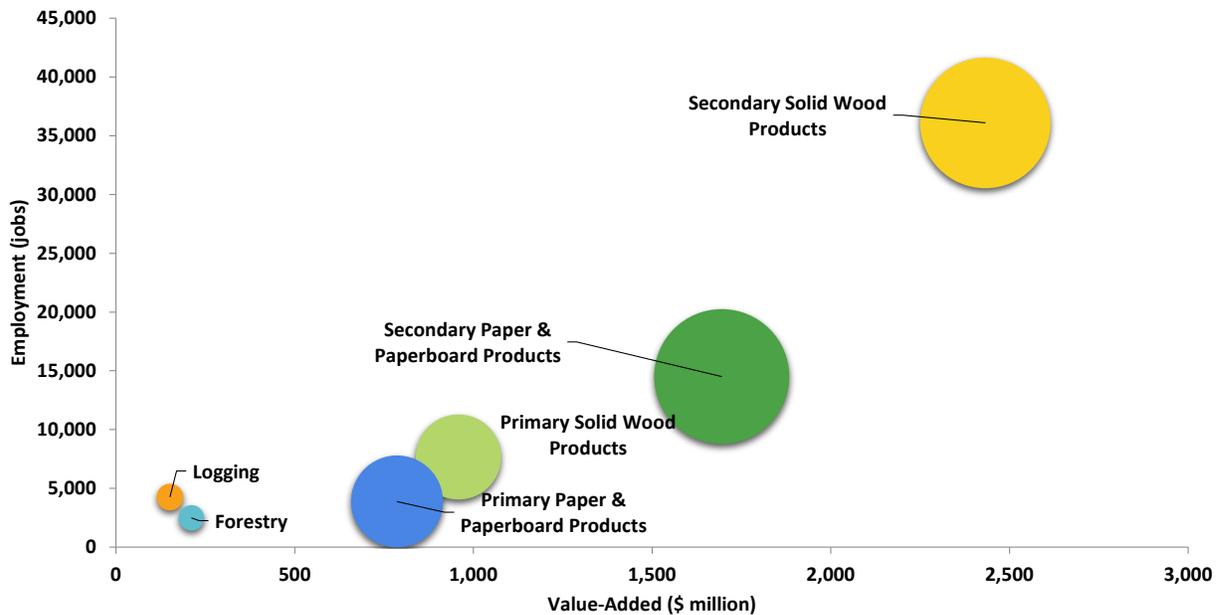


Figure 3. Direct economic contributions of the Texas forest sector by sub-industry, 2021

wood and paper and paperboard products) produced about 30 percent of the direct industry output, supporting 11,553 full and part-time jobs in Texas. The forestry and logging sub-industries together accounted for about three percent of the total industry output. Figure 3 shows the direct economic contributions of the forest sector by sub-industry. The size of the bubbles represents the magnitude of industry output. Overall, the primary paper and paperboard products sub-industry has the highest SAM multipliers in industry output, value-added, employment, and labor income indicating local economies benefited more from this sub-industry than other sub-industries in the forest sector. Every dollar generated in the primary paper and paperboard products sub-industry created an additional \$1.08 to the state economy in Texas. Every job in the primary paper and paperboard sub-industry created an additional 4.54 jobs in Texas.

CONTRIBUTIONS BY REGION

The economic impacts of the forest sector varied substantially across the state's seven regions: Northeast, Southeast, North Central, North west, South, West, and West Central. Table 2 shows the direct and total economic contributions of the Texas forest sector by region. In absolute terms, North Central Texas had the greatest direct economic contribution in 2021. The forest sector in North Central Texas contrib-

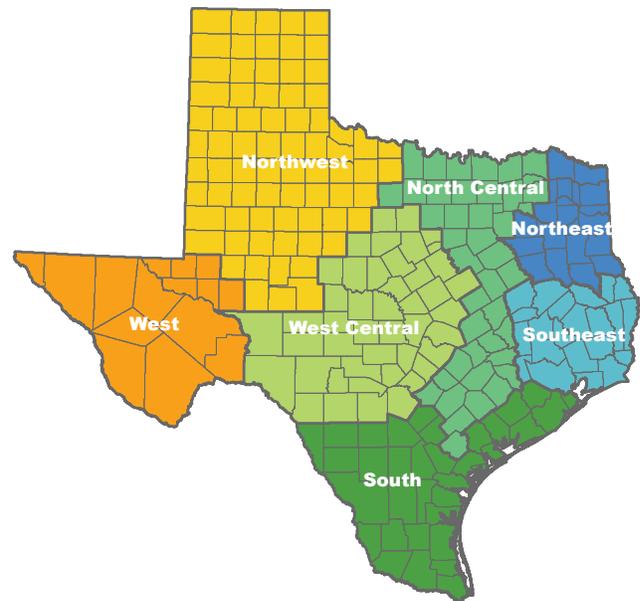


Figure 4. Regions in Texas

uted 43 percent — \$9.2 billion — of the total industry output and employed about 41 percent of total workers — 28,149 people. This is mainly due to the concentration of secondary forest products and primary paperboard firm in this region. Including direct, indirect, and induced impacts, the forest sector in this region had a total impact of approximately \$19.2 billion in industry output and \$7.7 billion in value-added, employing 76,320 people.

The East Texas region had about 31 percent of direct industrial output (\$6.6 billion) and employed 31

percent (21,646) of total workers in the sector, mainly from the solid wood products and logging industries in the region. Nearly three-quarters of all forestry and logging industries and the great majority of the primary forest products industries in Texas reside in East Texas. The output from primary solid wood products in East Texas accounted for 81 percent of all primary solid wood products manufacturing in Texas. The forest sector in East Texas had a total economic impact of \$12.9 billion in total industry output, \$5.3 billion in value-

added, and 55,089 jobs.

West Central Texas produced \$3.2 billion worth of goods and services from the forest sector in 2021. The region's share of the total Texas forest sector's industry output, employment, and value-added was around 15 percent. Most of the outputs in this region were from the secondary forest products industries. The remaining three regions (Northwest, South, and West) played relatively minor roles in the Texas forest sector.

Table 2. Direct and total contributions of the Texas forest sector by region, 2021

Region	Industry Output (\$ million)	Value-Added (\$ million)	Employment (jobs)	Labor Income (\$ million)
Direct Impact				
Northeast	2,304.67	694.68	7,766	448.65
Southeast	4,350.62	1,452.13	13,880	908.97
North Central	9,243.01	2,621.43	28,149	1,881.94
Northwest	522.41	152.01	2,092	103.16
South	1,175.76	294.16	4,431	220.45
West	544.73	111.05	1,619	82.12
West Central	3,215.49	907.34	10,980	651.32
Total	21,356.69	6,232.81	68,917	4,296.61
Total Impact				
Northeast	4,182.83	1,569.15	19,316	986.34
Southeast	8,723.56	3,769.17	35,773	2,349.73
North Central	19,197.37	7,725.94	76,320	4,961.18
Northwest	849.39	310.22	3,925	197.15
South	1,911.09	626.16	8,928	420.15
West	891.64	265.13	3,496	173.93
West Central	5,832.72	2,227.21	24,971	1,444.60
Total	41,588.59	16,492.98	172,730	10,533.08
SAM Multiplier				
Northeast	1.81	2.26	2.49	2.20
Southeast	2.01	2.60	2.58	2.59
North Central	2.08	2.95	2.71	2.64
Northwest	1.63	2.04	1.88	1.91
South	1.63	2.13	2.01	1.91
West	1.64	2.39	2.16	2.12
West Central	1.81	2.45	2.27	2.22
Total	1.95	2.65	2.51	2.45

Numbers in columns may not sum to totals due to rounding.

The forest sector plays an important role in local economies of many East Texas counties. For example, in 32 of 43 East Texas counties, the wood-based sector was in the top five among manufacturing sector employers in 2021. The forest sector ranked first among manufacturing industries in Cass, Cherokee, Hardin, Jasper, Marion, Newton, Polk, Rusk, Sabine, San Augustine, San Jacinto, Tyler, and Walker Counties. The forest sector contributed more than 10 percent of total employment generated in Cass, Jasper, Marion, Polk and Sabine Counties. Similarly, forest sector contributed more than 25 percent of direct economic output generated in Cass, Jasper, Mario, Polk, and Sabine counties. Finally, the sector contributed more than 15 percent of total value added in Cass, Jasper, Marion, Polk and Sabine Counties.

Harris, Polk, Jasper, Orange, and Angelina were the top five East Texas counties in terms of direct output value of the forest sector in 2021. Similarly, the top five counties with direct forest-related employment were Harris, Polk, Harrison, Angelina and Nacogdoches. Harris, Polk, Jasper, Harrison and Orange counties provided the five largest direct labor-income opportunities. In addition, Harris, Polk, Jasper, Orange, and Angelina also ranked the top five among East Texas counties in terms of direct value-added impacts.

FOREIGN EXPORTS OF THE TEXAS FOREST SECTOR

Texas forest products firms exported \$1.2 billion worth of forest products to foreign countries in 2021, about six percent of the forest sector’s value of direct industry output. Primary paper and paperboard products was the largest forest products export industry, shipping \$424.3 million worth of products to foreign countries (Figure 5). The value of foreign exports by

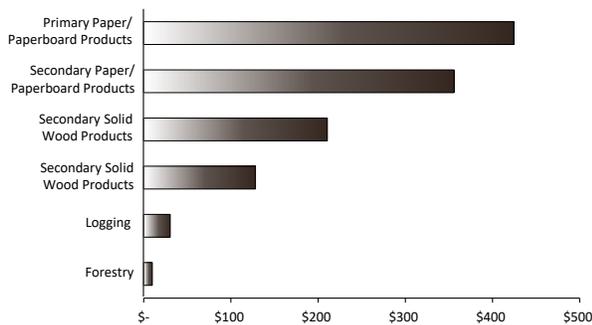


Figure 5. Value of Texas forest products foreign exports by sub-industry, 2021

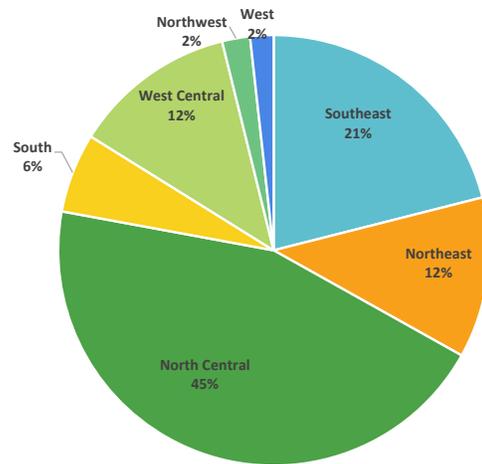


Figure 6. Value of Texas forest products foreign exports by region, 2021

the secondary solid wood products industry totaled \$355.8 million in 2021. The secondary solid wood products and primary solid wood products exported \$210.5 million and \$128.2 million, respectively.

North Central Texas region was the largest contributor to exports, accounting for about 45 percent of the total value of forest products foreign exports in 2021 (Figure 6). East Texas, which includes Northeast and Southeast regions, was the second largest contributor, exporting \$383.8 million of forest products internationally. These top two regions accounted for about 78 percent of the total forest products exports from the state in 2021. West Central Texas was a distant third, accounting for 12 percent and the remaining three regions together contributed 10 percent of the total forest products exports, or \$113.8 million.

RECESSION EFFECTS ON THE FOREST SECTOR IN TEXAS: A RETROSPECTIVE ANALYSIS

The 2008 great financial crisis began in December 2007 and ended in June 2009. During this time goods-producing industries experienced substantial declines in employment and economic output. The housing market collapse resulted in significant job losses in the forest sector across the South. Similar to the rest of the region, wood-related business dipped in Texas during the recession. Given the importance of forestry in the state economy, it is imperative to understand how recession impacted the sector, and whether the forest sector recovered from the recession. With the help of

trend analysis, this section evaluates the forest sector's total economic impacts in recent year(2009-2021) and the recession effects in Texas forest industry. The year 2011 constant dollars were used for the comparison analysis.

Texas forest industry felt the deleterious effects of recession in 2010 and was still on a path of recovery as of 2021 based on the contribution trend analysis. Compared to the 2009 value, the 2021 total economic output value was still down three percent. The magnitude of recession effects, however, varied across sub-industries. In terms of percentage change, the forestry sub-industry was the hardest hit, as its total economic output was still down 69 percent in 2021 compared to the year of 2009 (Figure 7). Secondary solid wood products, a major contributor among forest sub-industries, experienced the largest number of job losses in Texas. Compared to 2009, the secondary solid wood products sub-industry contributed eight percent less in terms of total economic output and generated 10 percent fewer jobs in 2021. Total payroll of secondary solid wood products decreased by six percent during this period. In contrast, the primary solid wood products sub-industry, which consists of sawmills and veneer and plywood manufacturing, performed better than year 2009 in terms of total output, total employment opportunities and labor income as well as value-added.

The secondary paper and paperboard products sub-industry has also not fully recovered from the economic recession. Compared to 2009 levels, there was still about a two percent decline in total economic output and an five percent decline in employment in the secondary paper and paperboard products sub-sector. Due to lower economic activity, total volumes of timber harvests declined from 619.3 million cubic feet in 2007 to 566.2 million cubic feet in 2019, but the trend of timber harvest has been generally upward since 2011.

The average weighted price of large pine saw-timber was still down 25 percent during the period from 2009 to 2021 (Texas Timber Price Trends). Lower demand for timber stagnated production along the entire forest sector supply chain. Apart from economic recession, structural changes in traditional forest sub-industries and substitution effects (lack of product demand due to availability of inexpensive substitutes)could have worsened the overall forest product output contributed to the decrease of overall forest product output. For example, primary paper and paperboard outputs have declined and the Texas furniture sub-industry is facing increased competition from imported products. Employment opportunities in logging declined during this period. Overall, contribution trend analysis of the Texas forest sector suggests that the economic downturn had significant impacts on the state forest sector

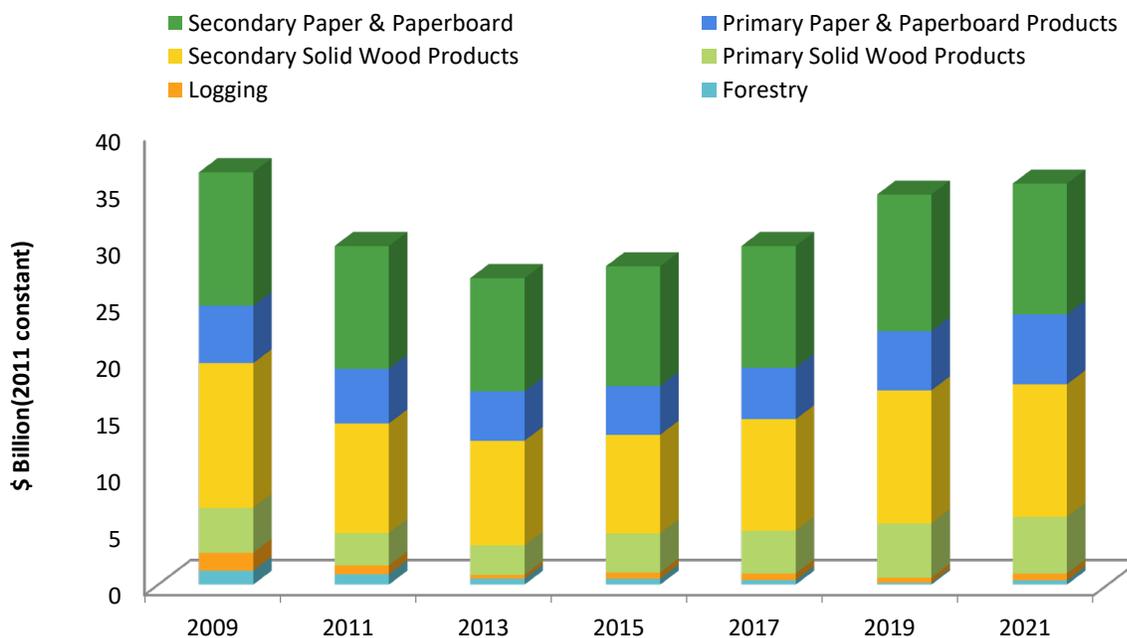


Figure 7. Total economic output of Texas forest sector by sub-industry, 2009–2021

and it had not fully recovered as of 2021.

CONCLUSION

The Texas forest sector plays an important role in the state's economy. For more than a decade, the wood-based industry has remained one of the top 10 manufacturing sectors in the state. In 2021, the Texas forest sector (forestry, logging, primary and secondary solid wood products manufacturing, and primary and secondary paper and paperboard products manufacturing) directly contributed \$21.4 billion in industry output and \$6.2 billion in value-added to the state economy and supported more than 68,000 jobs with a payroll of \$4.3 billion.

Impacts of the forest sector are transferred to other sectors of the economy through input purchases and spending. Including direct, indirect, and induced effects, the total economic contributions of the Texas forest sector in 2021 were \$41.6 billion in industry output, \$16.5 billion in value-added, \$10.5 billion in labor income, and about 172,730 jobs. On average, every dollar generated in the Texas forest sector contributed an additional \$0.95 in other sectors of the state. Every job in the Texas forest sector created another 1.51 jobs in the state's economy.

The largest industry outputs were from secondary forest products (e.g., wood windows, doors and mill work, wood containers, wood buildings, other wood products, furniture, paperboard containers, coated and treated paper and packaging materials, etc.). Over half of all forestry and logging industries and the great majority of the primary forest products industries in Texas reside in East Texas. Most of the secondary forest products manufacturing facilities are located outside of East Texas, mostly in North Central Texas.

The forest sector in East Texas directly produced \$6.6 billion worth of goods and services in 2021. It generated \$2.1 billion in value-added, about 21,646 jobs, and \$1.4 billion in labor income.

Texas forest products firms exported about six percent of their total industry output, or \$1.2 billion worth of forest products to foreign countries in 2021. Primary paper and paperboard was the largest forest products export industry. The North Central Texas was the largest contributor among all regions to forest products foreign exports in 2021.

The 2008 economic recession had a profound adverse impact on the Texas forest sector. Compared to pre-recession levels, the 2021 total economic output value of the forest sector was still down three percent. The secondary solid wood sub-industry contributed eight percent less in terms of total economic output and generated 10 percent fewer jobs during this period. In contrast, the primary solid wood sub-industry, which consists of sawmills and veneer and plywood manufacturing performed better than the pre-recession year of 2007 in terms of total output, total employment opportunities, labor income and value-added.

Note that the scope of this study is focused only on the economic impacts of the forest sector. A study conducted by Texas A&M Forest Service in 2013 estimated that Texas' more than 60 million acres of forestland provide \$93 billion worth of environmental goods and services such as regulating local climate, protecting water resources, improving wildlife habitats, species diversity, and other non-material cultural benefits. There are some emerging, non-traditional markets for forestry and forest products such as electricity or bio-fuel production using woody biomass, carbon credits, and other ecosystem benefits from sustainable forest management. These markets also provide economic opportunities for the Texas forest sector.

Additional information on economic impacts of Texas forest industries, statewide trend analysis, directory of forest products industry, timber supply analysis, county- or region-specific distribution of forest products, economic values of the ecological goods and services provided by Texas forests, and more web-based applications are available in the Texas Forest Information Portal (texasforestinfo.com) developed by Texas A&M Forest Service.

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GLOSSARY

Industry output is the total value of production or service by industry for a given time period.

Value-added is the difference between an industry's total output and the cost of its intermediate inputs. It consists of four components: employee compensation, proprietor income, other property income, and indirect business tax.

Employment includes full-time and part-time employees and self-employed individuals.

Labor income includes wages, salary, and benefits of employees, taxes paid to the government on behalf of employees, and income for self-employed individuals.

Direct effects refer to the sector's own production, value-added, employment, and labor income.

Indirect effects refer to the economic activities in other sectors impacted by the forest sector's purchase of goods and services.

Induced effects are economic activities from consumption of goods and services using income generated from the direct and indirect effects.

SAM is the acronym for Social Accounting Matrices, a macro accounting system widely used by many countries for analyzing relationships of economic activities such as production, consumption, and trade between various economic entities.

Direct economic impact of a sector includes only direct effects.

Total economic impact of a sector includes all three types of effects generated by the sector: direct, indirect, and induced.

APPENDIX

Sub-Industry/IMPLAN Sector	IMPLAN Index	2017 NAICS
Forestry		
Forestry, forest products, and timber tract production	15	1131-2
Commercial hunting and trapping	18 (partial)	1142 (partial)
Support activities for agriculture and forestry	19 (partial)	115 (partial)
Logging		
Commercial logging	16	113310
Primary solid wood products		
Sawmills	132	321113
Wood preservation	133	321114
Veneer and plywood manufacturing	134	321211-2
Reconstituted wood product manufacturing	136	321219
Secondary solid wood products		
Engineered wood member and truss manufacturing	135	321213-4
Wood windows and door manufacturing	137	321911
Cut stock, resawing lumber, and planing	138	321912
Other millwork, including flooring	139	321918
Wood container and pallet manufacturing	140	321920
Prefabricated wood building manufacturing	142	321992
All other miscellaneous wood product manufacturing	143	321999
Wood kitchen cabinet and countertop manufacturing	365	337110
Upholstered household furniture manufacturing	366	337121
Nonupholstered wood household furniture manufacturing	367	337122
Institutional furniture manufacturing	369	337127
Wood office furniture manufacturing	370	337211
Custom architectural woodwork and millwork	371	337212
Showcase, partition, shelving, and locker manufacturing	373	337215
Primary Paper and Paperboard Products		
Pulp mills	144	322110
Paper mills	145	322121-2
Paperboard mills	146	322130
Secondary Paper and Paperboard Products		
Paperboard container manufacturing	147	32221
Paper bag and coated and treated paper manufacturing	148	322220
Stationery product manufacturing	149	322230
Sanitary paper product manufacturing	150	322291
All other converted paper product manufacturing	151	322299

Source: IMPLAN Group, 2019

