



# FORESTRY IN MISSISSIPPI

The Economic Impact of Forestry and the Forest Products Industry on Mississippi's Congressional Districts

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**FOREST AND WILDLIFE RESEARCH CENTER**

Mississippi State University

# **The Economic Impact of Forestry and the Forest Products Industry on Mississippi's Congressional Districts**

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# Introduction

The forestry and forest products industry makes a substantial economic contribution to each of Mississippi's four congressional districts. The forest products industry impacts an economy in a number of ways ranging from jobs, wages, and purchases in local economies to local, state and federal taxes. The purchase of goods and services by this forest products industry and its employees spurs economic activity in other sectors of the economy resulting in a substantial cumulative economic impact. For example, in Mississippi, forestry is a 10.4 billion dollar industry, and in 2010 forestry related employment accounted for 4.2% of all jobs in Mississippi (Dahal et al. 2012). Given the contribution generated by the forest products industry to the Mississippi economy and the economic development potential, there is great interest in understanding the contribution of the forest products industry to the economies of each of Mississippi's four congressional districts. This study estimates the economic impact of forestry and forest products by congressional district.



# Methods

The economic impacts of the forest products industry were modeled using IMpact Analysis for PLANning (IMPLAN), an input-output model (MIG 2004). The IMPLAN model was originally developed by the USDA Forest Service in cooperation with the Federal Emergency Management Agency and the University of Minnesota to estimate the regional economic impacts of management plans for National Forests (Alward et al. 1985).

The IMPLAN model tracks inter-industry spending and summarizes the economy into a 440 industry sector model. For reporting purposes the results of this analysis were simplified by combining the 440 sectors to 17 sectors representing the entire economy including the 5 forestry and forest products related sectors (Table A.1).

Using input-output analysis to track how the inputs of one sector of the economy are the outputs of other sectors can allow for a greater appreciation of the economic importance of a sector or group of sectors to the overall economy. Using 2011 data IMPLAN V3.0 software, this study estimates the total economic contribution of forestry and the forest products industry within Mississippi's four congressional districts (Figure 1).

This is measured by examining how spending by the forestry and forest products industry impacts the entire economy using four key statistics: employment (the number of full- and part-time jobs), income (employee compensation), total industry output (total value of production), and value-added (payments made to workers, interest, profits and indirect business taxes). For each of the four key statistics the direct, indirect, induced, and total economic impacts were estimated. The direct impacts are the actual expenditures and employment of the forestry and forest products industry sectors (forestry services, logging, solid wood products, pulp and paper, and wood furniture manufacturing). The direct impacts are then used to measure how the purchase of goods and services by the forest products industry's supporting industries (i.e., indirect impact) and the purchases of consumer goods and services by employee households associated with direct and indirect effects (i.e., induced impact) generate a total economic impact.

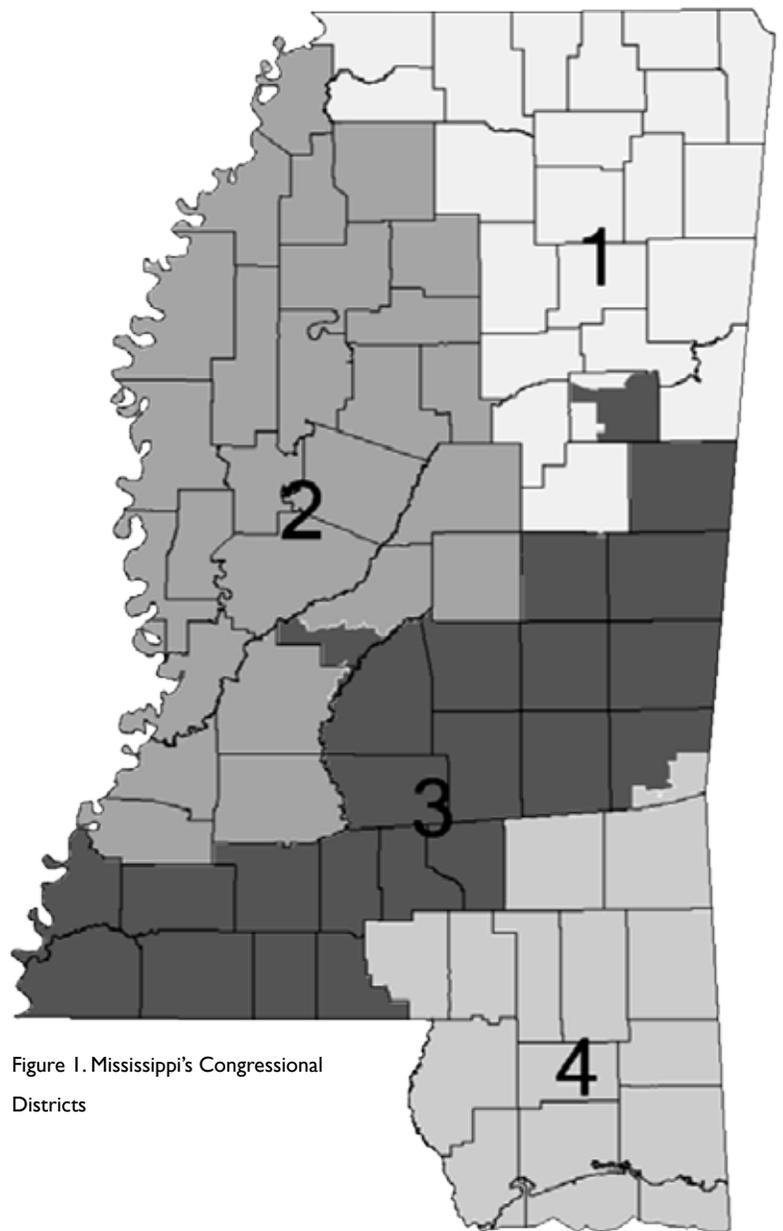


Figure 1. Mississippi's Congressional Districts

# Results

The key findings of how forestry and forest products impact the economy of Mississippi's congressional districts are presented in detail in Tables 1, 2, 3, and 4. The associated federal, state, and local tax impacts are presented in Tables 5a and 5b.

The forestry and forest products industry in Mississippi's 1st Congressional District has a total economic impact amounting to 34,088 jobs and \$1.6 billion in income during 2011. That's 9.4% of jobs and 10.7% of income in the district. Forestry and the forest products industry generated \$5.9 billion, or about 12.1 %, of total output in in the district. Total industry output is defined as the value of all goods and services produced in the district. Value-added amounted to over \$2.4 billion or 10.6 % of all value-added in the district. Value-added represents the creation of new wealth, and is inserted into the economy through payments made to workers, interest, profits and indirect business taxes. In addition, the tax impact was estimated to be \$417.7 million with \$278.2 million in federal and \$139.5 million in state and local taxes.

In the 2nd Congressional District, forestry and forest products has a total economic impact of 6,927 jobs and \$284.6 million in income. That amounts to 1.9% of jobs and 2% of income in the district. The value of output produced by the forest products industry was \$1.4 billion, which is over 3% of the district's total output, and value-added was \$442.4 million or just over 2% of the value-added generated in the district. The associated tax impacts amounted to \$87.1 million with \$51.9 million in federal and \$35.2 million in state and local taxes.

The employment and income impacts resulting from the forest products industry in Mississippi's 3rd Congressional District summed to 10,905 jobs and \$489.3 million in income. The employment and income impacts account for 2.8% of jobs and 3.1% of income in the district. The total output and value-added impacts are also very considerable. Forest products generated \$2.1 billion in output and \$710.1 million in value-added. That corresponds to 4.1% of total output and 2.8% of value-added for the district. Additionally, the tax impact was estimated to be \$138.8 million with \$85.1 million in federal and \$53.7 million in state and local taxes.

Mississippi's 4th Congressional District also benefits from the forest product industry as evidenced by an economic impact amounting to 7,237 jobs and \$334.8 million in income. That represents 2% of jobs and income in the district's economy. The total output and value-added impacts amounted to \$1.5 billion and \$522.7 million, respectively, which amount to 2.4% of output and 1.9% of value-added generation in the district. The tax impact amounted to \$99.6 million with \$57.3 million in federal and \$42.3 million in state and local taxes.

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**Table 1. Impacts from Forest Related Sectors on Employment, Income, Output, and Value-Added in Mississippi's 1st Congressional District (2011).**

	Number of jobs	% of District	Income (\$)	% of District	Output (\$)	% of District	Value-Added (\$)	% of District
<b>Direct Impact from Forest-Related Sectors:</b>								
Forestry Services	96	0.03	4,856,290	0.03	30,241,697	0.06	12,405,551	0.06
Logging	1,235	0.34	29,951,870	0.21	74,107,841	0.15	23,970,593	0.11
Solid Wood Products	2,536	0.70	109,774,904	0.76	507,408,023	1.04	132,061,895	0.59
Pulp and Paper	1,604	0.44	163,908,573	1.13	835,954,040	1.72	242,777,045	1.09
Wood Furniture	15,361	4.21	760,725,358	5.25	2,650,036,355	5.44	1,087,893,445	4.90
<b>Subtotal</b>	<b>20,832</b>	<b>5.71</b>	<b>1,069,216,995</b>	<b>7.38</b>	<b>4,097,747,958</b>	<b>8.41</b>	<b>1,499,108,529</b>	<b>6.75</b>
<b>Indirect and Induced Impacts on Sectors:</b>								
Services	2,783	0.76	103,546,179	0.71	250,644,376	0.51	170,757,369	0.77
Retail and Wholesale Trade	2,633	0.72	88,041,308	0.61	222,063,485	0.46	120,810,711	0.54
Transportation and Warehousing	2,056	0.56	95,797,359	0.66	572,235,831	1.17	164,747,595	0.74
Food Services	1,208	0.33	20,794,836	0.14	63,025,220	0.13	30,321,667	0.14
Construction and Manufacturing	1,169	0.32	52,693,211	0.36	151,946,753	0.31	68,578,947	0.31
Real Estate, Finance, and Insurance	1,142	0.31	64,652,847	0.45	120,823,486	0.25	70,747,450	0.32
Health Care	1,035	0.28	24,881,009	0.17	289,594,847	0.59	178,746,921	0.80
Agricultural Production and Services	450	0.12	7,040,576	0.05	15,580,941	0.03	6,781,056	0.03
Hotels and Entertainment	235	0.06	4,440,690	0.03	16,565,693	0.03	7,968,951	0.04
Government	206	0.06	13,463,510	0.09	43,121,880	0.09	18,638,299	0.08
Education	189	0.05	4,310,555	0.03	8,459,349	0.02	5,157,787	0.02
Food and Fiber Products	149	0.04	7,070,855	0.05	41,791,026	0.09	9,437,596	0.04
<b>Subtotal</b>	<b>13,256</b>	<b>3.64</b>	<b>486,732,937</b>	<b>3.36</b>	<b>1,795,852,888</b>	<b>3.68</b>	<b>852,694,349</b>	<b>3.84</b>
<b>Total Impact</b>	<b>34,088</b>	<b>9.35</b>	<b>1,555,949,932</b>	<b>10.74</b>	<b>5,893,600,846</b>	<b>12.09</b>	<b>2,351,802,878</b>	<b>10.59</b>
Rest of District	330,577	90.65	12,929,354,341	89.26	42,843,795,794	87.91	19,859,400,440	89.41
Total in District	364,664	100.00	14,485,304,273	100.00	48,737,396,639	100.00	22,211,203,317	100.00

**Table 2. Impacts from Forest-Related Sectors on Employment, Income, Output, and Value-Added in Mississippi's 2nd Congressional District (2011).**

	Number of jobs	% of District	Income (\$)	% of District	Output (\$)	% of District	Value-Added (\$)	% of District
<b>Direct Impact from Forest-Related Sectors:</b>								
Forestry Services	167	0.05	3,137,331	0.02	44,097,957	0.10	13,083,345	0.06
Logging	847	0.24	18,470,312	0.13	48,509,270	0.11	14,369,651	0.07
Solid Wood Products	1,977	0.55	76,551,829	0.54	424,134,058	0.94	88,521,441	0.40
Pulp and Paper	649	0.18	48,541,999	0.34	388,488,973	0.86	100,940,841	0.46
Wood Furniture	423	0.12	25,121,026	0.18	73,603,240	0.16	35,728,922	0.16
<b>Subtotal</b>	<b>4,064</b>	<b>1.14</b>	<b>171,822,496</b>	<b>1.21</b>	<b>978,833,498</b>	<b>2.18</b>	<b>252,644,200</b>	<b>1.15</b>
<b>Indirect and Induced Impacts on Sectors:</b>								
Services	702	0.20	27,705,216	0.19	62,233,712	0.14	35,460,404	0.16
Retail and Wholesale Trade	507	0.14	20,933,752	0.15	49,550,977	0.11	34,020,679	0.16
Transportation and Warehousing	315	0.09	10,051,960	0.07	18,447,660	0.04	9,619,629	0.04
Food Services	288	0.08	13,123,271	0.09	40,373,459	0.09	17,522,345	0.08
Construction and Manufacturing	238	0.07	4,671,440	0.03	12,987,616	0.03	6,545,828	0.03
Real Estate, Finance, and Insurance	234	0.07	11,874,641	0.08	113,817,044	0.25	31,599,783	0.14
Health Care	196	0.05	11,385,145	0.08	20,717,592	0.05	12,580,238	0.06
Agricultural Production and Services	190	0.05	5,973,355	0.04	55,683,157	0.12	31,313,335	0.14
Hotels and Entertainment	88	0.02	1,972,939	0.01	6,616,215	0.01	3,305,725	0.02
Government	54	0.02	3,531,062	0.02	10,900,233	0.02	5,879,482	0.03
Education	42	0.01	1,114,747	0.01	2,145,077	0.00	1,280,763	0.01
Food and Fiber Products	10	0.00	428,164	0.00	4,082,542	0.01	638,618	0.00
<b>Subtotal</b>	<b>2,863</b>	<b>0.80</b>	<b>112,765,692</b>	<b>0.79</b>	<b>397,555,284</b>	<b>0.88</b>	<b>189,766,829</b>	<b>0.87</b>
<b>Total Impact</b>	<b>6,927</b>	<b>1.93</b>	<b>284,588,188</b>	<b>2.00</b>	<b>1,376,388,782</b>	<b>3.06</b>	<b>442,411,029</b>	<b>2.02</b>
Rest of District	351,047	98.07	13,930,482,308	98.00	43,561,467,604	96.94	21,433,419,304	97.98
Total in District	357,974	100.00	14,215,070,496	100.00	44,937,856,386	100.00	21,875,830,333	100.00

**Table 3. Impacts from Forest-Related Sectors on Employment, Income, Output, and Value-Added in Mississippi's 3rd Congressional District (2011).**

	Number of jobs	% of District	Income (\$)	% of District	Output (\$)	% of District	Value-Added (\$)	% of District
<b>Direct Impact from Forest-Related Sectors:</b>								
Forestry Services	64	0.02	6,230,681	0.04	25,225,437	0.05	13,404,953	0.05
Logging	1,958	0.50	55,070,864	0.34	125,073,814	0.25	45,588,409	0.18
Solid Wood Products	2,614	0.66	128,189,538	0.79	588,900,275	1.17	150,211,090	0.60
Pulp and Paper	966	0.25	82,185,457	0.51	541,411,607	1.08	141,290,126	0.56
Wood Furniture	853	0.22	42,115,867	0.26	141,071,752	0.28	57,238,623	0.23
<b>Subtotal</b>	<b>6,455</b>	<b>1.64</b>	<b>313,792,407</b>	<b>1.95</b>	<b>1,421,682,886</b>	<b>2.83</b>	<b>407,733,201</b>	<b>1.62</b>
<b>Indirect and Induced Impacts on Sectors:</b>								
Services	1,037	0.26	41,271,086	0.26	92,313,289	0.18	52,730,313	0.21
Retail and Wholesale Trade	881	0.22	36,901,180	0.23	88,155,847	0.18	60,613,389	0.24
Transportation and Warehousing	447	0.11	20,997,647	0.13	63,854,823	0.13	27,825,355	0.11
Food Services	431	0.11	12,614,008	0.08	109,424,917	0.22	62,764,386	0.25
Construction and Manufacturing	397	0.10	7,279,495	0.05	21,155,062	0.04	10,408,412	0.04
Real Estate, Finance, and Insurance	371	0.09	22,380,016	0.14	40,504,539	0.08	24,591,663	0.10
Health Care	353	0.09	18,073,542	0.11	135,955,148	0.27	42,430,732	0.17
Agricultural Production and Services	251	0.06	5,315,894	0.03	9,003,987	0.02	4,618,984	0.02
Hotels and Entertainment	101	0.03	1,932,852	0.01	6,821,420	0.01	3,372,640	0.01
Government	88	0.02	5,818,302	0.04	18,909,625	0.04	9,360,237	0.04
Education	65	0.02	1,800,357	0.01	3,375,975	0.01	2,053,117	0.01
Food and Fiber Products	28	0.01	1,109,842	0.01	8,308,464	0.02	1,528,073	0.01
<b>Subtotal</b>	<b>4,450</b>	<b>1.13</b>	<b>175,494,219</b>	<b>1.09</b>	<b>597,783,097</b>	<b>1.19</b>	<b>302,297,303</b>	<b>1.20</b>
<b>Total Impact</b>	<b>10,905</b>	<b>2.77</b>	<b>489,286,626</b>	<b>3.03</b>	<b>2,019,465,983</b>	<b>4.02</b>	<b>710,030,504</b>	<b>2.83</b>
Rest of District	382,986	97.23	15,642,198,164	96.97	48,166,677,648	95.98	24,405,558,237	97.17
Total in District	393,890	100.00	16,131,484,790	100.00	50,186,143,631	100.00	25,115,588,742	100.00

**Table 4. Impacts from Forest-Related Sectors on Employment, Income, Output, and Value-Added in Mississippi's 4th Congressional District (2011).**

	Number of jobs	% of District	Income (\$)	% of District	Output (\$)	% of District	Value-Added (\$)	% of District
<b>Direct Impact from Forest-Related Sectors:</b>								
Forestry Services	59	0.02	3,960,464	0.02	20,712,757	0.03	9,742,332	0.04
Logging	1,107	0.30	37,206,450	0.22	76,777,916	0.12	31,846,180	0.12
Solid Wood Products	2,458	0.68	120,178,602	0.72	540,872,007	0.86	156,902,286	0.57
Pulp and Paper	651	0.18	53,291,541	0.32	449,984,610	0.71	124,455,846	0.45
Wood Furniture	314	0.09	14,671,085	0.09	38,658,045	0.06	12,479,274	0.05
<b>Subtotal</b>	<b>4,588</b>	<b>1.26</b>	<b>229,308,141</b>	<b>1.37</b>	<b>1,127,005,335</b>	<b>1.79</b>	<b>335,425,917</b>	<b>1.22</b>
<b>Indirect and Induced Impacts on Sectors:</b>								
Services	694	0.19	26,532,605	0.16	62,383,271	0.10	34,301,640	0.13
Retail and Wholesale Trade	466	0.13	17,292,343	0.10	41,655,075	0.07	28,413,521	0.10
Transportation and Warehousing	294	0.08	13,888,716	0.08	42,232,131	0.07	18,118,740	0.07
Food Services	263	0.07	5,001,870	0.03	14,205,878	0.02	7,076,855	0.03
Construction and Manufacturing	252	0.07	15,531,198	0.09	121,428,513	0.19	36,696,412	0.13
Real Estate, Finance, and Insurance	197	0.05	5,180,680	0.03	57,332,407	0.09	35,598,009	0.13
Health Care	193	0.05	11,861,160	0.07	20,617,920	0.03	12,941,653	0.05
Agricultural Production and Services	100	0.03	2,888,337	0.02	5,393,063	0.01	2,568,557	0.01
Hotels and Entertainment	93	0.03	2,261,948	0.01	7,023,469	0.01	3,611,756	0.01
Government	56	0.02	3,821,461	0.02	11,475,601	0.02	6,292,627	0.02
Education	30	0.01	668,676	0.00	1,591,167	0.00	873,123	0.00
Food and Fiber Products	11	0.00	557,902	0.00	4,130,643	0.01	742,667	0.00
<b>Subtotal</b>	<b>2,649</b>	<b>0.73</b>	<b>105,486,897</b>	<b>0.63</b>	<b>389,469,138</b>	<b>0.62</b>	<b>187,235,559</b>	<b>0.68</b>
<b>Total Impact</b>	<b>7,237</b>	<b>1.99</b>	<b>334,795,037</b>	<b>2.00</b>	<b>1,516,474,473</b>	<b>2.41</b>	<b>522,661,477</b>	<b>1.91</b>
Rest of District	356,035	98.01	16,370,690,238	98.00	61,488,123,302	97.59	26,875,046,940	98.09
Total in District	363,272	100.00	16,705,485,275	100.00	63,004,597,775	100.00	27,397,708,416	100.00

**Table 5a. Federal, Non-Defense Tax Impacts (\$) Generated by the Forest Products Industry in Mississippi by congressional district (2011).**

Type of Tax	Congressional District			
	1st	2nd	3rd	4th
Corporate Profits Tax	45,261,605	8,466,394	10,689,225	9,540,627
Indirect Business Taxes <sup>1</sup>	7,548,767	2,354,243	3,285,880	2,783,557
Personal Taxes <sup>2</sup>	68,631,666	12,748,048	21,837,055	14,479,370
Social Security Taxes <sup>3</sup>	156,712,105	28,300,184	49,314,756	30,516,461
Total	278,154,143	51,868,869	85,126,916	57,320,015

<sup>1</sup>Includes Custom Duty; Excise Taxes; and Federal Non Taxes.

<sup>2</sup>Includes Estate and Gift Taxes; and Income Taxes.

<sup>3</sup>Includes Employee Contribution; and Employer Contribution.

**Table 5b. State and Local Government, Non-Education Taxes (\$MM) Generated by the Forest Products Industry in Mississippi by congressional district (2011).**

Type of Tax	Congressional District			
	1st	2nd	3rd	4th
Corporate Profits Tax	7,969,332	1,490,700	1,882,081	1,679,843
Indirect Business Taxes <sup>1</sup>	98,510,885	27,263,310	40,899,674	33,534,114
Personal Taxes <sup>2</sup>	29,075,473	5,400,650	9,251,162	6,134,115
Social Security Taxes <sup>3</sup>	3,982,163	1,044,395	1,626,993	895,478
Total	139,537,853	35,199,055	53,659,910	42,243,550

<sup>1</sup>Includes Motor Vehicle License; Property Taxes; State and Local Non Taxes; Sales Tax; Severance Tax; and Other Taxes.

<sup>2</sup>Includes Estate and Gift Taxes; and Income Taxes.; Motor Vehicle License; Non Taxes; Property Taxes; and Other Taxes.

<sup>3</sup>Includes Employee Contribution; and Employer Contribution.

**Table A.1. Aggregation Scheme of Commercial Sectors used for IMPLAN  
Input-Output Analysis of the Forest Products Industry Impacts to the Economy of  
Mississippi's Congressional Districts, 2011..**

MODEL SECTORS	ORIGINAL IMPLAN SECTORS
FORESTRY SERVICES	Forestry, forest products, and timber tract production
LOGGING	Commercial logging
SOLID WOOD PRODUCTS	Sawmills and wood preservation; Veneer and plywood manufacturing; Engineered wood member and truss manufacturing; Reconstituted wood product manufacturing; Wood windows and doors and millwork manufacturing; Wood container and pallet manufacturing; Prefabricated wood building manufacturing; All other miscellaneous wood product manufacturing
PULP AND PAPER	Pulp mills; Paper mills; Paperboard Mills; Paperboard container manufacturing; Coated and laminated paper, packaging paper and plastics film manufacturing; All other paper bag and coated and treated paper manufacturing; Stationery product manufacturing; Sanitary paper product manufacturing; All other converted paper product manufacturing
WOOD FURNITURE	Wood kitchen cabinet and countertop manufacturing; Upholstered household furniture manufacturing; Nonupholstered wood household furniture manufacturing; Office Furniture; Custom architectural woodwork and millwork manufacturing
AGRICULTURAL PRODUCTION AND SERVICES	Oilseed farming; Grain farming; Vegetable and melon farming; Fruit farming; Tree nut farming; Greenhouse, nursery, and floriculture production; Tobacco farming; Cotton farming; Sugarcane and sugar beet farming; All other crop farming; Cattle ranching and farming; Dairy cattle and milk production; Poultry and egg production; Animal production, except cattle and poultry and eggs; Commercial Fishing; Commercial hunting and trapping; Support activities for agriculture and forestry; Fertilizer manufacturing; Pesticide and other agricultural chemical manufacturing; Farm machinery and equipment manufacturing
CONSTRUCTION AND MANUFACTURING	Extraction of oil and natural gas; Mining coal; Mining iron ore; Mining copper, nickel, lead, and zinc; Mining gold, silver, and other metal ore; Mining and quarrying stone; Mining and quarrying sand, gravel, clay, and ceramic and refractory minerals; Mining and quarrying other nonmetallic minerals; Drilling oil and gas wells; Support activities for oil and gas operations; Support activities for other mining; Electric power generation, transmission, and distribution; Natural gas distribution; Water, sewage and other treatment and delivery systems; Construction of new nonresidential commercial and health care structures; Construction of new nonresidential manufacturing structures; Construction of other new nonresidential structures; Construction of new residential permanent site single- and multi-family structures; Construction of other new residential structures; Maintenance and repair construction of nonresidential structures; Maintenance and repair construction of residential structures; Manufactured home (mobile home) manufacturing; Printing; Support activities for printing; Petroleum refineries; Asphalt paving mixture and block manufacturing; Asphalt shingle and coating materials manufacturing; Petroleum lubricating oil and grease manufacturing; All other petroleum and coal products manufacturing; Petrochemical manufacturing; Industrial gas manufacturing; Synthetic dye and pigment manufacturing; Alkalies and chlorine manufacturing; Carbon black manufacturing; All other basic inorganic chemical manufacturing; Other basic organic chemical manufacturing; Plastics material and resin manufacturing; Synthetic rubber manufacturing; Artificial and synthetic fibers and filaments manufacturing; Medicinal and botanical manufacturing; Pharmaceutical preparation manufacturing; Mining copper, nickel, lead, and zinc; In-vitro diagnostic substance manufacturing; Biological product (except diagnostic) manufacturing; Paint and coating manufacturing; Adhesive manufacturing; Soap and cleaning compound manufacturing; Toilet preparation manufacturing; Printing ink manufacturing; All other chemical product and preparation manufacturing; Plastics packaging materials and unlaminated film and sheet manufacturing; Unlaminated plastics profile shape manufacturing; Plastics pipe and pipe fitting manufacturing; Laminated plastics plate, sheet (except packaging), and shape manufacturing; Polystyrene foam product manufacturing; Urethane and other foam product (except polystyrene) manufacturing; Plastics bottle manufacturing; Other plastics product manufacturing; Tire manufacturing; Rubber and plastics hoses and belting manufacturing; Other rubber product manufacturing; Pottery, ceramics, and plumbing fixture manufacturing; Brick, tile, and other structural clay product manufacturing; Clay and nonclay refractory manufacturing; Flat glass manufacturing; Other pressed and blown glass and glassware manufacturing; Glass container manufacturing; Glass product manufacturing made of purchased glass; Cement manufacturing; Ready-mix concrete manufacturing; Concrete pipe, brick, and block manufacturing; Other concrete product manufacturing; Lime and gypsum product manufacturing; Abrasive product manufacturing; Cut stone and stone product manufacturing; Ground or treated mineral and earth manufacturing; Mineral wool manufacturing; Miscellaneous nonmetallic mineral product manufacturing; Iron and steel mills and ferroalloy manufacturing; Steel product manufacturing from purchased steel; Alumina refining and primary aluminum production; Secondary smelting and alloying of aluminum; Aluminum product manufacturing from purchased aluminum; Primary smelting and refining of copper; sintering; Custom roll forming; Crown and closure manufacturing and metal stamping; Cutlery, utensil, pot, and pan manufacturing; Handtool manufacturing; Plate work and fabricated structural product manufacturing; Ornamental and architectural metal products manufacturing; Power boiler and heat exchanger manufacturing; Metal tank (heavy gauge) manufacturing; Metal can, box, and other metal container (light gauge) manufacturing; Ammunition manufacturing; Arms, ordnance, and accessories manufacturing; Hardware manufacturing; Spring and wire product manufacturing; Machine shops; Turned product and screw, nut, and bolt manufacturing; Coating, engraving, heat treating and allied activities; Valve and fittings other than plumbing manufacturing; Plumbing fixture fitting and trim manufacturing; Ball and roller bearing manufacturing; Fabricated pipe and pipe fitting manufacturing; Construction machinery manufacturing; Mining and oil and gas field machinery

**Table A.1. (continued)**

<p>CONSTRUCTION AND MANUFACTURING (continued)</p>	<p>manufacturing; Other industrial machinery manufacturing; Plastics and rubber industry machinery manufacturing; Semiconductor machinery manufacturing; Vending, commercial, industrial, and office machinery manufacturing; Alumina refining and primary aluminum production; Optical instrument and lens manufacturing; Photographic and photocopying equipment manufacturing; Other commercial and service industry machinery manufacturing; Air purification and ventilation equipment manufacturing; Heating equipment (except warm air furnaces) manufacturing; Air conditioning, refrigeration, and warm air heating equipment manufacturing; Industrial mold manufacturing; Metal cutting and forming machine tool manufacturing; Special tool, die, jig, and fixture manufacturing; Cutting tool and machine tool accessory manufacturing; Rolling mill and other metalworking machinery manufacturing; Turbine and turbine generator set units manufacturing; Speed changer, industrial high-speed drive, and gear manufacturing; Mechanical power transmission equipment manufacturing; Other engine equipment manufacturing; Pump and pumping equipment manufacturing; Air and gas compressor manufacturing; Material handling equipment manufacturing; Power-driven handtool manufacturing; Other general purpose machinery manufacturing; Packaging machinery manufacturing; Industrial process furnace and oven manufacturing; Fluid power process machinery manufacturing; Electronic computer manufacturing; Computer storage device manufacturing; Computer terminals and other computer peripheral equipment manufacturing; Telephone apparatus manufacturing; Broadcast and wireless communications equipment manufacturing; Other communications equipment manufacturing; Audio and video equipment manufacturing; Electron tube manufacturing; Bare printed circuit board manufacturing; Semiconductor and related device manufacturing; Electronic capacitor, resistor, coil, transformer, and other inductor manufacturing; Electronic connector manufacturing; Industrial process variable instruments manufacturing; Totalizing fluid meters and counting devices manufacturing; Electricity and signal testing instruments manufacturing; Analytical laboratory instrument manufacturing; Irradiation apparatus manufacturing; Watch, clock, and other measuring and controlling device manufacturing; Software, audio, and video media for reproduction; Magnetic and optical recording media manufacturing; Electric lamp bulb and part manufacturing; Lighting fixture manufacturing; Small electrical appliance manufacturing; Household cooking appliance manufacturing; Household refrigerator and home freezer manufacturing; Household laundry equipment manufacturing; Other major household appliance manufacturing; Power, distribution, and specialty transformer manufacturing; Motor and generator manufacturing; Switchgear and switchboard apparatus manufacturing; Relay and industrial control manufacturing; Storage battery manufacturing; Primary battery manufacturing; Communication and energy wire and cable manufacturing; Wiring device manufacturing; Carbon and graphite product manufacturing; All other miscellaneous electrical equipment and component manufacturing; Automobile manufacturing; Light truck and utility vehicle manufacturing; Heavy duty truck manufacturing; Motor vehicle body manufacturing; Truck trailer manufacturing; Motor home manufacturing; Travel trailer and camper manufacturing; Motor vehicle parts manufacturing; Aircraft manufacturing; Aircraft engine and engine parts manufacturing; Other aircraft parts and auxiliary equipment manufacturing; Guided missile and space vehicle manufacturing; Propulsion units and parts for space vehicles and guided missiles manufacturing; Railroad rolling stock manufacturing; Ship building and repairing; Boat building; Analytical laboratory instrument manufacturing; Motorcycle, bicycle, and parts manufacturing; Military armored vehicle, tank, and tank component manufacturing; All other transportation equipment manufacturing; Metal and other household furniture manufacturing; Institutional furniture manufacturing; Showcase, partition, shelving, and locker manufacturing; Mattress manufacturing; Blind and shade manufacturing; Surgical and medical instrument, laboratory and medical instrument manufacturing; Surgical appliance and supplies manufacturing; Dental equipment and supplies manufacturing; Ophthalmic goods manufacturing; Dental laboratories manufacturing; Jewelry and silverware manufacturing; Sporting and athletic goods manufacturing; Doll, toy, and game manufacturing; Office supplies (except paper) manufacturing; Sign manufacturing; Gasket, packing, and sealing device manufacturing; Musical instrument manufacturing; All other miscellaneous manufacturing; Broom, brush, and mop manufacturing</p>
<p>EDUCATION</p>	<p>Private elementary and secondary schools; Private junior colleges, colleges, universities, and professional schools; Other private educational services; * Employment and payroll only (state &amp; local govt, education)</p>
<p>FOOD AND FIBER PRODUCTS</p>	<p>Dog and cat food manufacturing; Other animal food manufacturing; Flour milling and malt manufacturing; Wet corn milling; Soybean and other oilseed processing; Fats and oils refining and blending; Breakfast cereal manufacturing; Sugar cane mills and refining; Beet sugar manufacturing; Chocolate and confectionery manufacturing from cacao beans; Confectionery manufacturing from purchased chocolate; Nonchocolate confectionery manufacturing; Frozen food manufacturing; Fruit and vegetable canning, pickling, and drying; Fluid milk and butter manufacturing; Cheese manufacturing; Dry, condensed, and evaporated dairy product manufacturing; Ice cream and frozen dessert manufacturing; Animal (except poultry) slaughtering, rendering, and processing; Poultry processing; Seafood product preparation and packaging; Bread and bakery product manufacturing; Cookie, cracker, and pasta manufacturing; Tortilla manufacturing; Snack food manufacturing; Coffee and tea manufacturing; Flavoring syrup and concentrate manufacturing; Seasoning and dressing manufacturing; All other food manufacturing; Soft drink and ice manufacturing; Breweries; Wineries; Distilleries; Tobacco product manufacturing; Fiber, yarn, and thread mills; Broadwoven fabric mills; Narrow fabric mills and schiffli machine embroidery; Nonwoven fabric mills; Knit fabric mills; Textile and fabric finishing mills; Fabric coating mills; Wet corn milling; Carpet and rug mills; Curtain and linen mills; Textile bag and canvas mills; All other textile product mills; Apparel knitting mills; Cut and sew apparel contractors; Mens and boys cut and sew apparel manufacturing; Womens and girls cut and sew apparel manufacturing; Other cut and sew apparel manufacturing; Apparel accessories and other apparel manufacturing; Leather and hide tanning and finishing; Footwear manufacturing; Other leather and allied product manufacturing</p>
<p>FOOD SERVICES</p>	<p>Food services and drinking places</p>

**Table A.1. (continued)**

GOVERNMENT	US Postal Service; Federal electric utilities; Other Federal Government enterprises; State and local government passenger transit; State and local government electric utilities; Other state and local government enterprises; * Employment and payroll only (state & local govt, non-education); * Employment and payroll only (federal govt, non-military); * Employment and payroll only (federal govt, military)
HEALTH CARE	Offices of physicians, dentists, and other health practitioners; Home health care services; Medical and diagnostic labs and outpatient and other ambulatory care services; Private hospitals; Nursing and residential care facilities
HOTELS AND ENTERTAINMENT	Performing arts companies; Spectator sports companies; Promoters of performing arts and sports and agents for public figures; Independent artists, writers, and performers; Museums, historical sites, zoos, and parks; Fitness and recreational sports centers; Bowling centers; Amusement parks, arcades, and gambling industries; Other amusement and recreation industries; Hotels and motels, including casino hotels; Other accommodations
REAL ESTATE, FINANCE, AND INSURANCE	Monetary authorities and depository credit intermediation activities; Nondepository credit intermediation and related activities; Securities, commodity contracts, investments, and related activities; Insurance carriers; Insurance agencies, brokerages, and related activities; Funds, trusts, and other financial vehicles; Real estate establishments; Imputed rental activity for owner-occupied dwellings; Automotive equipment rental and leasing; General and consumer goods rental except video tapes and discs; Video tape and disc rental; Commercial and industrial machinery and equipment rental and leasing; Lessors of nonfinancial intangible assets
RETAIL AND WHOLESALE TRADE	Wholesale trade businesses; Retail Stores - Motor vehicle and parts; Retail Stores - Furniture and home furnishings; Retail Stores - Electronics and appliances; Retail Stores - Building material and garden supply; Retail Stores - Food and beverage; Retail Stores - Health and personal care; Retail Stores - Gasoline stations; Retail Stores - Clothing and clothing accessories; Retail Stores - Sporting goods, hobby, book and music; Retail Stores - General merchandise; Retail Stores - Miscellaneous; Retail Nonstores - Direct and electronic sales
SERVICES	Newspaper publishers; Periodical publishers; Book publishers; Directory, mailing list, and other publishers; Software publishers; Motion picture and video industries; Sound recording industries; Radio and television broadcasting; Cable and other subscription programming; Internet publishing and broadcasting; Telecommunications; Data processing, hosting, ISP, web search portals and related services; Other information services; Legal services; Accounting, tax preparation, bookkeeping, and payroll services; Architectural, engineering, and related services; Specialized design services; Custom computer programming services; Computer systems design services; Other computer related services, including facilities management; Management, scientific, and technical consulting services; Environmental and other technical consulting services; Scientific research and development services; Advertising and related services; Photographic services; Veterinary services; All other miscellaneous professional, scientific, and technical services; Management of companies and enterprises; Employment services; Travel arrangement and reservation services; Office administrative services; Facilities support services; Business support services; Investigation and security services; Services to buildings and dwellings; Other support services; Waste management and remediation services; Child day care services; Individual and family services; Community food, housing, and other relief services, including rehabilitation services; Automotive repair and maintenance, except car washes; Directory, mailing list, and other publishers; Car washes; Electronic and precision equipment repair and maintenance; Commercial and industrial machinery and equipment repair and maintenance; Personal and household goods repair and maintenance; Personal care services; Death care services; Dry-cleaning and laundry services; Other personal services; Religious organizations; Grantmaking, giving, and social advocacy organizations; Civic, social, professional, and similar organizations; Private household operations
TRANSPORTATION AND WAREHOUSING	Transport by air; Transport by rail; Transport by water; Transport by truck; Transit and ground passenger transportation; Transport by pipeline; Scenic and sightseeing transportation and support activities for transportation; Couriers and messengers; Warehousing and storage
BALANCE	Not an industry (Used and secondhand goods); Not an industry (Scrap); Not an industry (Rest of the world adjustment); Not an industry (Noncomparable foreign imports)





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