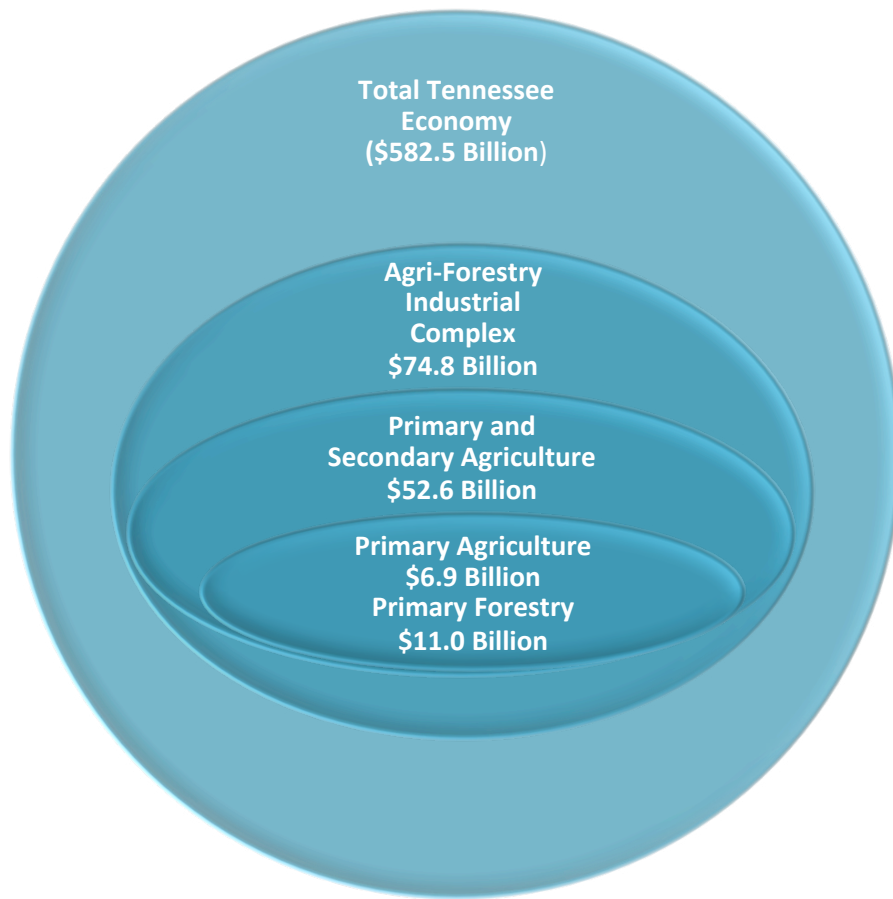


Economic Contributions of Agriculture and Forestry in Tennessee, 2013

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Executive Summary

In 2013, Tennessee’s economy totaled \$582.6 billion and had 3.7 million jobs. Industry sectors preceding the agri-forestry industrial complex for direct economic activity were services at \$166.6 billion, followed by manufacturing (\$121.3 billion), government (\$50.0 billion), and then agri-forestry at \$49.0 billion (Figure 1). Industry sectors preceding the agri-forestry industrial complex for direct employment were services at 1,640.5 thousand, followed by government at 476.4 thousand, manufacturing (375.4 thousand), construction (183.9 thousand), and then agri-forestry at 179.7 thousand (Figure 2). For direct value-added, the agri-forestry industrial complex ranked seventh at \$13.9 billion preceded in increasing magnitude by retail trade (\$18.7 billion), wholesale trade (\$18.9 billion), manufacturing (\$32.6 billion), real estate (\$34.0 billion), government (34.8 billion), and services (\$101.6 billion) (Figure 3).

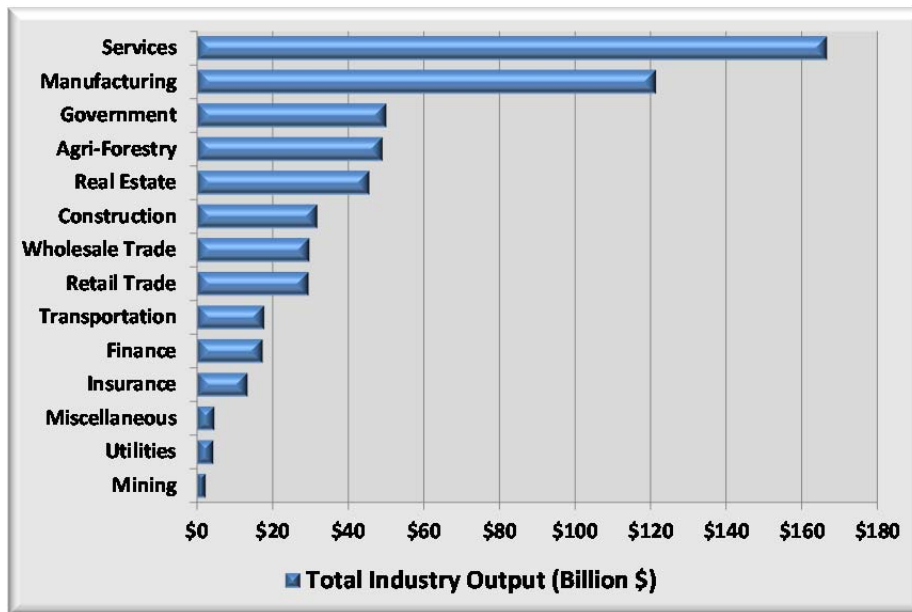


Figure 1. Direct Total Industry Output by Sector, Tennessee, 2013
(Source: IMPLAN Group, LLC, 2013)

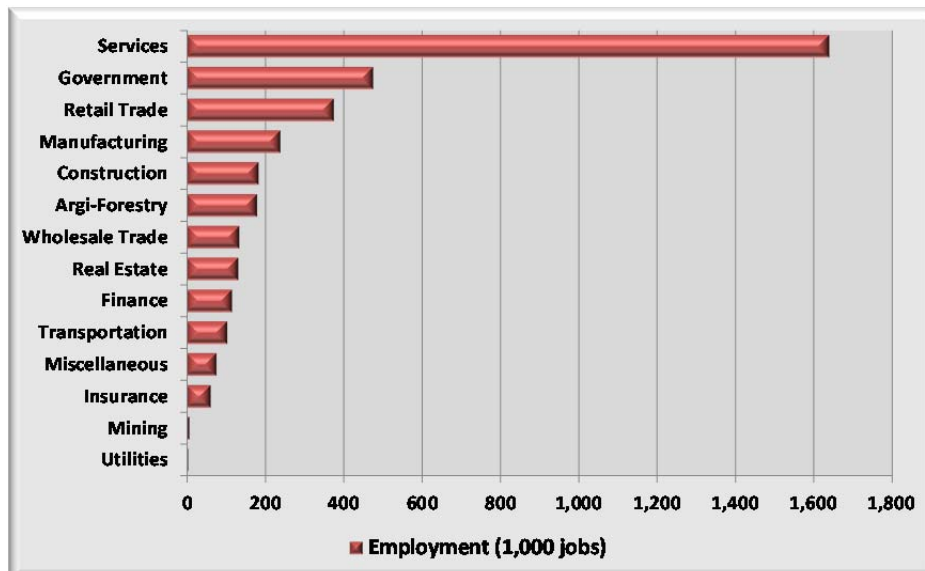


Figure 2. Direct Employment by Sector, Tennessee, 2013
(Source: IMPLAN Group, LLC, 2013)

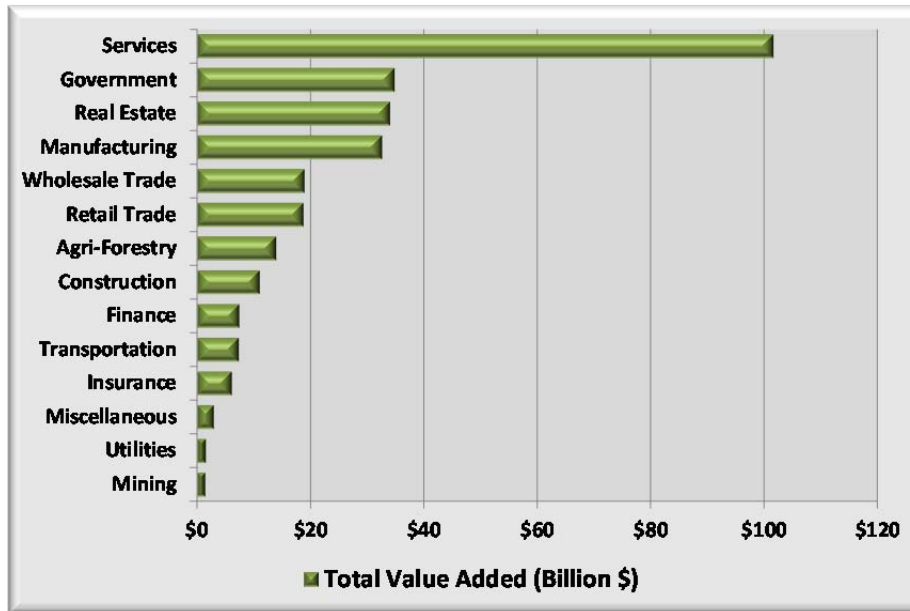


Figure 3. Direct Total Value Added by Sector, Tennessee, 2013
 (Source: IMPLAN Group, LLC, 2013)

In this study the agri-forestry industrial complex included the primary industries typically associated with agriculture and forest operations such as growing crops, the breeding and feeding of livestock, and the management and logging of trees. Also included in the industrial complex were input supplying industries and value added-sub-sectors, which included food and beverage manufacturing, apparel and textiles and forestry products manufacturing.

In 2013, the agri-forestry industrial complex directly and indirectly contributed \$74.8 billion to the Tennessee economy accounting for multiplier effects, which was 12.8 percent of the economic activity conducted within the state, and employed an estimated 349,398 individuals, or 9.4 percent of the total number of workers. Agriculture accounted for 9.0 percent of the state’s economy and generated \$52.6 billion in output and employed close to 254,000 Tennesseans, with over 109,000 (both full- and part-time) in agricultural production.

The 2013 output and employment multipliers for agricultural commodities and forestry activities (i.e., logging, sawmills, and pulp-, paper-, and paperboard mills) ranged from 1.18 to 1.92 for total industrial output and 1.05 to 5.61 for employment. Commercial logging’s output multiplier of 1.68 indicates that for every dollar invested in the logging industry an additional \$0.68 of economic activity is generated, and the employment multiplier of 1.65 indicates that for every job created in the commercial logging industry an estimated 0.65 additional jobs are added in other industries.

Comparing recent growth for total industry output (economic activity) in agriculture and forestry as a percentage of Tennessee’s total economy indicates relatively stagnant growth for the years depicted in Figures 4 and 5. For both *direct* (Figure 4) and *total (with multiplier effects)* (Figure 5) output for agriculture and forestry, the largest growth as a percentage of the state’s total economy occurred in 2003.

Comparing *direct* (without multiplier effects) agriculture and forestry economic activity to individual counties total economic activity (all industries) for 2013 within the state, Lake County had the highest level of economic activity for commodity agriculture (included crop production and livestock breeding and feeding) at 22.5 percent. For all agriculture, Moore County had the highest level of economic activity at 81.8 percent (including commodity agriculture, plus the input supplying industries and secondary agriculture, which included manufacturing). For forestry, Van Buren County had the highest level of economic activity at 3.1 percent (including the management and logging of trees). For

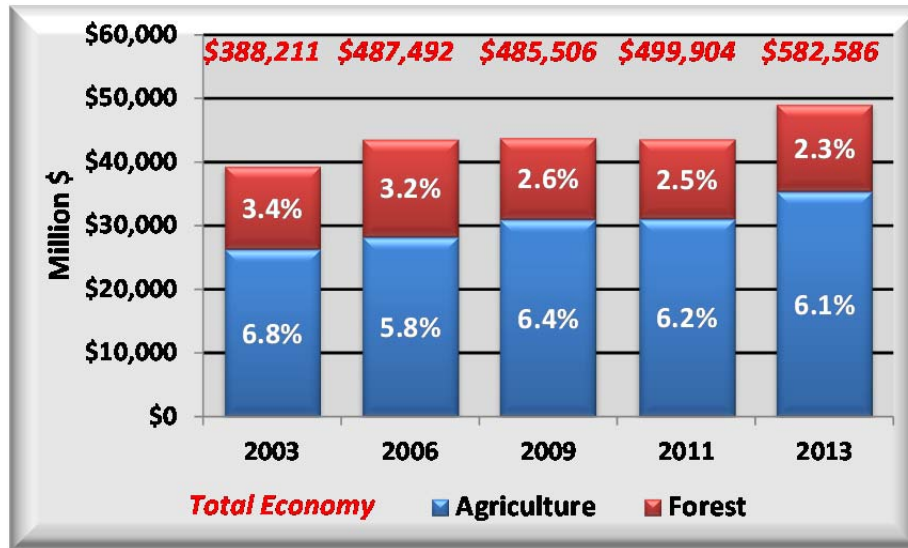


Figure 4. Growth in Direct Agricultural and Forestry as a Percentage of Tennessee’s Total Economy
 (Source: IMPLAN Group, LLC, 2003-2013)

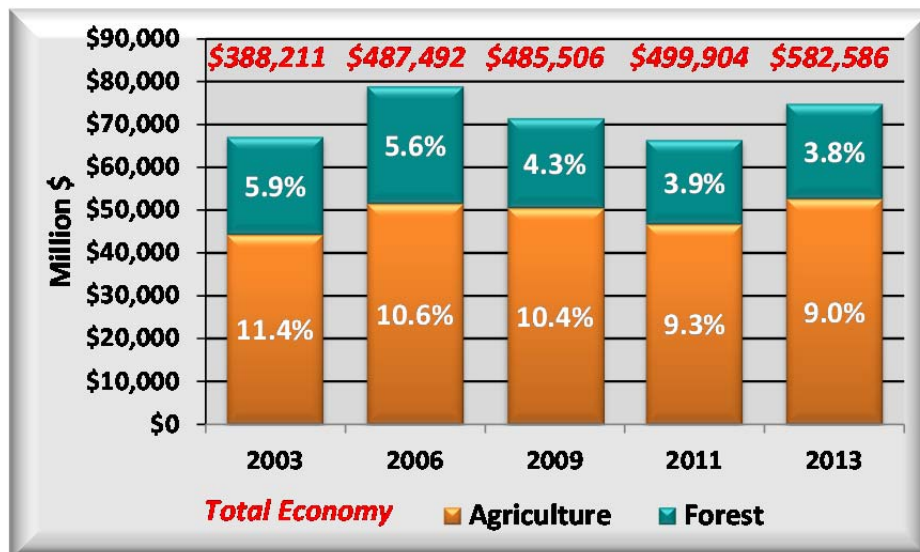


Figure 5. Growth in Total Agricultural and Forestry as a Percentage of Tennessee’s Total Economy
 (Source: IMPLAN Group, LLC, 2003-2013)

all forestry, Hardin County had the highest level at 39.4 percent (including the management and logging of trees, plus input supplying industries and manufacturing). Combining both agriculture and forestry, Moore County followed by Lake County had the largest levels of economic activity at 82.3 percent and 22.5 percent, respectively.

Further analysis indicates:

- Agriculture input supplying industries – agricultural machinery and chemical products – generated nearly \$2.1 billion in cash receipts annually.
- Tennessee farmers earned most of their cash receipts from beef cattle and calves, poultry, soybeans, corn, hay, and greenhouse and nursery production.

- Exports for Tennessee’s wood products and furniture and related products outside the United States totaled \$384.5 million. Wood products had the highest export value at \$267.8 million, followed by furniture and related products (\$116.7 million).
- Major countries receiving Tennessee’s forestry products (NAICS 113) totaled \$52.3 million with the top five major markets consisting of Canada, China, the United Kingdom, Germany, and Italy.
- Value-added agriculture manufacturing contributed a total of \$45.7 billion to the state’s economy of which 79.4 percent came from food (\$30.6 billion) and beverages (\$5.6 billion) manufacturing.
- Major markets for Tennessee’s exports of agricultural crop products included China, Mexico, Turkey, Viet Nam, and Indonesia; for agricultural livestock products, Mexico, France, Canada, Thailand, and the Dominican Republic.

This analysis was conducted using the Tennessee Agri-Industry model (TNAIM) and the Impact Analysis for Planning (IMPLAN) model and most recent data set. TNAIM, an input-output model for five trading regions within the state, traces transactions conducted within the economy and attempts to quantify the economic interdependencies within each region’s economy for a given point in time. Through these interdependencies, one can evaluate the indirect and induced impacts that economic activity in one region might have on the entire state economy.

2013 Economic Contributions of Agriculture and Forestry in Tennessee

Introduction

This study measures the economic contributions and importance of agricultural and forestry industrial complexes on Tennessee's economy in 2013.¹ An input-output model reflecting the state's 2013 economy is used to determine direct economic contributions on related input industries, and economic contributions through resulting expenditures by households at both the state and five-region level. The economic contributions are provided for four major indicators: total industry output (a measure of economic activity), employment, labor income, and value-added (gross domestic product (GDP)). For the purpose of this analysis, agriculture² and forestry includes the production and processing of agricultural and forest products and the input suppliers of these products.

The objectives of this analysis are to: 1) provide an overview of Tennessee's agriculture and forestry resource base based on recent documentation, 2) compare livestock and crop statistics for 2011 and 2013, 3) evaluate the economic contributions and importance of the agricultural and forestry industrial complex for the state and for specific consumption regions within the state, and 4) evaluate agriculture and forestry's tax contributions to the state.

This document is structured along the same theme as the objectives. First, an overview of Tennessee's agriculture and forestry is presented. Crop and livestock cash receipts, Tennessee's rank in the United States based on the production of agricultural products, exports for both agricultural and forestry products, plus agricultural and forestry manufacturing statistics are discussed. Next, a review of state level changes in livestock and crops for the years 2011 and 2013 is presented. Changes in livestock inventory, crop acreages, prices, including a brief discussion of historical rainfall by climate divisions in the state are discussed in the section. Finally, the remaining document evaluates the economic contributions and importance of the agricultural and forestry industrial complex for the state and specific consumption regions within the state with an input-output model. After the data and methodology section discussion, direct and total economic contribution results are summarized.

¹This study continues the series of previous reports (English, Jensen, and Menard, 2001 and 2003; Menard, English, and Jensen, 2006, 2009, 2011, and 2013) where the economic importance and impacts of agricultural and forestry industrial complexes on Tennessee's economy were examined using 1997, 2000, 2003, 2006, 2009, and 2011 IMPLAN data, respectively. For additional details on the previous studies and the IMPLAN version uses, see Appendix A.

²In this report, forestry and the production of forest products were incorporated in agriculture and agribusiness, respectively.

Overview of Agriculture and Forestry in Tennessee

In 2013, 68,000 Tennessee farms³ used 10.9 million acres, or close to 41.0 percent of the state's land base. For the ten-year period from 2002 to 2012, the numbers of farms in the state decreased an average of 1.4 percent annually. In 2013, the average farm size was 160 acres compared to 434 acres for the United States. Other southeastern states with similar average farm sizes as Tennessee include North Carolina and Kentucky at 168 and 169 acres, respectively. Arkansas, Mississippi, and Missouri have the largest average farm sizes at 306, 287, and 285 acres, respectively. Approximately 64.8 percent all Tennessee farms had sales in the \$1,000-\$9,999 range, 29.0 percent in the \$10,000-\$99,999 range, and 6.2 percent had sales of \$100,000 or more (Tennessee Department of Agriculture, 2014; USDA/NASS, 2012a and 2012b).

Cash receipts for all commodities in Tennessee totaled \$4.1 billion in 2013. Of that total, \$2.6 billion (63.5 percent) was from crops and \$1.5 billion (36.5 percent) was from all livestock and livestock products. Tennessee was ranked in the upper half of the nation for most major crops (Table 1). Approximately 37.5 percent of Tennessee's total harvested cropland acreage (roughly 5.1 million acres) was in hay (all types), followed by soybeans (29.8 percent), corn for grain (16.1 percent), wheat (10.6 percent), and cotton (4.6 percent). Among crops and for available data, corn had the largest cash receipts, followed by cotton, wheat, and tobacco.⁴ Tennessee's top crop counties included Robertson County for all tobacco, Obion County for corn, Haywood County for cotton, Gibson County for wheat,

Table 1. Crops Harvested, Acreage, State Ranking, and Cash Receipts, 2013

Crops	Acreage (Thousand Acres)	State Ranking	Leading State	Cash Receipts (Thousand \$)	% of Total ^d
Hay (all types)	1,915	^b	Texas	n/a	--
Soybeans	1,520	15	Illinois	n/a	--
Corn for Grain	820	19	Iowa	\$583,207	14.1
Winter Wheat	540	16	Kansas	\$259,454	6.3
Cotton, Lint	233	10	Texas	\$301,808	7.3
Corn for Silage	50	28	Wisconsin	--	--
All Tobacco	21.4	7	N. Carolina	\$105,386	2.6
Vegetables ^a	8.5	^c	--	n/a	--

^aSnap beans, squash, and tomatoes

^bTennessee is ranked 5th for all hay; 33 for alfalfa

^cTennessee is ranked 5th for snap beans; 3rd for tomatoes

^dFor 2013, cash receipts for all commodities were \$4.1 billion (\$2.6 billion for crops; \$1.5 billion for livestock & products)

Source: Tennessee Department of Agriculture, 2014

³Defined as an establishment with \$1,000 or more of agricultural products sold or would normally be sold during the year (USDA/ERS, 2015).

⁴Per Tennessee Department of Agriculture (2014), cash receipts for oil crops were \$815.8 million, all other crops \$330.8 million, vegetables & melons \$90.9 million, and fruits & nuts \$11.9 million.

Obion County for soybeans, and Green County for all other hay (Tennessee Department of Agriculture, 2013 and 2014).

Cash receipts in 2013 for *all* livestock and livestock products in Tennessee totaled \$1.5 billion. In terms of the number of head, broilers, chickens, cattle and calves, hogs, equine, and milk cows were the predominant livestock in the state (Table 2). According to the Tennessee Department of Agriculture for 2013, cash receipts from farm marketing for these livestock products (except for beef cows and equine) totaled over \$1.4 billion. Of that total, cattle and calves contributed 43.1 percent, broilers 37.2 percent, dairy products 11.2 percent, all chickens 4.4 percent, and hogs 4.1 percent. Tennessee is ranked 13th in the United States for the numbers of beef cows and equine on farms, 14th for broilers, 16th for cattle and calves, 22nd for hogs, 29th for milk cows, and 32nd for all chickens. Tennessee's top cattle county is Greene County for all cattle (includes beef and dairy cows).

Table 2. Livestock Numbers, State Rankings, and Cash Receipts, 2013

Livestock	Inventory (Number)	State Ranking	Leading State	Cash Receipts (Thousand \$)	% of Total ^g
Broilers	172,800,000	14	Georgia	\$544,552	37.2
All Chickens ^a	2,647,000	32	Iowa	\$63,706 ^d	4.4
Cattle & Calves ^b	1,760,000	16	Texas	\$630,458 ^e	43.1
Beef Cows ^b	864,000	13	Texas	--	--
Hogs ^a	200,000	22	Iowa	\$60,321	4.1
Equine ^c	96,541	13	Texas	--	--
Milk Cows ^b	48,000	29	California	\$163,830 ^f	11.2

^aDecember 2013 inventory

^bJanuary 2014 inventory

^c2012 Census of Agriculture

^dIncludes eggs and farm chickens; excludes commercial broilers

^eIncludes beef cows; milk cows; replacement heifers; steers and bulls 500 pounds or greater; and calves under 500 pounds

^fCash receipts from marketing milk and cream, plus value of milk used for home consumption and farm churned butter

^gFor 2013, cash receipts for all commodities were \$4.1 billion (\$2.6 billion for crops; \$1.5 billion for livestock & products)

Source: Tennessee Department of Agriculture, 2014; USDA/NASS, 2012a & 2014b

Tennessee's more significant agricultural commodities in terms of dollar value, along with their corresponding U.S. market share, are shown in Table 3. In descending order they were oilseed farming (primarily soybeans); grain farming (barley, corn, oats, sorghum, and wheat); beef cattle ranching and farming; poultry and egg production; all other crop farming (primarily hay and seed); greenhouse, nursery, and floriculture production; cotton farming; dairy cattle and milk production; animal production, except cattle, poultry, and eggs; tobacco farming; and vegetable and melon farming.

Table 3. State Value of Agricultural Commodities and U.S. Market Share, 2013

Commodity	Value (Million \$)	U.S. Market Share (Percent)
Oilseed Farming	\$895.2	2.1
Grain Farming	\$875.8	1.0
Beef Cattle Ranching & Farming	\$639.3	0.9
Poultry & Egg Production	\$553.5	1.3
All Other Crop Farming ^a	\$458.3	1.6
Greenhouse, Nursery, & Floriculture Production	\$320.3	1.9
Cotton Farming	\$195.8	3.1
Dairy Cattle & Milk Production	\$164.9	0.4
Animal Production, except Cattle & Poultry & Eggs ^b	\$123.1	0.5
Tobacco Farming	\$106.4	6.6
Vegetable & Melon Farming	\$55.8	0.3
Commercial Hunting & Trapping	\$34.7	2.1
Fruit Farming	\$8.9	0.05
Tree Nut Farming	\$0.6	0.01

^aPrimarily hay/seed farming

^bPrimarily hogs, sheep & goats, aquaculture, equine, and apiculture

Source: IMPLAN Group, LLC, 2013

Tobacco, cotton, and oilseeds had the largest U.S. market shares at 6.6 percent, 3.1 percent, and 2.1 percent, respectively.

Tennessee's 2013 agricultural commodity exports totaled \$1.9 billion. The value of the top ten commodities exported included soybeans at \$461.2 million, other plant products (defined as sugar products, planting seeds, other oilseeds and oilseed products, other horticulture products, and other processed foods) at \$288.6 million, cotton at \$250.4 million, wheat at \$190.2 million, soybean meal at \$116.6 million, feeds and fodder at \$89.4 million, poultry products at \$87.5 million, tobacco at \$77.4 million, corn at \$60.3 million, and beef and veal at \$56.7 million (USDA/ERS, 2013). For 2013, Tennessee's exports of agricultural crop products (North American Industry Classification (*NAICS code 111*)) totaled \$828.5 million with the top five major markets consisting of China, Mexico, Turkey, Viet Nam and Indonesia. For agricultural livestock products (*NAICS code 112*), exports totaled \$6.0 million with Mexico, France, Canada, Thailand, and Dominican Republic the top five markets (USDOC/ITA, 2013).

In 2013, Tennessee's forest products (wood products (*NAICS code 321*) and furniture and related products (*NAICS code 337*)) exports outside the U.S. totaled \$384.5 million. Wood products had the highest export value at \$267.8 million, followed by furniture and related products at \$116.7 million. For 2013, Tennessee exports of forestry products (*NAICS code 113*) totaled \$52.3 million with the top five major markets consisting of Canada, China, United Kingdom, Germany, and Italy (USDOC/ITA, 2013).

Roughly 52 percent of Tennessee is covered in forest. The forest cover is primarily hardwoods (89 percent of the forest composition) making it one of the top three hardwood lumber producing states

in the United States. It is estimated that over 120 tree species exist in Tennessee. White oak, red oak, hickory, yellow poplar, and maple were some of the more predominant hardwood species. For softwoods, loblolly pine, virginia pine, red cedar, and shortleaf pine were major species. The dominant forest type in the state is oak-hickory, accounting for an estimated 9.9 million acres. Of the close to 14.0 million acres in forest, 83.3 percent is privately owned with Federal and state/local forests comprising 10.1 percent and 6.6 percent, respectively (USDA Forest Service, 2013). Timber sales on private lands totaled \$305.00 million in 2012. Tennessee is home to 15 state forests totaling around 166,897 acres. In 2010, guidelines were issued by the Tennessee Department of Forestry (see *“Plan 2020: Harvest Plan for Sustainable State Forests”*) to sustainably harvest state owned forests in the future to achieve a more balanced age-class distribution (Tennessee Depart of Agriculture, 2011; Tennessee Department of Agriculture, 2013; Clatterbuck, 2013).

Agriculture and forestry manufacturing industries for the state (Figures 6 through 15) included food (*NAICS code 311*), animal slaughtering and processing (*NAICS code 3116*), beverage and tobacco products (*NAICS code 312*), textile mills (*NAICS code 313*), textile product mills (*NAICS code 314*), apparel (*NAICS code 315*), leather and allied products (*NAICS code 316*), wood products (*NAICS code 321*), paper (*NAICS code 322*), and furniture and related products (*NAICS code 337*). In 2013, \$36.1 billion dollars of goods were shipped and over 77,000 Tennesseans were employed with a payroll of \$3.2 billion (Table 4). Food manufacturing shipped the largest value of goods at \$18.5 billion, followed by beverage and tobacco products manufacturing at \$6.2 billion, and paper manufacturing at \$5.7 billion. As a group, textile mills, including textile product mills and apparel, shipped \$1.9 billion. For the forest products group, which included wood products manufacturing, paper manufacturing, and furniture and related products, \$9.5 billion of goods were shipped. Tennessee’s national market share for value of shipments for food manufacturing was 2.4 percent, beverage and tobacco products at 4.2 percent, textile mills at 3.2 percent, textile product mills at 2.6 percent, wood product manufacturing at 2.4 percent, paper manufacturing at 3.1 percent, and furniture and related products at 2.3 percent (U.S. Census Bureau, 2013b). Of the value-added agri-forestry sectors, food manufacturing employed the largest share at over 34,000. This was followed by the forest products group (wood product manufacturing, paper manufacturing, and furniture and related products), which employed close over 30,000. The textile mills and related products, including apparel, employed over 8,600 workers.

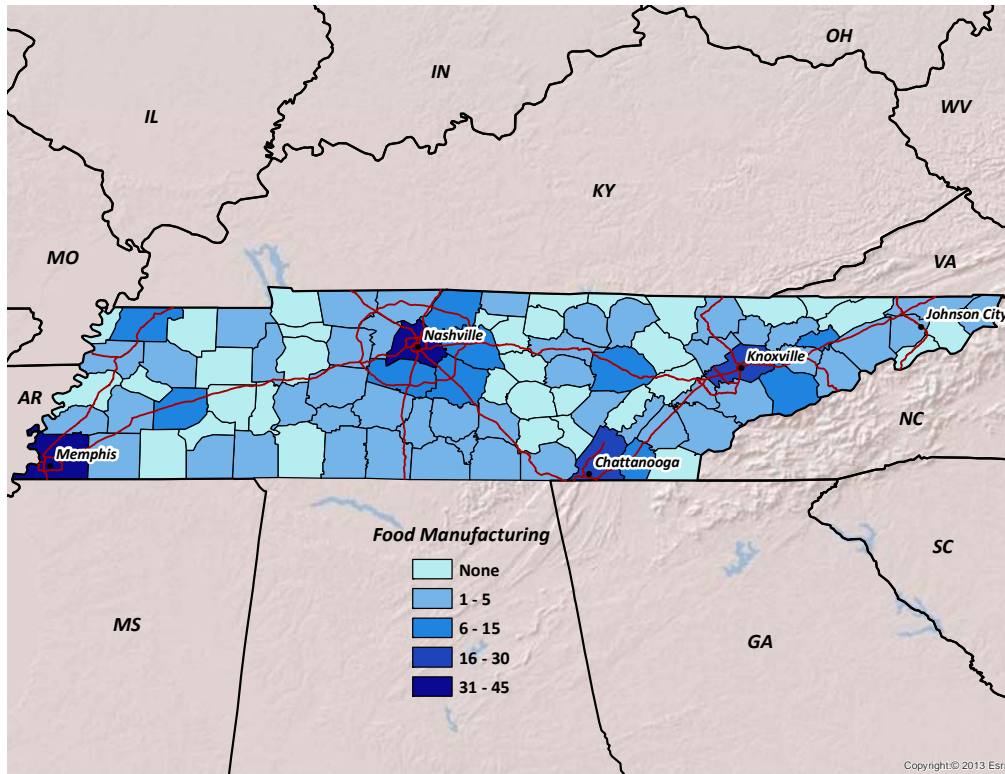


Figure 6. Number of Food Manufacturing Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

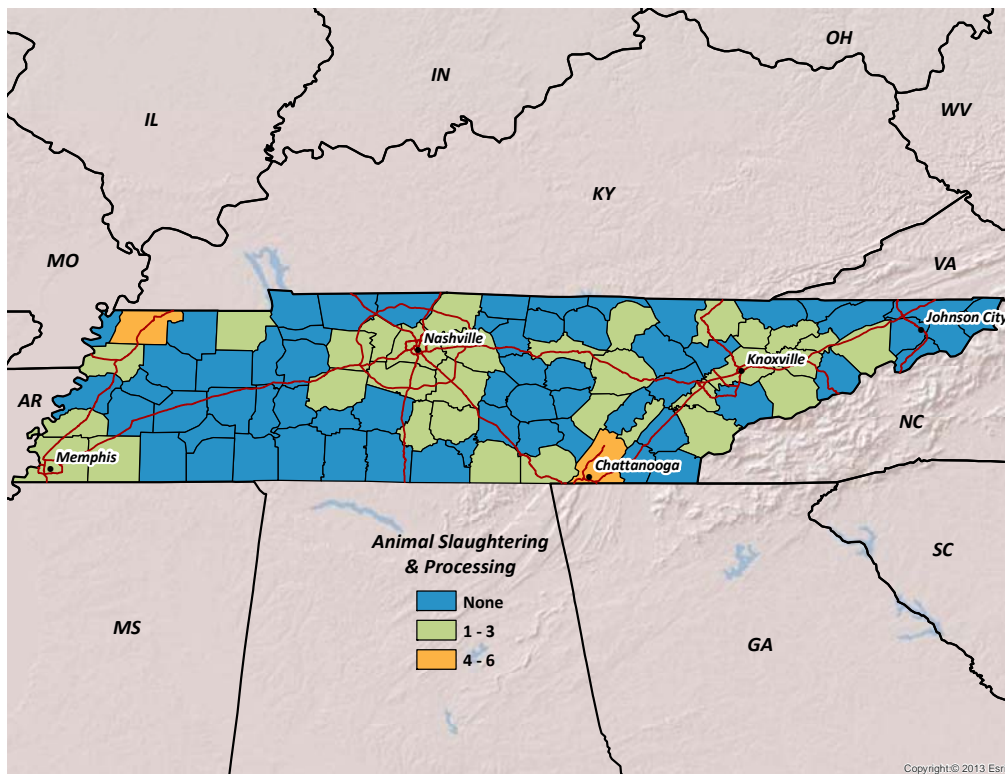


Figure 7. Number of Animal Slaughtering & Processing Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

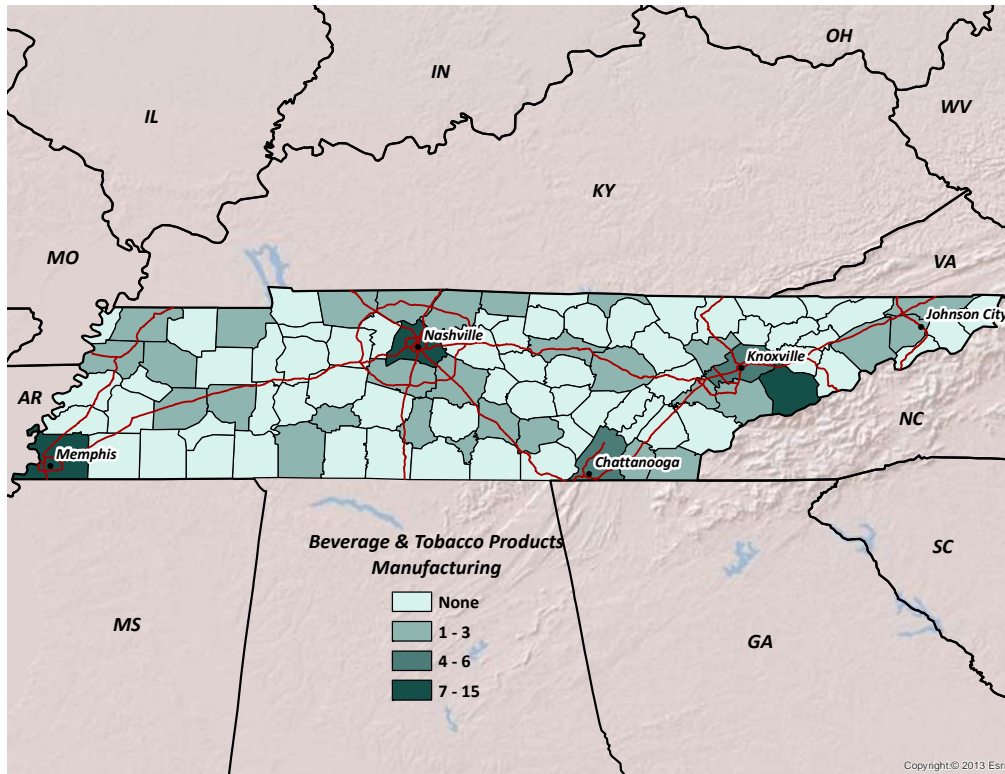


Figure 8. Number of Beverage and Tobacco Products Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

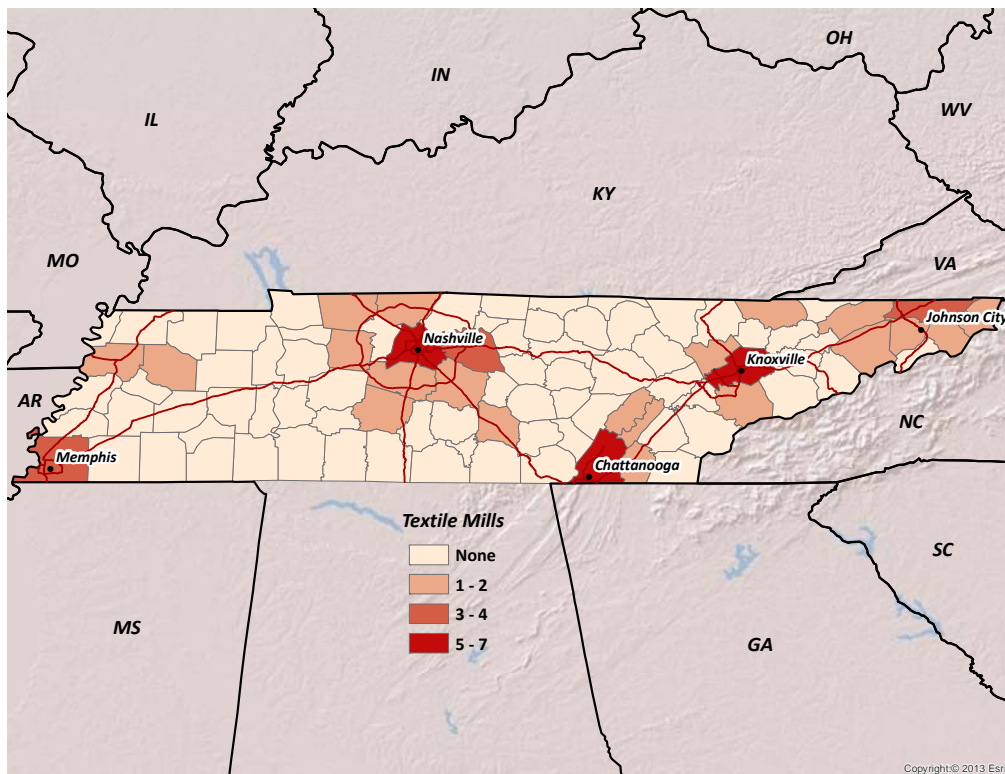


Figure 9. Number of Textile Mill Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

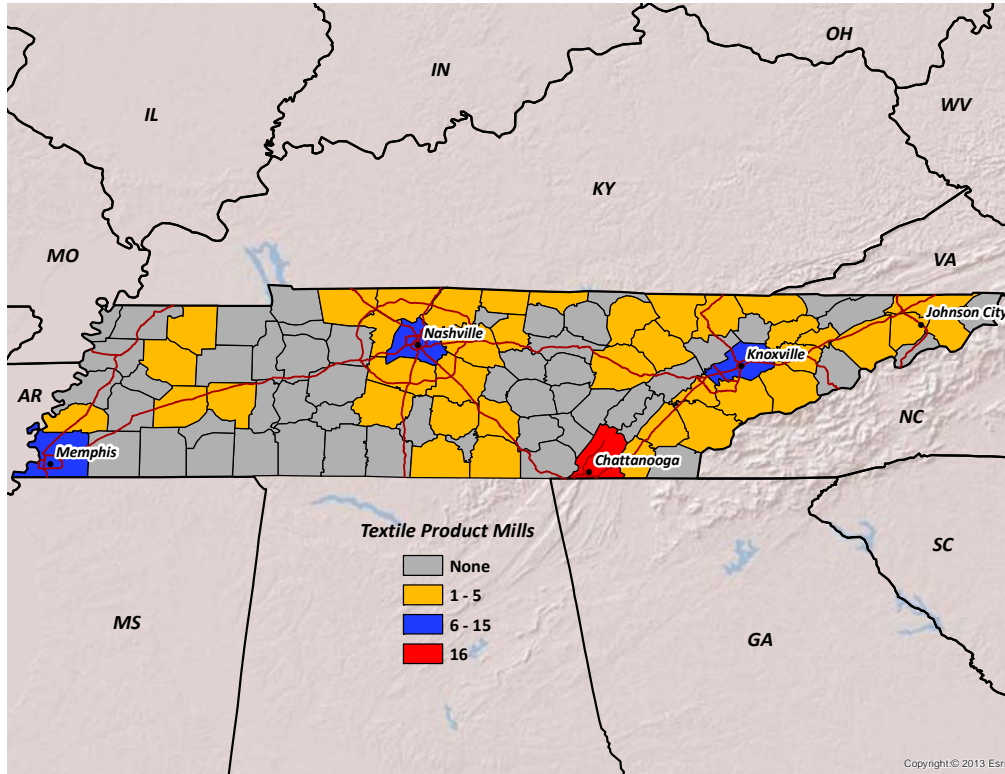


Figure 10. Number of Textile Product Mill Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

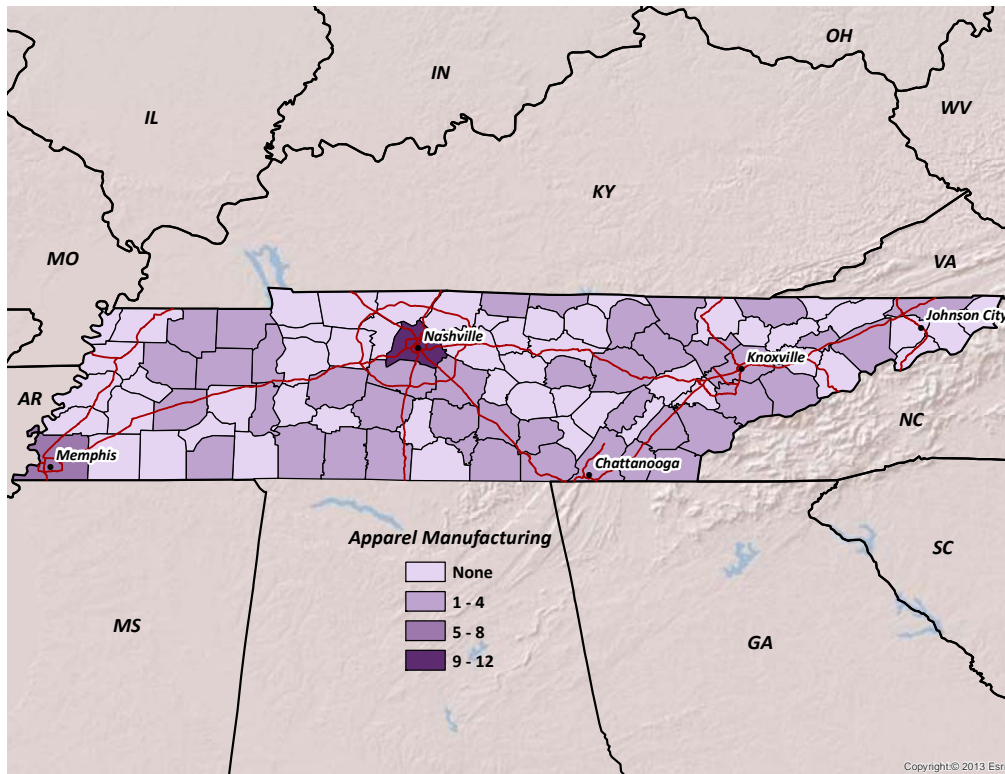


Figure 11. Number of Apparel Manufacturing Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

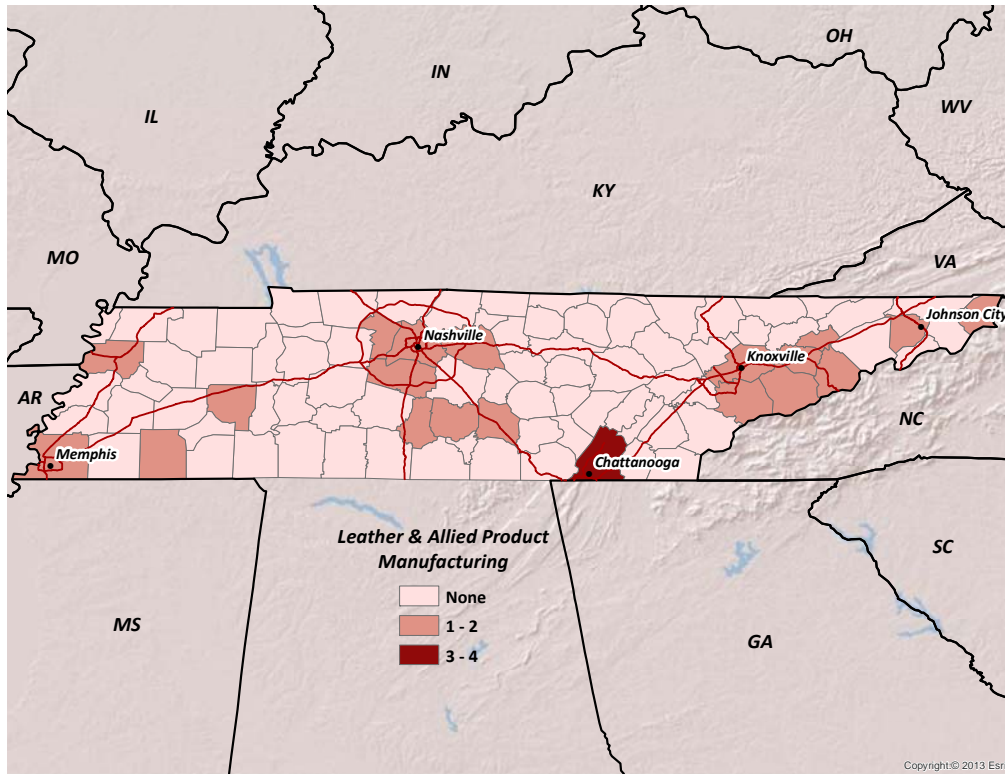


Figure 12. Number of Leather & Allied Product Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

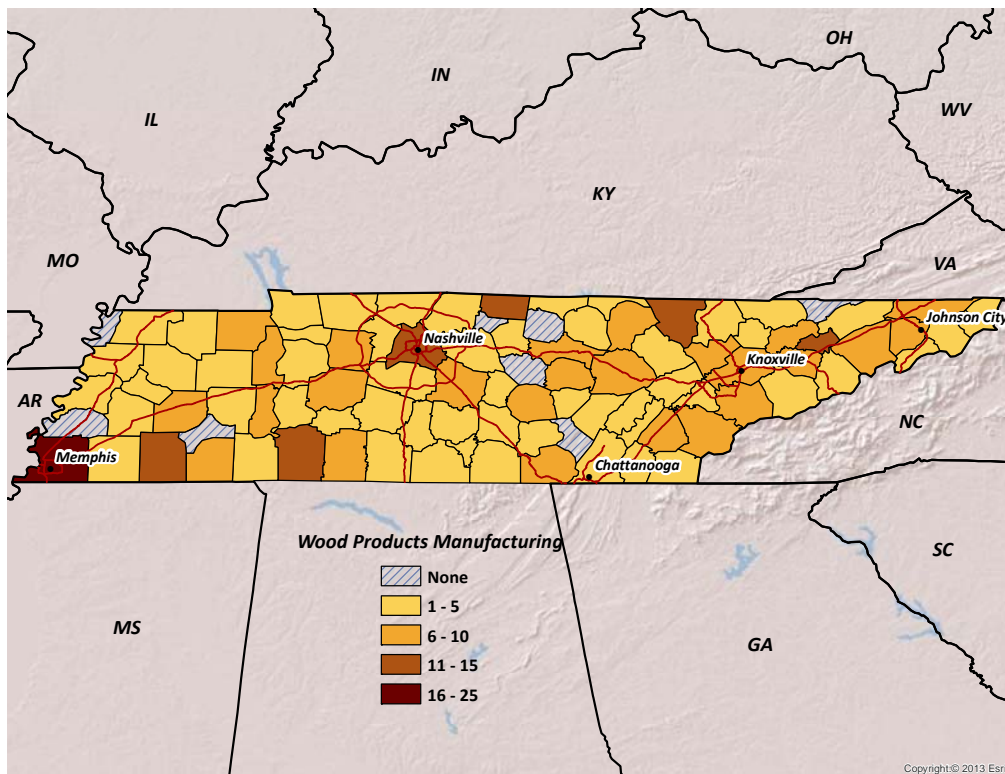


Figure 13. Number of Wood Product Manufacturing Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

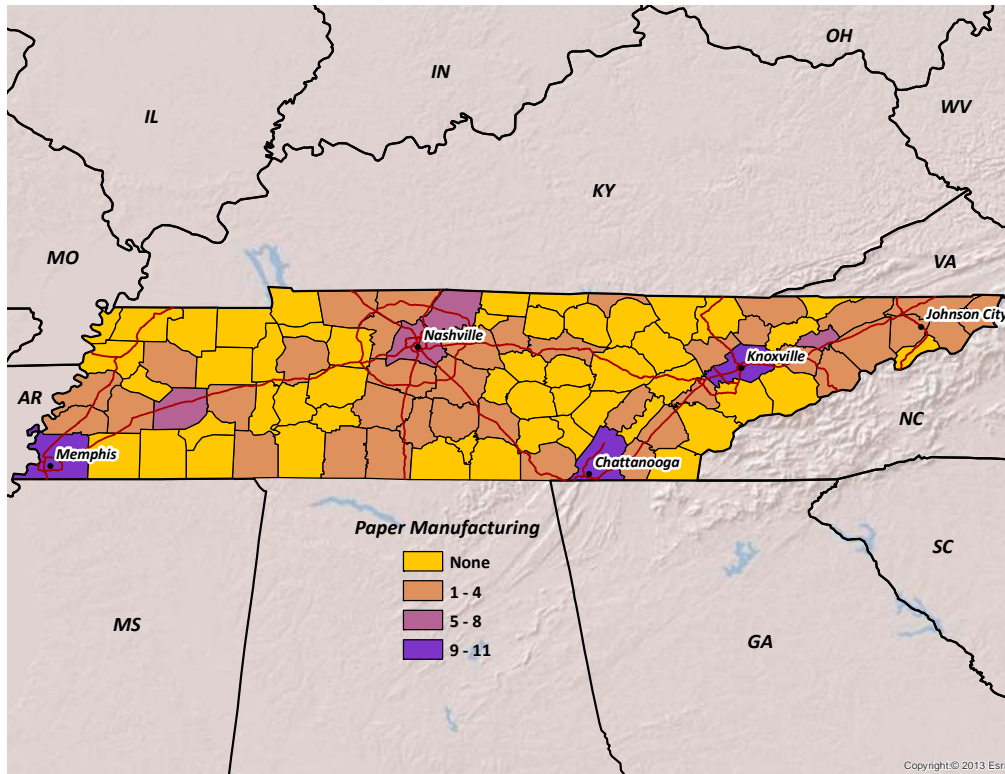


Figure 14. Number of Paper Manufacturing Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

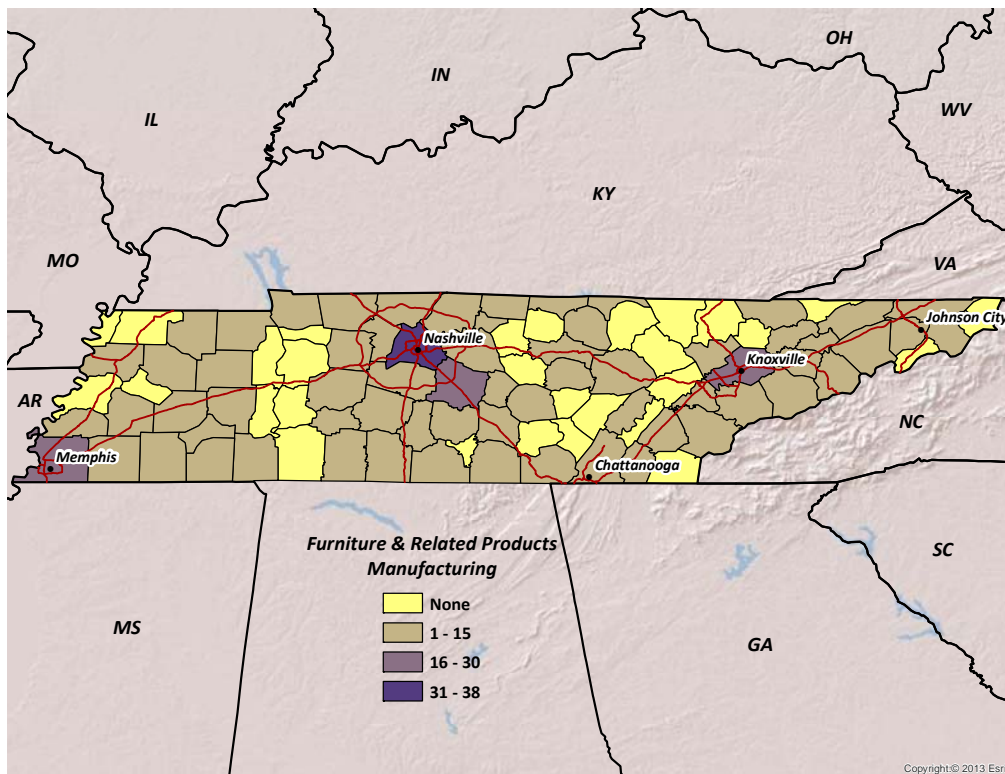


Figure 15. Number of Furniture & Related Products Establishments in Tennessee, 2013
 (Source: U.S. Census Bureau, 2013a)

Table 4. Manufacturing Statistics for Tennessee, 2013

Manufacturing Industry/NAICS Code	Employees	Payroll	Establishments	Value of Shipments
	(Number)	(Thousand \$)	(Number)	(Thousand \$)
Food (311)	34,430	\$1,446,133	302	\$18,529,624
<i>Animal Slaughtering/Processing (3116)</i>	<i>10,603</i>	<i>\$308,141</i>	<i>64</i>	<i>\$3,414,664</i>
Beverage & Tobacco Products (312)	3,227	\$190,060	67	\$6,190,904
Textile Mills (313)	2,692	\$124,951	52	\$986,869
Textile Product Mills (314)	2,487	\$81,106	128	\$601,177
Apparel (315)	3,449	\$92,586	96	\$354,203
Leather & Allied Products (316)	421	\$11,613	29	D
Wood Products (321)	10,909	\$351,459	517	\$2,168,604
Paper (322)	10,856	\$598,619	136	\$5,687,664
Furniture & Related Products (337)	8,812	\$321,824	357	\$1,614,115
Total^a	77,283	\$3,218,351	1,574	\$36,133,160

D = Data not disclosed

^aValues for animal slaughtering and processing are imbedded in food manufacturing (311) values

Source: U.S. Census Bureau, Annual Survey of Manufacturers, Geographic Area Statistics, 2013b; U.S. Census Bureau, Censtats Databases, 2013a.

State Level Changes in Livestock and Crops: 2011 to 2013

Comparing 2011 and 2013 statewide agricultural data revealed a decrease in the numbers of cattle and calves, broilers, eggs, and dairy cattle, while the numbers of chickens (excluding broilers) and hogs increased. Prices increased for all livestock products except for cattle and calves. Many of the traditional row crops grown in the state experienced increased planted acreage except for cotton and the vegetable crops snap beans and tomatoes. Crop prices increased for all major crops grown except for corn and cotton plus the vegetable crop snap beans.

Precipitation for the state by climatic division for the 2010-2013 timeframe is displayed in Figure 16. Above average rainfall occurred across the state for the years 2011 and 2013, whereas for 2010 and 2012, below normal rainfall occurred (U.S. Department of Commerce, 2015).

Livestock Changes in Inventory and Prices

Compared to 2011 production levels, the largest increases in livestock numbers were for hogs (17.6 percent) and all chickens (2.4 percent). Eggs had the largest decrease in numbers at -12.7 percent, followed by cattle and calves (-11.6 percent), broilers (-9.2 percent), and dairy cattle (-4.0 percent) (Table 5). Total milk production for the state declined 5.5 percent from 2011 (810 million pounds) to 2013 (765 million pounds). Livestock prices were higher for all livestock products, except cattle and calves (7.2 percent decrease). Broilers had the greatest price increase at 32.6 percent, followed by eggs (16.2 percent), all chickens (13.2 percent), and hogs (3.9 percent) (Tennessee Department of Agriculture, 2012 and 2014).

Table 5. Comparison of Tennessee Livestock Numbers and Prices, 2011 and 2013^a

Commodity	Inventory		Change	Units	Price		Change	Units
	2011	2013			2011	2013		
			%	1,000	(dollars/unit)		%	
All Cattle & Calves	1,990	1,760	-11.6	head	\$88.70	\$82.30	-7.2	100 pounds
All Chickens	2,584	2,647	2.4	no.	\$6.80	\$7.70	13.2	head
Broilers	190,300	172,800	-9.2	no.	\$0.47	\$0.61	32.6	pound
Eggs	363,000	317,000	-12.7	no.	\$1.97	\$2.29	16.2	dozen
Milk Cows	50	48	-4.0	head	--	--	--	head
All Hogs	170	200	17.6	head	\$64.70	\$67.20	3.9	100 pounds

Source: Tennessee Department of Agriculture, 2012 and 2014; USDA/NASS, 2014a and 2014b

^aData in nominal values.

Crop Changes in Acres Planted and Prices

With the exception of cotton, snap beans, tomatoes and tobacco, acres of crops harvested increased from 2011 to 2013 (Table 6). Wheat had the largest increase in acres harvested at 74.2 percent, followed by soybeans (21.6 percent), corn (11.6 percent), and hay (1.9 percent). Cotton harvested acres decreased from 490 to 233 thousand acres. All the crop commodities experienced higher prices for the timeframe examined except for corn and cotton. The largest price increase was for snap beans, followed by hay, tobacco, soybeans, and wheat.

Table 6. Comparison of Tennessee Crop Acreages and Prices, 2011 and 2013^a

Commodity	Harvested Acres		Change	Price		Change	Units
	2011	2013		2011	2013		
	1,000 acres		%	\$/unit		%	
Hay, All	1,880	1,915	1.9	\$83.62	\$99.52	19.0	ton
Corn	735	820	11.6	\$6.50	\$4.70	-27.7	bushel
Soybeans	1,250	1,520	21.6	\$12.00	\$12.80	6.7	bushel
Cotton	490	233	-52.4	\$0.93	\$0.79	-15.1	pound
Tobacco	22.0	21.4	-2.7	\$2.16	\$2.39	10.7	pound
Wheat	310	540	74.2	\$6.85	\$7.00	2.2	bushel
Tomatoes	3.8	3.4	-10.5	\$36.00	\$36.00	0.0	cwt
Snap Beans	10.8	4.5	-58.3	\$34.97	\$50.00	43.0	cwt

Source: Tennessee Department of Agriculture, 2012 and 2014

^aData in Nominal Values.

Changes in yields for Tennessee's crops can be attributed to better crop varieties and producers' management practices. However, weather also plays an important role too. Precipitation values from 2010 to 2013 are shown in Figure 16. The values shown were departures from average precipitation (from 1895 to 2013) by climate division. For example, for the western climate division in 2010, rainfall was 4.06 inches below average precipitation values. Likewise, for that same climate division for 2013, rainfall was 12.18 inches above average. Rainfall for years 2011 and 2013 were above average for much of the state. On the other hand, rainfall was below average for all climate divisions in 2010 and 2012.

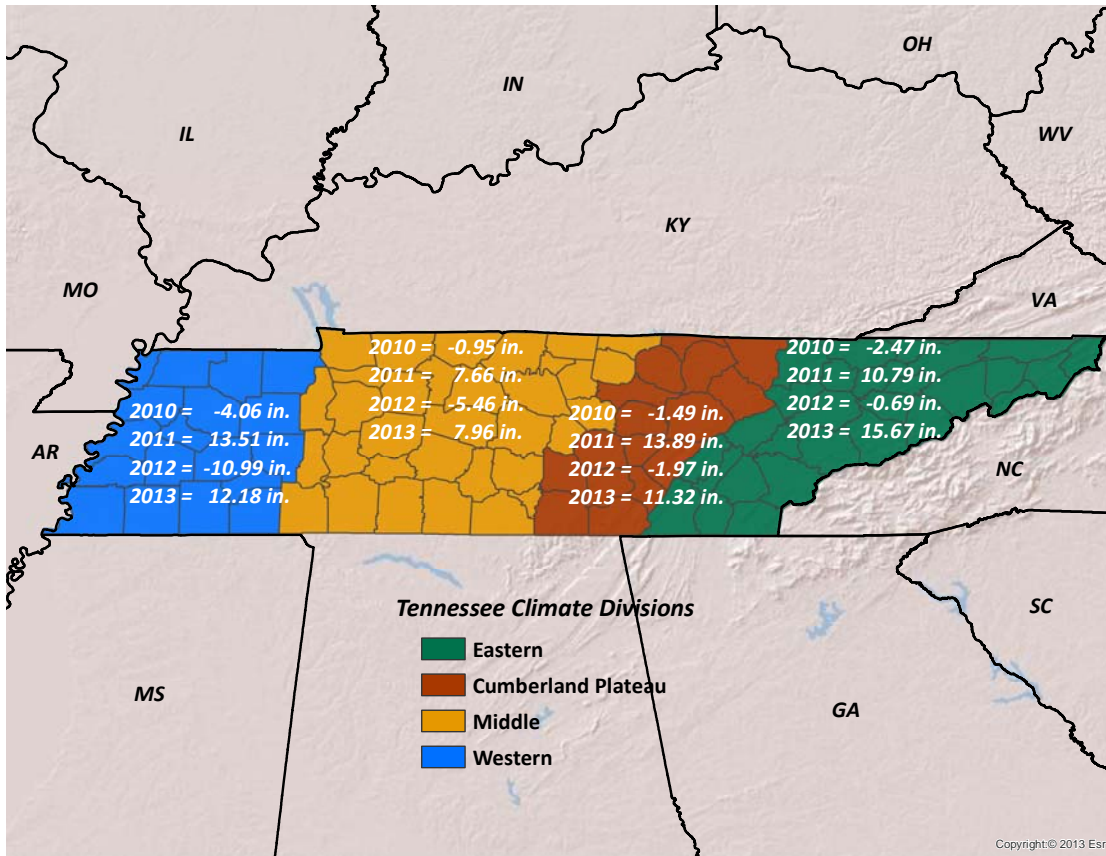


Figure 16. Departure from Average Precipitation for Tennessee’s Climate Divisions

(Source: U.S. Department of Commerce, 2015)

Changes in acres, yields, and prices impacted the total industry output (value of production or cash receipts) contributed to the state’s economy from crops. Of the five major crops, soybeans, tobacco, and wheat had an increase in gross receipts from comparing 2011 to 2013. Corn and cotton had a decrease in gross receipts during this timeframe (Tennessee Department of Agriculture, 2012 and 2014).

Input-Output Analysis: Data and Methods Used

The Tennessee Agri-Industry Model (TN-AIM) was used to model industry and institutional interrelationships in each of five regions within Tennessee. TN-AIM is based on the Impact Analysis for Planning (IMPLAN) model and databases (Olson and Lindall, 1999). The five regions followed those used by the Bureau of Economic Analysis to represent areas of economic consumption (consumption regions), as displayed in Figure 17 (for county listings, see Appendix C) (USDOC, 2011). Regional values were then aggregated to the state level. For additional information on IMPLAN see Appendix A.

IMPLAN (Version 3.0) utilizes a National Trade Flows Model (NTFM) (doubly-constrained gravity model) to estimate a new set of regional purchase coefficients and other trade data that predict local purchases based on a region’s characteristics (Lindall, Olson, and Alward, 2006). Output from the model

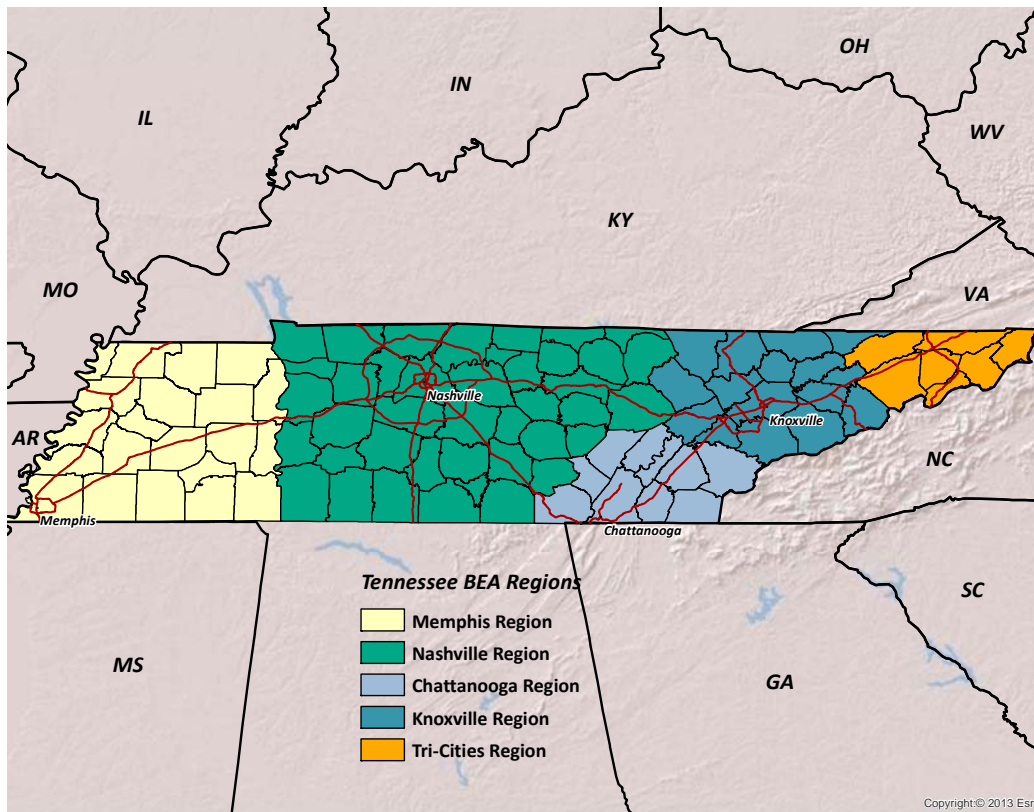


Figure 17. Tennessee Agri-Industry Model Analysis Regions

(Source: U.S. Department of Commerce, 2011)

includes descriptive measures of the economy including total industry output (a measure of economic activity), employment, labor income, and total value-added for 536 industries in the Tennessee economy (Appendix B). **Total industry output** is defined as the value of production by industry per year or a measure of overall economic activity by that industry. **Employment** represents total wage and salary employees, as well as self-employed jobs in a region, for both full-time and part-time workers. **Labor income** is defined as employee compensation, as well as benefits, and proprietary (owner-operator) income. **Total value added** is defined as all income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses. Not only does the model describe a regional economy, it can be used for predictive purposes by providing multiplier-based estimates.

Multipliers measure the response of the economy to a change in demand or production. Multiplier analysis generally focuses on the impacts of exogenous changes on: a) output of the sectors in the economy, b) income earned by households because of new outputs, and c) employment (in physical terms) that is expected to be generated because of the new outputs. The concept of multipliers rests on the difference between the initial impact of an exogenous change (final demand) and the total

impacts of a change. **Direct** impacts measure the response of a given industry given a change in final demand for that same industry. **Indirect** impacts represent the response by all local industries that occur as a result of a change in final demand for a specific industry. **Induced** impacts represent the response by all local industries caused by increased (decreased) expenditures of new household income and inter-institutional transfers generated (lost) from the direct and indirect impacts of the change in final demand for a specific industry. This study uses Type I and Type SAM (Social Accounting Matrix) multipliers. Type I multipliers are calculated by dividing direct plus indirect impacts by the direct impacts, where the Type SAM multipliers = (direct + indirect + induced impacts)/direct impacts. The Type SAM multipliers take into account the expenditures resulting from increased incomes of households as well as inter-institutional transfers resulting from the economic activity. Therefore, Type SAM multipliers assume that as final demand changes, incomes also increase along with inter-institutional transfers. As consumers and institutions increase expenditures this leads to increased demands from local industries. To account for double-counting for the economic contributions estimated, regional purchase coefficients⁵ (RPC) are also set to zero for the backward linked supply and service industries.⁶

Results

Tennessee had a \$582.6 billion economy in 2013.⁷ The services industry was the largest sector of the economy at \$166.6 billion and over 1.6 million jobs (Table 7). The agri-forestry industrial complex ranked fourth in terms of total industry output at \$49.0 billion. The state's value-added, or state gross domestic product⁸ (GDP), is estimated at \$292.1 billion with the agri-forestry industrial complex contributing close to \$14.0 billion towards the state's GDP. For every dollar of sales, the agri-forestry industrial complex contributed \$0.28 to the state's GDP, which is less than all of the sectors except manufacturing.

Table 7. Estimated Economic Indicators for Tennessee, 2013

Sector	TIO ^a	TVA ^b	Jobs	TVA/Job	TVA/TIO
	(Billion \$)		(1,000)		
Services	\$166.6	\$101.6	1,640.5	\$61,932	0.61
Manufacturing	\$121.3	\$32.6	239.6	\$136,060	0.27
Government	\$50.0	\$34.8	476.4	\$73,048	0.70

⁵IMPLAN's regional purchase coefficient (RPC) represents how much of each commodity purchasing industries and institutions buy from regional sources. For example, a RPC of .55 for a given commodity means that for each \$1 of local need, 55 percent of the commodity is purchased locally.

⁶Hence, the analysis provided in this document belongs in the category of contribution analysis. For more details, see Steinback, 2004.

⁷Agricultural services (i.e., landscape/horticultural services and veterinary services) are excluded

⁸The state domestic product is measuring by summing employee compensation, proprietor income, other property type income, and indirect business taxes. It is analogous to Gross Domestic Product for the entire U.S.

Table 7. Estimated Economic Indicators for Tennessee, 2013 (Cont.)

Sector	TIO ^a	TVA ^b	Jobs	TVA/Job	TVA/TIO
	(Billion \$)		(1,000)		
Agri-Forest Industry	\$49.0	\$13.9	179.7	\$77,351	0.28
Real Estate	\$45.6	\$34.0	131.6	\$258,359	0.75
Construction	\$31.7	\$11.0	183.9	\$59,815	0.35
Wholesale Trade	\$29.6	\$18.9	134.6	\$140,416	0.64
Retail Trade	\$29.5	\$18.7	375.4	\$49,814	0.63
Transportation	\$17.7	\$7.3	104.0	\$70,192	0.41
Finance	\$17.3	\$7.4	115.8	\$63,903	0.43
Insurance	\$13.3	\$6.1	61.2	\$99,673	0.46
Miscellaneous	\$4.5	\$2.9	76.4	\$37,958	0.64
Utilities	\$4.2	\$1.5	3.7	\$405,405	0.36
Mining	\$2.2	\$1.4	7.0	\$200,000	0.64
Total^f	\$582.5	\$292.1	3,729.8		

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interest, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

^cState totals may not add due to rounding.

Economic Impacts at the State & In-State Region Levels

Direct economic activity for total industry output (TIO), employment, labor income, and total value-added (TVA) for agriculture and forestry for the state and by analysis regions within the state are presented in Table 8. In 2013, agriculture and forestry related industries contributed a total of \$49.0 billion in direct economic activity to the state of Tennessee, or 8.7 percent of the state's economy.

Direct employment in agriculture and forestry related industries were over 179 thousand persons, or 4.8 percent of the workforce. Direct total value added was close to \$14.0 billion, with \$6.4 billion in labor income. Much of the industry output generated from agriculture and forestry was through secondary or manufactured products. For agriculture, approximately 40.0 percent of the workforce was employed in secondary industries (agriculture input supplying industries plus manufacturing) and the rest (60.0 percent) in primary industries (crop and livestock commodities). For forestry, however, 69.4 percent of the forestry workforce was employed in secondary industries (wood products manufacturing) and 30.6 percent in primary (commercial logging; pulp, paper, and paperboard mills; sawmills; wood preservation; sawmills, woodworking, and paper machinery; and nursery/timber tracts production).

The largest value of output from both agriculture and forestry, 40.0 percent, originated from the Memphis Region (Figure 17 on page 14), followed by the Nashville Region at 28.7 percent. However, for numbers of jobs, the Nashville Region had the largest value (38.5 percent) followed by the Memphis Region (25.2 percent). For primary agriculture, 39.5 percent of the output originated in the Memphis Region followed by the Nashville Region at 39.1 percent. The Memphis and Nashville Regions also have the largest value of outputs for secondary agriculture at 37.7 percent and 31.0 percent, respectively.

Table 8. Direct Economic Activity in Agriculture and Forestry

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
All Sectors (Including Non-Agricultural and Non-Forestry):								
State ^c	582,586		3,729,906		188,725		292,119	
Chattanooga	64,506	11.1%	384,777	10.3%	18,478	9.8%	29,693	10.2%
Knoxville	90,453	15.5%	629,831	16.9%	29,359	15.6%	45,833	15.7%
Memphis	148,070	25.4%	949,308	25.5%	48,590	25.7%	74,730	25.6%
Nashville	239,324	41.1%	1,511,298	40.5%	81,280	43.1%	124,266	42.5%
Tri-Cities	40,233	6.9%	254,691	6.8%	11,019	5.8%	17,596	6.0%
Agriculture & Forestry:								
State ^c	49,047		179,734		6,426		13,967	
Chattanooga	6,172	12.6%	24,193	13.5%	1,023	15.9%	1,729	12.4%
Knoxville	6,443	13.1%	27,410	15.3%	950	14.8%	1,690	12.1%
Memphis	19,639	40.0%	45,305	25.2%	2,261	35.2%	5,207	37.3%
Nashville	14,101	28.7%	69,253	38.5%	1,845	28.7%	4,654	33.3%
Tri-Cities	2,693	5.5%	13,572	7.6%	346	5.4%	687	4.9%
Primary & Secondary Agriculture:								
State ^c	35,361		140,297		3,757		9,930	
Chattanooga	4,053	11.5%	17,822	12.7%	654	17.4%	1,177	11.8%
Knoxville	4,823	13.6%	20,512	14.6%	570	15.2%	1,210	12.2%
Memphis	13,400	37.9%	33,270	23.7%	1,066	28.4%	3,186	32.1%
Nashville	11,343	32.1%	57,745	41.2%	1,261	33.6%	3,909	39.4%
Tri-Cities	1,742	4.9%	10,947	7.8%	205	5.5%	449	4.5%
Primary Agriculture:								
State ^c	4,694		83,944		572		2,112	
Chattanooga	403	8.6%	6,325	7.5%	40	6.9%	176	8.3%
Knoxville	345	7.3%	11,718	14.0%	73	12.7%	179	8.5%
Memphis	1,852	39.5%	19,528	23.3%	204	35.6%	756	35.8%
Nashville	1,834	39.1%	38,442	45.8%	227	39.6%	871	41.2%
Tri-Cities	260	5.5%	7,931	9.4%	29	5.1%	130	6.1%
Secondary Agriculture:								
State ^c	30,667		56,353		3,185		7,819	
Chattanooga	3,650	11.9%	11,497	20.4%	614	19.3%	1,001	12.8%
Knoxville	4,479	14.6%	8,794	15.6%	498	15.6%	1,031	13.2%
Memphis	11,548	37.7%	13,742	24.4%	862	27.1%	2,430	31.1%
Nashville	9,509	31.0%	19,304	34.3%	1,035	32.5%	3,038	38.9%
Tri-Cities	1,482	4.8%	3,016	5.4%	176	5.5%	319	4.1%
Primary & Secondary Forestry:								
State ^c	13,686		39,437		2,668		4,037	
Chattanooga	2,118	15.5%	6,371	16.2%	369	13.8%	552	13.7%
Knoxville	1,620	11.8%	6,898	17.5%	379	14.2%	480	11.9%
Memphis	6,240	45.6%	12,035	30.5%	1,195	44.8%	2,021	50.1%
Nashville	2,758	20.1%	11,508	29.2%	584	21.9%	745	18.5%
Tri-Cities	951	6.9%	2,625	6.7%	141	5.3%	238	5.9%
Primary Forestry:								
State ^c	6,590		12,060		1,254		2,153	
Chattanooga	890	13.5%	1,285	10.7%	137	11.0%	270	12.5%

Table 8. Direct Economic Activity in Agriculture and Forestry (Cont.)

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Knoxville	236	3.6%	781	6.5%	56	4.5%	78	3.6%
Memphis	4,441	67.4%	6,201	51.4%	874	69.7%	1,512	70.3%
Nashville	654	9.9%	3,133	26.0%	142	11.3%	191	8.9%
Tri-Cities	368	5.6%	661	5.5%	45	3.6%	101	4.7%
Secondary Forestry:								
State ^c	7,097		27,377		1,414		1,884	
Chattanooga	1,228	17.3%	5,086	18.6%	232	16.4%	282	15.0%
Knoxville	1,384	19.5%	6,117	22.3%	323	22.9%	402	21.3%
Memphis	1,799	25.3%	5,834	21.3%	321	22.7%	509	27.0%
Nashville	2,104	29.6%	8,375	30.6%	442	31.3%	554	29.4%
Tri-Cities	583	8.2%	1,964	7.2%	95	6.8%	137	7.3%

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interest, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

^cState totals may not add due to rounding.

For both primary and secondary forestry, the Memphis Region had the largest value of total industry output at 45.6 percent followed by the Nashville Region (20.1 percent). The Memphis Region dominates the economic activity for primary forestry at 67.4 percent for the state followed by the Chattanooga (13.5 percent) and Nashville (9.9 percent) Regions. For secondary forestry, the Nashville Region had the largest total industry output and jobs compared to other regions in the state. The Knoxville, Memphis, and Chattanooga Regions also had large numbers of jobs for secondary forestry.

Primary Agricultural Products:

The largest output value (19.9 percent) for the state for the top ten agriculture commodities from farm production was from oilseed farming (primarily soybeans) (Table 9), followed by grain farming (19.5 percent); beef cattle ranching and farming (14.2 percent); poultry and egg production (12.3 percent); all other crop farming (primarily hay/seed farming) (10.2 percent); greenhouse, nursery, & floriculture production (7.1 percent); agriculture and forestry support activities⁹ (5.8 percent); cotton farming (4.4 percent); dairy cattle and milk production (3.7 percent); and animal production, except cattle, poultry, and eggs (2.7 percent). In terms of labor income, agriculture and forestry support activities had the largest value followed by all other crop farming (primarily hay/seed farming);

⁹Includes support activities for crop production (i.e., cotton ginning; soil preparation, planting, and cultivating; crop harvesting; and farm management services), animal production (i.e., breeding services, pedigree record services boarding horses, dairy herd improvement activities, livestock spaying, and sheep dipping and shearing), and forestry (i.e., estimated timber, forest fire-fighting, forest pest control, and consulting on wood attributes and reforestation).

Table 9. State Level: Direct Economic Activity in Farm Production

Rank	Sector	TIO ^a (Million \$)	Employment (Number)	Labor Income (Million \$)	TVA ^b (Million \$)
	All Farm Production	4,487	80,043	526	1,977
1	Oilseed farming	895	4,714	52	556
2	Grain farming	876	9,020	14	-1
3	Beef cattle ranching & farming	639	15,935	30	258
4	Poultry & egg production	554	2,237	34	179
5	All other crop farming	458	28,386	84	275
6	Greenhouse, nursery, & floriculture production	320	5,706	75	222
7	Agriculture & forestry support activities	261	7,375	173	187
8	Cotton farming	196	1,805	38	121
9	Dairy cattle & milk production	165	1,114	12	74
10	Animal production, except cattle/poultry/eggs	123	3,751	15	107

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

greenhouse, nursery, and floriculture production; oilseed farming; and cotton farming. The largest total value added contributors included oilseed farming (primarily soybeans); all other crop farming (primarily hay/seed farming); beef cattle ranching and farming; greenhouse, nursery, and floriculture production; and agriculture and forestry support activities.

The direct economic activity from farm production by the top ten sectors for each trading region within the state is summarized in Table 10. Poultry and egg production, beef cattle ranching and

Table 10. Region Level: Direct Economic Activity in Farm Production (Top Ten Sectors)

Rank	Sector	TIO ^a (Million \$)	Employment (Number)	Labor Income (Million \$)	TVA ^b (Million \$)
	Chattanooga:	393	6,121	38	171
1	Poultry & egg production	165	628	10	53
2	Beef cattle ranching & farming	60	1,303	3	24
3	All other crop farming	49	2,644	9	29
4	Dairy cattle & milk production	41	240	2	19
5	Oilseed farming	20	122	1	12
6	Grain farming	14	184	0 ^c	0 ^c
7	Greenhouse, nursery, & floriculture production	14	221	2	10
8	Agriculture & forestry support activities	13	420	7	8
9	Vegetable & melon farming	11	134	2	9
10	Animal production, except cattle/poultry/eggs	7	224	1	6

Table 10. Region Level: Direct Economic Activity in Farm Production (Top Ten Sectors) (Cont.)

Rank	Sector	TIO ^a (Million \$)	Employment (Number)	Labor Income (Million \$)	TVA ^b (Million \$)
Knoxville:		336	11,486	70	175
1	Beef cattle ranching & farming	89	2,809	5	36
2	All other crop farming	68	5,272	21	41
3	Greenhouse, nursery, & floriculture production	37	927	13	26
4	Poultry & egg production	37	200	4	12
5	Agriculture & forestry support activities	30	1,014	18	20
6	Dairy cattle & milk production	28	260	4	13
7	Vegetable & melon farming	14	230	2	11
8	Oilseed farming	13	126	1	8
9	Grain farming	10	198	0 ^c	0 ^c
10	Animal production, except cattle/poultry/eggs	10	451	1	8
Memphis:		1,826	19,293	200	740
1	Grain farming	638	5,842	9	-1
2	Oilseed farming	606	2,776	35	376
3	Cotton farming	186	1,688	36	115
4	Agriculture & forestry support activities	118	2,752	85	90
5	Beef cattle ranching & farming	71	1,438	3	29
6	Animal production, except cattle/poultry/eggs	54	1,152	6	47
7	All other crop farming	53	2,680	8	32
8	Greenhouse, nursery, & floriculture production	47	707	8	32
9	Poultry & egg production	43	123	3	14
10	Commercial hunting & trapping	11	136	6	7
Nashville:		1,792	37,728	218	844
1	Beef cattle ranching & farming	351	8,458	16	142
2	Poultry & egg production	262	1,027	15	85
3	Oilseed farming	252	1,658	15	156
4	All other crop farming	235	14,035	38	141
5	Grain farming	206	2,675	3	0 ^c
6	Greenhouse, nursery, & floriculture production	197	3,336	48	136
7	Agriculture & forestry support activities	90	2,821	56	61
8	Tobacco farming	86	1,719	18	53
9	Dairy cattle & milk production	69	437	4	31
10	Animal production, except cattle/poultry/eggs	44	1,562	5	38
Tri-Cities:		254	7,846	28	126
1	Beef cattle ranching & farming	68	1,927	3	27
2	All other crop farming	54	3,756	8	32

Table 10. Region Level: Direct Economic Activity in Farm Production (Top Ten Sectors) (Cont.)

Rank	Sector	TIO ^a (Million \$)	Employment (Number)	Labor Income (Million \$)	TVA ^b (Million \$)
3	Poultry & egg production	46	259	3	15
4	Greenhouse, nursery, & floriculture production	26	516	4	18
5	Dairy cattle & milk production	17	134	1	8
6	Agriculture & forestry support activities	11	368	6	7
7	Tobacco farming	10	290	2	6
8	Animal production, except cattle/poultry/eggs	8	362	1	7
9	Grain farming	7	122	0 ^c	0 ^c
10	Vegetable & melon farming	7	112	1	6

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

^cValues of 0 are nonzero values that are less than 1.

farming, all other crop farming (primarily hay/seed farming), dairy cattle and milk production, and oilseed farming were primary contributors to total industry output from farm production in the *Chattanooga Region*. In the *Knoxville Region*, beef cattle ranching and farming; all other crop farming (primarily hay/seed farming); greenhouse, nursery, and floriculture production; poultry and egg production; and agriculture and forestry support activities were important sectors. For the *Memphis Region*, grain farming, oilseed farming, cotton farming, agriculture and forestry support activities, and beef cattle ranching and farming had the largest total industry output, while in the *Nashville Region* the greatest total industry output values were from beef cattle ranching and farming, poultry and egg production, oilseed farming, all other crop farming (primarily hay/seed farming), and grain farming. Beef cattle ranching and farming; all other crop farming (primarily hay/seed farming); poultry and egg production; greenhouse, nursery, and floriculture production; and dairy cattle and milk production were important contributors to total industry output for the *Tri-Cities Region*. For all regions except Memphis, all other crop farming (primarily hay/seed farming) employed the largest number of workers. For the Memphis Region, grain farming employed the largest numbers, followed by oilseed and all other crop farming (primarily hay/seed farming).

Secondary Agricultural Products:

Among secondary agricultural products, food manufacturing contributed the largest total industry output, followed by beverage manufacturing, tobacco products manufacturing, textile mills, agricultural machinery, agricultural chemicals, textile product mills, apparel manufacturing, and leather and allied product manufacturing (Table 11). Approximately 67.0 percent of the total value of total

Table 11. Direct Economic Activity in Secondary Agricultural Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Total Secondary Agriculture:								
State ^c	30,667		56,353		3,185		7,819	
Chattanooga	3,650	11.9%	11,497	20.4%	614	19.3%	1,001	12.8%
Knoxville	4,479	14.6%	8,794	15.6%	498	15.6%	1,031	13.2%
Memphis	11,548	37.7%	13,742	24.4%	862	27.1%	2,430	31.1%
Nashville	9,509	31.0%	19,304	34.3%	1,035	32.5%	3,038	38.9%
Tri-Cities	1,482	4.8%	3,016	5.4%	176	5.5%	319	4.1%
Food Manufacturing:								
State ^c	20,538		37,078		2,053		4,389	
Chattanooga	2,472	12.0%	7,632	20.6%	435	21.2%	730	16.6%
Knoxville	3,086	15.0%	5,369	14.5%	288	14.1%	599	13.7%
Memphis	8,846	43.1%	9,674	26.1%	621	30.3%	1,586	36.1%
Nashville	5,592	27.2%	13,415	36.2%	645	31.4%	1,368	31.2%
Tri-Cities	541	2.6%	987	2.7%	64	3.1%	106	2.4%
Beverage Manufacturing:								
State ^c	3,872		4,445		300		1,088	
Chattanooga	488	12.6%	593	13.3%	49	16.2%	104	9.6%
Knoxville	873	22.6%	997	22.4%	56	18.7%	246	22.6%
Memphis	882	22.8%	1,107	24.9%	70	23.4%	175	16.1%
Nashville	1,362	35.2%	1,417	31.9%	103	34.4%	510	46.8%
Tri-Cities	267	6.9%	330	7.4%	22	7.2%	53	4.9%
Tobacco Products Manufacturing:								
State ^c	2,406		910		82		1,255	
Chattanooga	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Knoxville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Memphis	680	28.3%	257	28.2%	25	30.4%	356	28.3%
Nashville	1,726	71.7%	654	71.8%	57	69.6%	900	71.7%
Tri-Cities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Textile Mills:								
State ^c	1,141		3,567		192		235	
Chattanooga	303	26.6%	1,005	28.2%	41	21.1%	48	20.5%
Knoxville	87	7.6%	366	10.3%	14	7.4%	18	7.6%
Memphis	134	11.8%	435	12.2%	24	12.5%	27	11.7%
Nashville	282	24.7%	745	20.9%	56	28.9%	70	29.6%
Tri-Cities	334	29.3%	1,017	28.5%	58	30.0%	72	30.5%
Agricultural Machinery:								
State ^c	734		1,381		69		159	
Chattanooga	124	16.8%	185	13.4%	14	19.9%	35	22.2%
Knoxville	6	0.8%	9	0.6%	0 ^d	0.5%	1	0.9%
Memphis	376	51.2%	744	53.9%	33	48.4%	74	46.8%
Nashville	24	3.2%	36	2.6%	2	3.5%	7	4.1%
Tri-Cities	206	28.0%	407	29.5%	19	27.7%	41	26.0%
Agricultural Chemicals:								
State ^c	722		589		61		247	
Chattanooga	17	2.3%	11	1.9%	1	1.5%	6	2.5%

Table 11. Direct Economic Activity in Secondary Agricultural Products (Cont.)

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Knoxville	120	16.5%	165	28.0%	12	19.4%	36	14.5%
Memphis	457	63.3%	309	52.4%	40	65.7%	161	64.9%
Nashville	18	2.4%	22	3.8%	2	2.6%	5	2.2%
Tri-Cities	111	15.4%	82	13.9%	7	10.8%	39	15.9%
Textile Product Mills:								
State ^c	485		2,891		122		143	
Chattanooga	51	10.5%	384	13.3%	15	12.4%	16	11.4%
Knoxville	115	23.7%	899	31.1%	32	26.7%	36	25.5%
Memphis	86	17.6%	432	14.9%	23	18.5%	28	19.3%
Nashville	221	45.6%	1,072	37.1%	48	39.4%	58	40.9%
Tri-Cities	13	2.6%	105	3.6%	4	3.1%	4	2.9%
Apparel Manufacturing:								
State ^c	459		4,103		170		168	
Chattanooga	188	41.0%	1,602	39.1%	58	34.3%	60	35.5%
Knoxville	36	7.8%	390	9.5%	10	5.7%	9	5.6%
Memphis	44	9.6%	536	13.1%	19	10.9%	16	9.7%
Nashville	184	40.1%	1,496	36.5%	81	47.6%	80	47.7%
Tri-Cities	7	1.5%	79	1.9%	3	1.6%	3	1.5%
Leather & Allied Product Manufacturing:								
State ^c	309		1,388		136		134	
Chattanooga	8	2.6%	84	6.1%	2	1.6%	1	0.9%
Knoxville	156	50.5%	598	43.1%	84	61.8%	84	62.6%
Memphis	42	13.6%	249	17.9%	7	5.1%	7	4.9%
Nashville	100	32.5%	447	32.2%	41	30.4%	41	30.4%
Tri-Cities	3	0.9%	9	0.7%	2	1.2%	2	1.2%

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

^cState totals may not add due to rounding.

^dValues of 0 are nonzero values that are less than 1.

industry output from processed agricultural products came from food manufacturing. In addition, food manufacturing employed the largest number of workers, had the largest amount of labor income, and contributed the largest amount in total value added. The Memphis Region had the largest economic activity (total industry output) in food manufacturing, whereas the Nashville Region had the largest numbers of jobs. The Nashville Region also had the largest total industry output for beverage manufacturing, tobacco products manufacturing, and textile product mills. The Memphis Region had the largest total industry output for agricultural chemicals and agricultural machinery. For apparel manufacturing, the Chattanooga Region had the largest total industry output followed closely by the Nashville Region. For leather and allied product manufacturing, the Knoxville Region had the largest total industry output. The largest economic activity for textile mills came from the Tri-Cities Region. A

more detailed presentation of the total industry output from processing by sub-sector is shown in Appendixes D and E.

Primary Forest Products:

The largest output value for primary forest products was from paper mills, followed by paperboard mills; sawmills; commercial logging; pulp mills; wood preservation; sawmills, woodworking, and paper machinery; and forestry, forest products, and timber tract production¹⁰ (Table 12). The Memphis Region had the largest output value for paper mills at \$3.2 billion or 74.7 percent of the output value for the state. The paper mills sector employed the largest numbers of individuals again with the Memphis Region employing the largest number. The Memphis Region also had the largest output value for paperboard mills; pulp mills; and forestry, forest products, and timber track production.

Table 12. Direct Economic Activity in Primary Forest Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Total Primary Forest Products:								
State ^c	6,590		12,060		1,254		2,153	
Chattanooga	890	13.5%	1,285	10.7%	137	11.0%	270	12.5%
Knoxville	236	3.6%	781	6.5%	56	4.5%	78	3.6%
Memphis	4,441	67.4%	6,201	51.4%	874	69.7%	1,512	70.3%
Nashville	654	9.9%	3,133	26.0%	142	11.3%	191	8.9%
Tri-Cities	368	5.6%	661	5.5%	45	3.6%	101	4.7%
Paper Mills:								
State ^c	4,324		4,791		760		1,441	
Chattanooga	570	13.2%	671	14.0%	71	9.4%	167	11.6%
Knoxville	80	1.8%	80	1.7%	20	2.7%	32	2.2%
Memphis	3,231	74.7%	3,513	73.3%	618	81.3%	1,117	77.5%
Nashville	154	3.6%	183	3.8%	18	2.3%	44	3.0%
Tri-Cities	289	6.7%	344	7.2%	33	4.4%	82	5.7%
Paperboard Mills:								
State ^c	914		981		160		289	
Chattanooga	140	15.3%	136	13.9%	35	22.1%	53	18.4%
Knoxville	34	3.7%	31	3.1%	10	6.2%	14	4.8%
Memphis	741	81.0%	814	83.0%	115	71.7%	222	76.7%
Nashville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tri-Cities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sawmills:								
State ^c	678		2,844		106		136	
Chattanooga	15	2.2%	63	2.2%	2	2.3%	3	2.3%
Knoxville	90	13.2%	372	13.1%	15	14.0%	19	13.8%
Memphis	188	27.8%	790	27.8%	30	27.8%	38	27.8%

¹⁰Includes growing trees for reforestation; growing forest products such as gums, barks, balsam needles, rhizomes, fibers, and ginseng; and timber tracts for selling timber.

Table 12. Direct Economic Activity in Primary Forest Products (Cont.)

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Nashville	359	52.9%	1,506	52.9%	56	52.6%	72	52.7%
Tri-Cities	26	3.9%	114	4.0%	3	3.3%	5	3.4%
Commercial Logging:								
State ^c	287		2,816		154		169	
Chattanooga	21	7.3%	187	6.6%	12	8.0%	13	7.8%
Knoxville	21	7.1%	250	8.9%	9	5.6%	10	5.9%
Memphis	105	36.7%	897	31.9%	63	40.8%	68	40.0%
Nashville	133	46.4%	1,403	49.8%	67	43.3%	74	43.9%
Tri-Cities	7	2.5%	79	2.8%	3	2.2%	4	2.3%
Pulp Mills:								
State ^c	283		288		55		88	
Chattanooga	119	42.1%	139	48.2%	9	17.0%	25	28.7%
Knoxville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Memphis	164	57.9%	149	51.8%	46	83.0%	63	71.3%
Nashville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tri-Cities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Wood Preservation:								
State ^c	53		131		5		11	
Chattanooga	6	11.1%	14	10.7%	1	14.8%	1	12.5%
Knoxville	4	7.0%	10	7.3%	0 ^d	4.0%	1	5.8%
Memphis	4	6.6%	9	6.6%	0 ^d	6.8%	1	6.7%
Nashville	2	3.5%	5	3.5%	0 ^d	3.8%	0 ^d	3.6%
Tri-Cities	38	71.8%	94	71.9%	3	70.7%	8	71.3%
Sawmills, Woodworking, & Paper Machinery:								
State ^c	40		167		12		14	
Chattanooga	18	45.5%	74	44.0%	6	49.2%	7	48.4%
Knoxville	8	19.2%	33	19.5%	2	18.7%	3	18.8%
Memphis	4	9.7%	15	8.8%	1	11.8%	2	11.3%
Nashville	4	10.0%	19	11.2%	1	7.1%	1	7.7%
Tri-Cities	6	15.6%	28	16.6%	2	13.3%	2	13.8%
Forestry, Forest Products, & Timber Tract Operations:								
State ^c	10		42		2		5	
Chattanooga	0 ^d	1.7%	1	2.4%	0 ^d	1.9%	0 ^d	1.0%
Knoxville	1	15.0%	6	15.3%	0 ^d	2.5%	1	14.7%
Memphis	5	47.3%	15	34.7%	2	74.7%	3	60.5%
Nashville	3	26.9%	18	41.3%	1	21.6%	1	11.8%
Tri-Cities	1	9.1%	3	6.3%	0 ^d	-0.6%	1	12.1%

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

^cState totals may not add due to rounding.

^dValues of 0 are nonzero values that are less than 1.

The Nashville Region had the largest output value for sawmills and commercial logging. The largest economic activity for wood preservation was from the Tri-Cities Region. For sawmills, woodworking, and paper machinery, 45.5 percent of the economic activity originated from the Chattanooga Region.

Secondary Forest Products:

Paper manufacturing had the largest output value among secondary forest products, followed by furniture and related products manufacturing; other wood products; wood windows and doors and millwork; manufactured home manufacturing; and veneer, plywood, and engineered wood product manufacturing (Table 13). The paper manufacturing sector was comprised of paperboard containers, paper bags and coated and treated paper, stationery products, and other converted paper products. Furniture and related products manufacturing was comprised of household and institutional, office, and other (mattress, blind and shades) furniture categories. The other wood products manufacturing category was comprised of wood containers and pallets, miscellaneous wood products, and kitchen cabinets and countertops. The Memphis Region had the largest values for output and total value added for paper manufacturing, whereas the Nashville Regions had the largest values for jobs and labor income. The Nashville Region also had the largest economic activity for other wood products manufacturing and veneer, plywood, and engineered wood products manufacturing. The Memphis

Table 13. Direct Economic Activity in Secondary Forest Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Total Secondary Forest Products:								
State ^c	7,097		27,377		1,414		1,884	
Chattanooga	1,228	17.3%	5,086	18.6%	232	16.4%	282	15.0%
Knoxville	1,384	19.5%	6,117	22.3%	323	22.9%	402	21.3%
Memphis	1,799	25.3%	5,834	21.3%	321	22.7%	509	27.0%
Nashville	2,104	29.6%	8,375	30.6%	442	31.3%	554	29.4%
Tri-Cities	583	8.2%	1,964	7.2%	95	6.8%	137	7.3%
Paper Manufacturing:								
State ^c	3,897		8,827		626		941	
Chattanooga	545	14.0%	1,344	15.2%	78	12.5%	108	11.5%
Knoxville	607	15.6%	1,524	17.3%	120	19.1%	156	16.6%
Memphis	1,245	32.0%	2,354	26.7%	171	27.3%	323	34.4%
Nashville	1,072	27.5%	2,573	29.1%	201	32.1%	262	27.9%
Tri-Cities	428	11.0%	1,032	11.7%	56	8.9%	91	9.6%
Furniture & Related Products Manufacturing:								
State ^c	1,443		7,873		342		343	
Chattanooga	479	33.2%	2,691	34.2%	105	30.6%	105	30.7%
Knoxville	354	24.6%	2,060	26.2%	91	26.6%	92	26.7%
Memphis	89	6.2%	550	7.0%	28	8.1%	28	8.1%
Nashville	467	32.4%	2,336	29.7%	105	30.7%	105	30.5%

Table 13. Direct Economic Activity in Secondary Forest Products (Cont.)

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Tri-Cities	52	3.6%	236	3.0%	14	4.0%	14	4.0%
Other Wood Products Manufacturing:								
State ^c	598		4,456		161		200	
Chattanooga	88	14.7%	639	14.4%	29	17.8%	33	16.5%
Knoxville	45	7.5%	348	7.8%	11	6.9%	14	6.9%
Memphis	155	25.9%	1,183	26.6%	45	28.0%	54	26.9%
Nashville	268	44.8%	1,932	43.4%	64	40.2%	86	43.1%
Tri-Cities	43	7.2%	354	7.9%	11	7.0%	13	6.6%
Wood Windows & Doors & Millwork:								
State ^c	532		2,935		126		180	
Chattanooga	34	6.4%	163	5.6%	8	6.2%	13	7.2%
Knoxville	85	16.0%	481	16.4%	16	13.0%	27	15.0%
Memphis	232	43.6%	1,301	44.3%	56	44.9%	76	42.4%
Nashville	139	26.1%	750	25.6%	34	27.3%	49	27.1%
Tri-Cities	43	8.0%	239	8.1%	11	8.7%	15	8.3%
Manufactured Homes Manufacturing:								
State ^c	401		2,310		117		161	
Chattanooga	4	0.9%	22	0.9%	1	0.6%	1	0.8%
Knoxville	263	65.6%	1,525	66.0%	77	66.2%	106	65.6%
Memphis	60	15.0%	352	15.3%	17	14.8%	24	14.7%
Nashville	69	17.3%	384	16.6%	20	17.3%	29	17.7%
Tri-Cities	5	1.2%	27	1.2%	1	1.0%	2	1.2%
Veneer, Plywood, & Engineered Wood Products Manufacturing:								
State ^c	226		975		43		59	
Chattanooga	78	34.6%	226	23.2%	12	27.6%	21	36.0%
Knoxville	30	13.2%	179	18.3%	7	17.2%	8	13.0%
Memphis	17	7.6%	93	9.5%	3	8.2%	4	6.7%
Nashville	89	39.2%	400	41.0%	18	41.3%	23	39.8%
Tri-Cities	12	5.4%	77	7.9%	2	5.7%	3	4.4%

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

^cState totals may not add due to rounding.

^dValues of 0 are nonzero values that are less than 1.

Region had large output values for wood windows and doors and millwork. The Knoxville Region had the largest output value for manufactured home manufacturing. The Chattanooga Region has the largest output value for furniture and related product manufacturing. The Tri-Cities Region had strong economic activity in paper manufacturing and wood windows and doors and millwork.

Estimated Total Economic Impacts of Agriculture and Forestry:

The estimated total economic impacts of agriculture and forestry included not only the direct impacts from the industry, but also the impacts the industry had on input supplying industries (indirect

impacts) and on expenditures by households and other institutions (induced impacts). The total economic impacts from agriculture and forestry included direct, indirect, and induced impacts. Table 14 indicates values for total industry output, employment, labor income, and value added resulting from agriculture and forestry, including each of these impacts. Agriculture and forestry contributed an

Table 14. Estimated Total Economic Impacts from Agriculture and Forestry

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Agriculture & Forestry:								
State	74,818		349,398		14,738		27,098	
Chattanooga	8,844	11.8%	42,746	12.2%	1,864	12.6%	3,130	11.6%
Knoxville	9,693	13.0%	50,319	14.4%	1,995	13.5%	3,428	12.6%
Memphis	29,151	39.0%	103,549	29.6%	5,287	35.9%	9,847	36.3%
Nashville	21,434	28.6%	119,247	34.1%	4,324	29.3%	8,587	31.7%
Tri-Cities	3,576	4.8%	20,648	5.9%	601	4.1%	1,130	4.2%
Intrastate Trade	2,120	2.8%	12,889	3.7%	666	4.5%	977	3.6%
Primary & Secondary Agriculture:								
State	52,616		253,884		9,226		18,497	
Chattanooga	5,726	10.9%	29,539	11.6%	1,176	12.7%	2,047	11.1%
Knoxville	7,126	13.5%	36,532	14.4%	1,305	14.1%	2,433	13.2%
Memphis	19,435	36.9%	69,180	27.2%	2,938	31.8%	5,989	32.4%
Nashville	16,849	32.0%	95,102	37.5%	3,087	33.5%	6,816	36.8%
Tri-Cities	2,284	4.3%	15,493	6.1%	360	3.9%	718	3.9%
Intrastate Trade	1,196	2.3%	8,038	3.2%	360	3.9%	495	2.7%
Primary Agriculture:								
State	6,936		109,232		1,322		2,981	
Chattanooga	537	7.7%	7,796	7.1%	79	5.9%	241	8.1%
Knoxville	503	7.3%	13,659	12.5%	125	9.4%	263	8.8%
Memphis	2,727	39.3%	27,216	24.9%	506	38.3%	996	33.4%
Nashville	2,750	39.6%	48,718	44.6%	525	39.7%	1,286	43.2%
Tri-Cities	350	5.0%	9,312	8.5%	53	4.0%	174	5.8%
Intrastate Trade	70	1.0%	2,531	2.3%	34	2.6%	20	0.7%
Secondary Agriculture:								
State	45,680		144,652		7,904		15,517	
Chattanooga	5,189	11.4%	21,742	15.0%	1,097	13.9%	1,806	11.6%
Knoxville	6,622	14.5%	22,873	15.8%	1,180	14.9%	2,169	14.0%
Memphis	16,708	36.6%	41,965	29.0%	2,432	30.8%	4,993	32.2%
Nashville	14,100	30.9%	46,384	32.1%	2,562	32.4%	5,529	35.6%
Tri-Cities	1,934	4.2%	6,181	4.3%	307	3.9%	544	3.5%
Intrastate Trade	1,127	2.5%	5,507	3.8%	325	4.1%	476	3.1%
Primary & Secondary Forestry:								
State	22,202		95,514		5,512		8,601	
Chattanooga	3,118	14.0%	13,207	13.8%	688	12.5%	1,083	12.6%
Knoxville	2,567	11.6%	13,788	14.4%	690	12.5%	995	11.6%
Memphis	9,717	43.8%	34,369	36.0%	2,349	42.6%	3,858	44.9%
Nashville	4,585	20.7%	24,144	25.3%	1,237	22.4%	1,771	20.6%
Tri-Cities	1,292	5.8%	5,155	5.4%	241	4.4%	412	4.8%

Table 14. Estimated Total Economic Impacts from Agriculture and Forestry (Cont.)

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Intrastate Trade	923	4.2%	4,851	5.1%	307	5.6%	481	5.6%
Primary Forestry:								
State	11,015		40,211		2,689		4,470	
Chattanooga	1,336	12.1%	4,211	10.5%	276	10.3%	501	11.2%
Knoxville	399	3.6%	1,977	4.9%	108	4.0%	164	3.7%
Memphis	7,094	64.4%	22,848	56.8%	1,740	64.7%	2,894	64.7%
Nashville	1,165	10.6%	6,814	16.9%	318	11.8%	470	10.5%
Tri-Cities	516	4.7%	1,689	4.2%	86	3.2%	174	3.9%
Intrastate Trade	505	4.6%	2,672	6.6%	160	5.9%	268	6.0%
Secondary Forestry:								
State	11,187		55,303		2,823		4,131	
Chattanooga	1,782	15.9%	8,997	16.3%	412	14.6%	582	14.1%
Knoxville	2,168	19.4%	11,810	21.4%	582	20.6%	831	20.1%
Memphis	2,623	23.4%	11,520	20.8%	609	21.6%	964	23.3%
Nashville	3,419	30.6%	17,331	31.3%	920	32.6%	1,302	31.5%
Tri-Cities	776	6.9%	3,466	6.3%	154	5.5%	238	5.8%
Intrastate Trade	418	3.7%	2,180	3.9%	147	5.2%	213	5.2%

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

estimated value of \$74.8 billion to Tennessee’s \$582.5 billion economy in 2013. An estimated 70.3 percent of the total economic impacts came from primary and secondary agriculture, while forest operations and forest products contributed about 29.7 percent. Employment in both agriculture and forestry totaled over 349 thousand workers. Of that value, 72.7 percent were affiliated with primary and secondary agriculture production, with 27.3 percent from primary and secondary forest products production. Intrastate trade represented values purchased or imported from outside the regions but within the state. A more detailed total impact presentation of output, employment, labor income, and value added by sub-sector is shown in Appendix E.

Primary Agriculture Products Total Impacts:

Figures 18 through 23 depict the estimated direct, indirect, and induced impacts for some of Tennessee’s top agricultural commodities from farm production (oilseeds; grains; vegetables and melons; greenhouse, nursery, and floriculture production; tobacco; cotton; all other crops (primarily hay/seeds); beef cattle; dairy cattle and milk production; poultry and egg production; and animal production, except cattle, poultry, and eggs). The top five indirect and induced sectors based on output value are also listed. Using oilseed farming as an example, which has direct sales of \$895.1 million, the indirect economic impacts caused by input supplying industries are \$187.3 million (15.9 percent) and

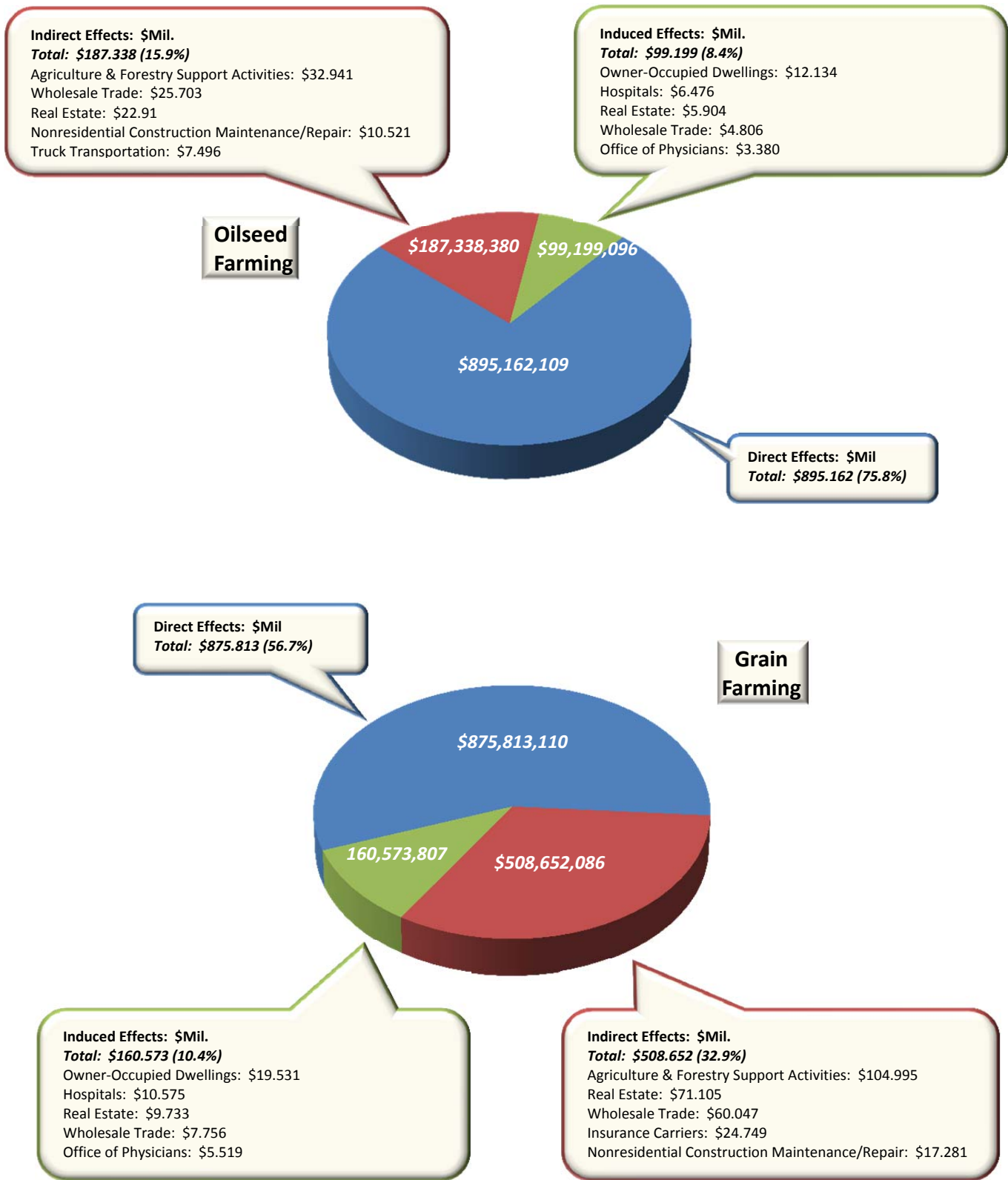


Figure 18. Estimated Direct, Indirect, and Induced Impacts for Oilseed Farming and Grain Farming.

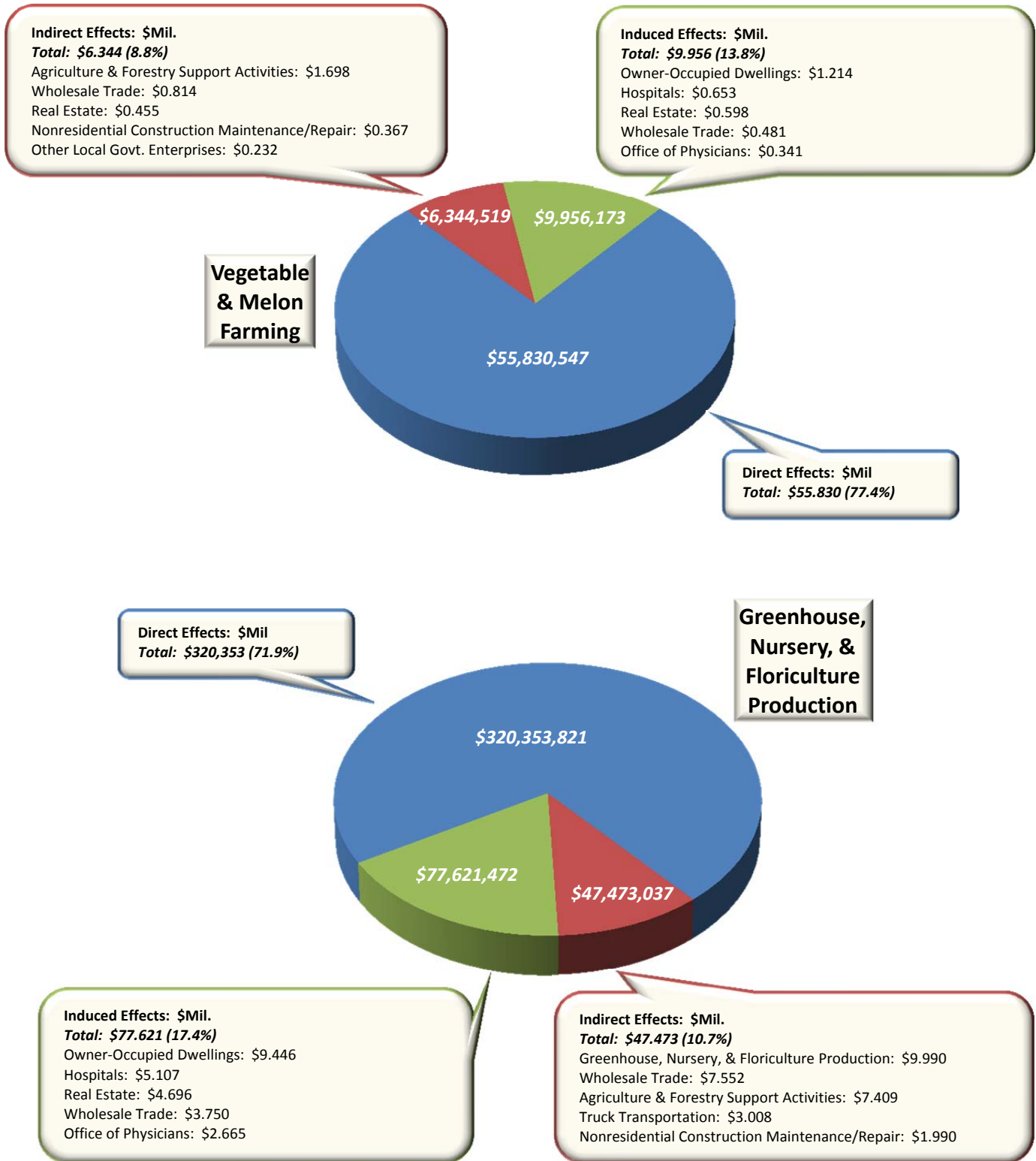


Figure 19. Estimated Direct, Indirect, and Induced Impacts for Vegetable & Melon Farming and Greenhouse, Nursery, & Floriculture Production.

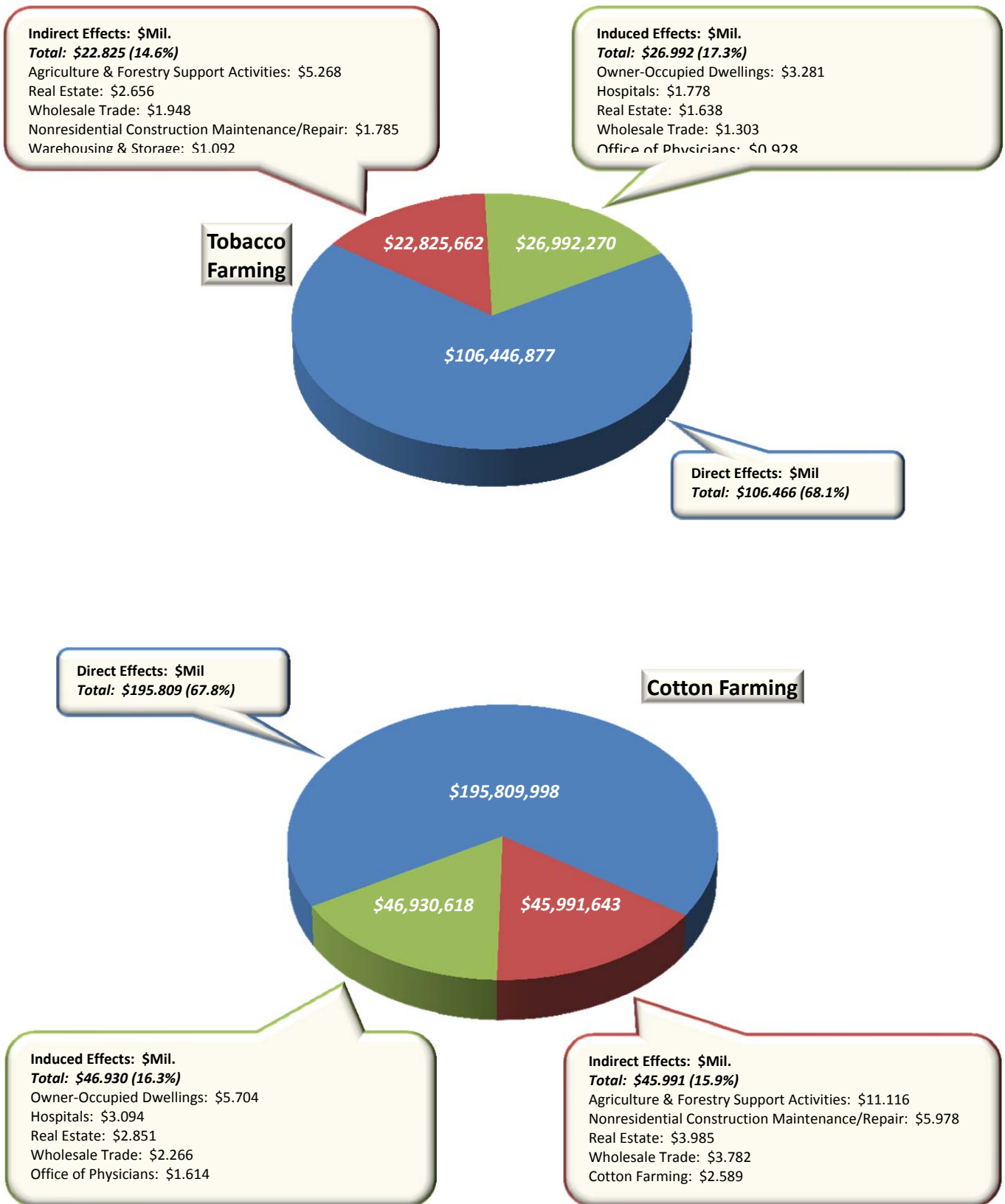


Figure 20. Estimated Direct, Indirect, and Induced Impacts for Tobacco Farming and Cotton Farming.

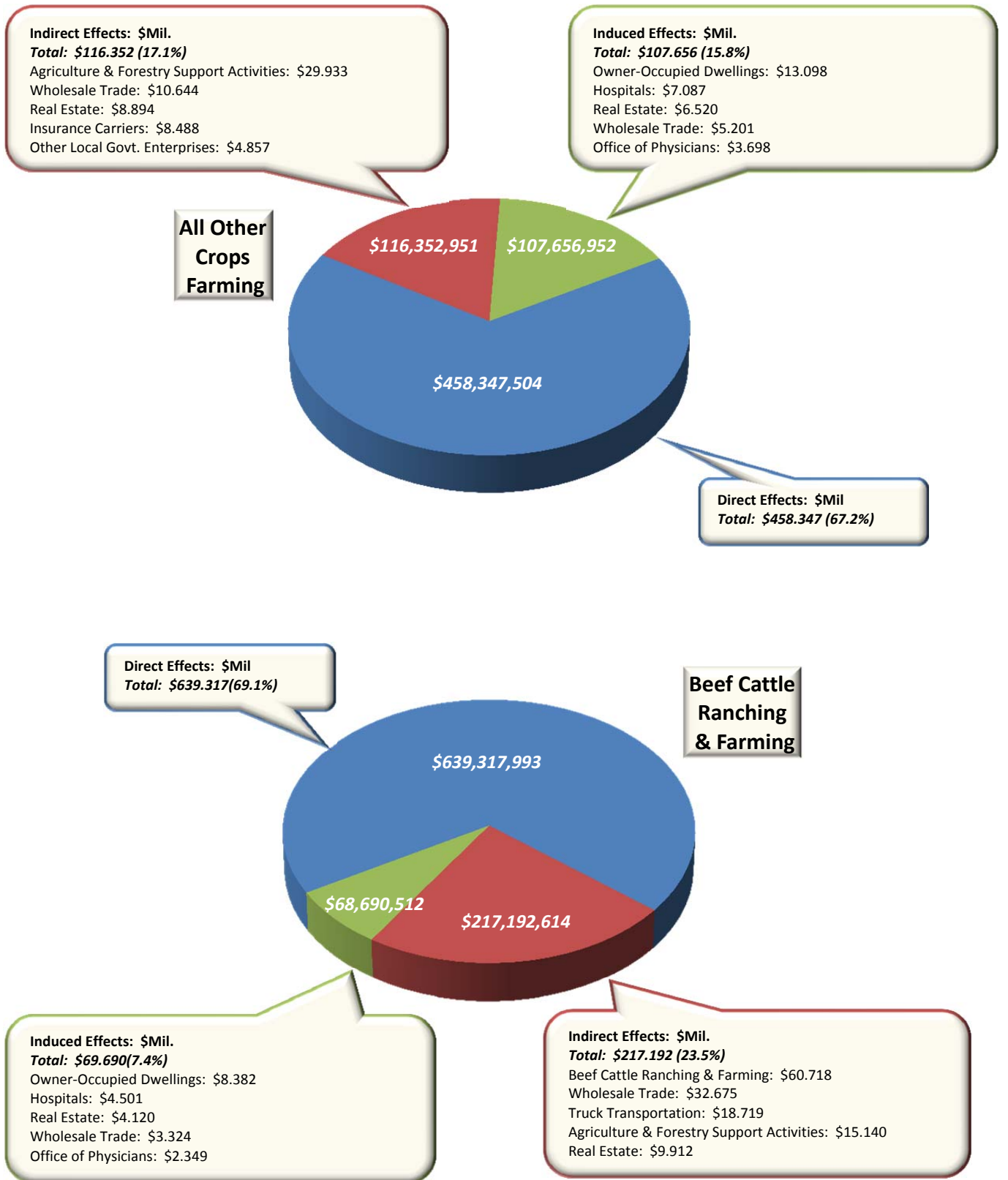


Figure 21. Estimated Direct, Indirect, and Induced Impacts for All Other Crops Farming and Cattle Ranching & Farming.

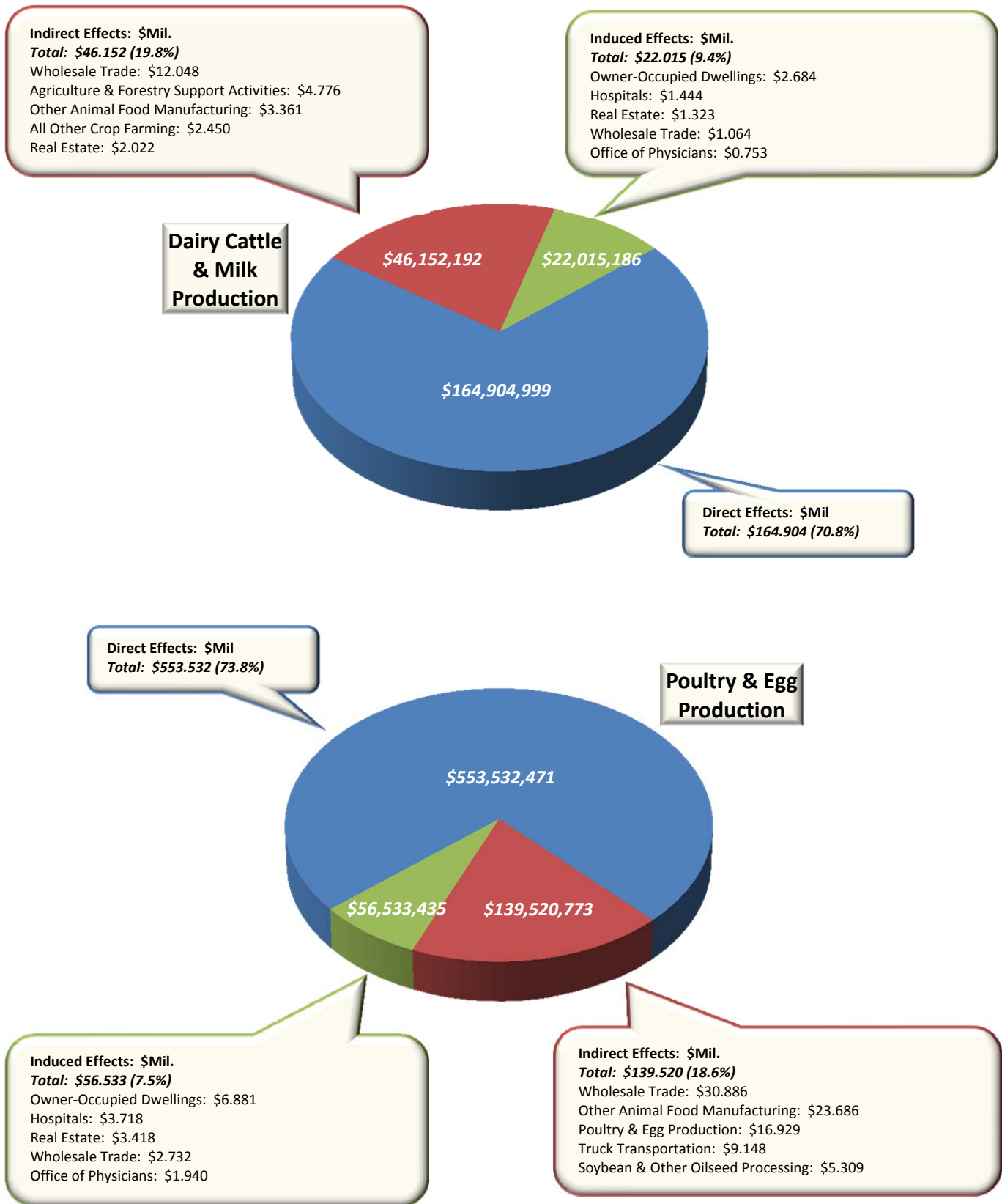


Figure 22. Estimated Direct, Indirect, and Induced Impacts for Dairy Cattle & Milk Production and Poultry & Egg Production.

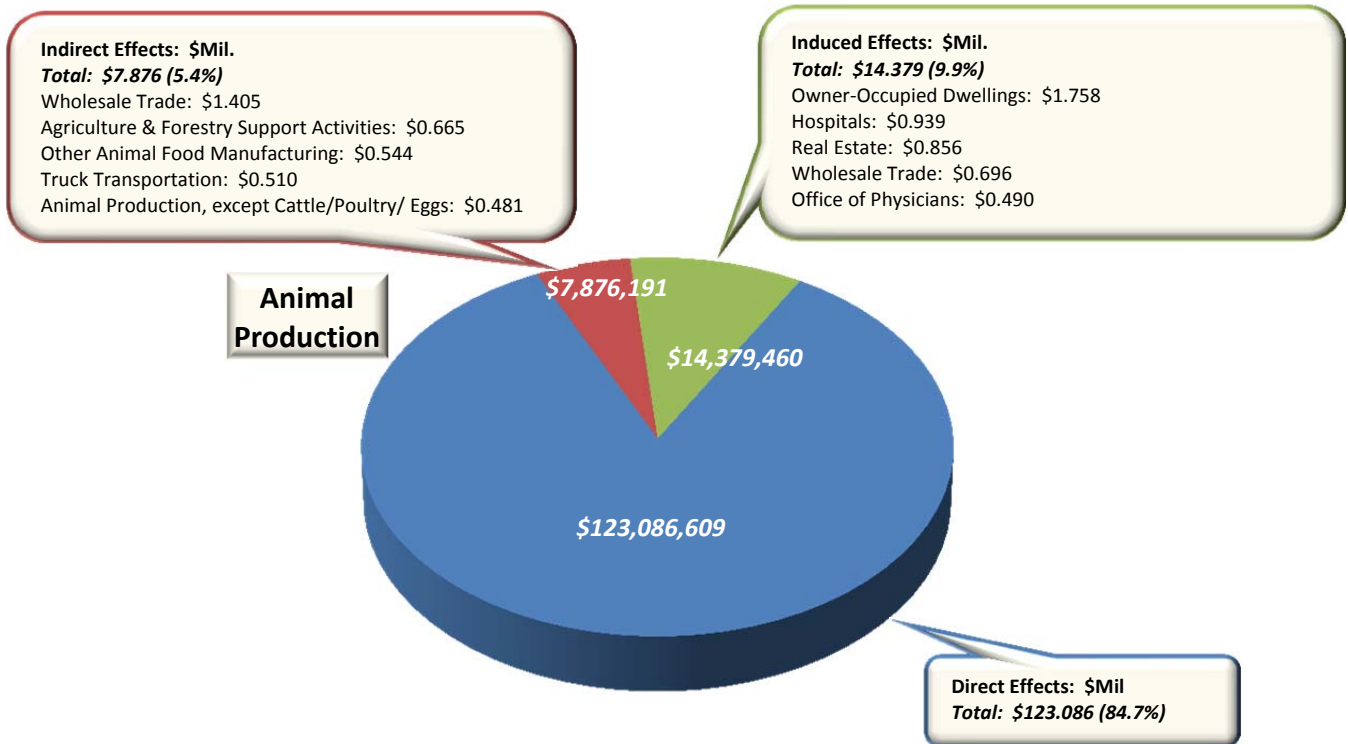


Figure 23. Estimated Direct, Indirect, and Induced Impacts for Animal Production, except Cattle, Poultry, & Eggs.

the induced impacts (expenditures by households are \$99.2 million (8.4 percent)). The top five sectors most impacted from the indirect impact in descending order included agriculture and forestry support activities; wholesale trade, real estate, nonresidential construction maintenance and repair, and truck transportation. Likewise, from household expenditures (induced impacts) the sectors most impacted in descending order based on output value included owner-occupied dwellings, hospitals, real estate, wholesale trade, and offices of physicians.

Secondary Agriculture Products Total Impacts:

For secondary agricultural products and for all indicators calculated (output, employment, labor income, and value added), food manufacturing contributed the greatest total economic impact values (Table 15). The Memphis Region exhibited the largest economic activity (primarily from grain and oilseed milling (*soybean and other oilseed processing, fats and oils refining and blending, and breakfast cereal manufacturing*), animal slaughtering and processing (*animal, except poultry, slaughtering*), other foods (*other snack food manufacturing*), followed by the Nashville Region (primarily from animal slaughtering and processing (*poultry processing*), bakeries and tortillas (*cookie and cracker manufacturing*), and other foods (*other snack food manufacturing*). The Nashville Region also produced the largest output values for beverage manufacturing (*primarily from distilleries and bottled and canned soft drinks and water*), tobacco products, apparel manufacturing (*men and boys cut and sew apparel manufacturing*), and textile product mills (*rope, cordage, twine, tire cord and tire fabric mills*). The

Table 15. Estimated Total Economic Impacts from Secondary Agricultural Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Total Secondary Agricultural Products:								
State	45,680		144,652		7,904		15,517	
Chattanooga	5,189	11.4%	21,742	15.0%	1,097	13.9%	1,806	11.6%
Knoxville	6,622	14.5%	22,873	15.8%	1,180	14.9%	2,169	14.0%
Memphis	16,708	36.6%	41,965	29.0%	2,432	30.8%	4,993	32.2%
Nashville	14,100	30.9%	46,384	32.1%	2,562	32.4%	5,529	35.6%
Tri-Cities	1,934	4.2%	6,181	4.3%	307	3.9%	544	3.5%
Intrastate Trade	1,127	2.5%	5,507	3.8%	325	4.1%	476	3.1%
Food Manufacturing:								
State	30,645		95,858		5,200		9,470	
Chattanooga	3,547	11.6%	14,674	15.3%	770	14.8%	1,287	13.6%
Knoxville	4,533	14.8%	14,777	15.4%	752	14.5%	1,363	14.4%
Memphis	12,890	42.1%	31,156	32.5%	1,828	35.1%	3,538	37.4%
Nashville	8,298	27.1%	29,670	31.0%	1,547	29.7%	2,792	29.5%
Tri-Cities	716	2.3%	2,161	2.3%	114	2.2%	191	2.0%
Intrastate Trade	661	2.2%	3,421	3.6%	190	3.7%	298	3.1%
Beverage Manufacturing:								
State	5,646		15,554		883		2,048	
Chattanooga	672	11.9%	1,857	11.9%	108	12.2%	203	9.9%
Knoxville	1,261	22.3%	3,444	22.1%	175	19.8%	449	21.9%
Memphis	1,265	22.4%	3,574	23.0%	199	22.5%	384	18.8%
Nashville	1,940	34.4%	5,042	32.4%	308	34.9%	839	41.0%
Tri-Cities	340	6.0%	892	5.7%	43	4.9%	92	4.5%
Intrastate Trade	168	3.0%	744	4.8%	50	5.7%	80	3.9%
Tobacco Products:								
State	3,440		5,901		375		1,802	
Chattanooga	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Knoxville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Memphis	944	27.5%	1,506	25.5%	98	26.2%	499	27.7%
Nashville	2,527	73.5%	4,424	75.0%	294	78.3%	1,346	74.7%
Tri-Cities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Intrastate Trade	-31	-0.9%	-29	-0.5%	-17	-4.5%	-43	-2.4%
Textile Mills:								
State	1,757		7,191		387		543	
Chattanooga	397	22.6%	1,617	22.5%	69	17.9%	96	17.6%
Knoxville	129	7.3%	662	9.2%	28	7.3%	41	7.5%
Memphis	183	10.4%	765	10.6%	41	10.6%	54	9.9%
Nashville	428	24.4%	1,691	23.5%	108	28.0%	152	28.1%
Tri-Cities	452	25.7%	1,808	25.1%	91	23.4%	127	23.5%
Intrastate Trade	168	9.6%	648	9.0%	49	12.8%	73	13.4%
Agricultural Chemicals:								
State	1,063		2,571		170		433	
Chattanooga	22	2.1%	49	1.9%	3	1.6%	9	2.1%
Knoxville	190	17.9%	595	23.1%	33	19.5%	73	16.8%
Memphis	649	61.1%	1,462	56.8%	105	61.8%	264	60.9%

Table 15. Estimated Total Economic Impacts from Secondary Agricultural Products (Cont.)

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Nashville	28	2.7%	85	3.3%	5	3.1%	12	2.7%
Tri-Cities	140	13.2%	281	10.9%	15	8.6%	54	12.4%
Intrastate Trade	32	3.0%	100	3.9%	9	5.4%	22	5.1%
Agricultural Machinery:								
State	993		3,129		159		291	
Chattanooga	165	16.6%	472	15.1%	27	17.1%	58	19.9%
Knoxville	8	0.8%	24	0.8%	1	0.7%	3	0.9%
Memphis	503	50.7%	1,572	50.2%	78	49.2%	147	50.4%
Nashville	34	3.5%	106	3.4%	6	3.9%	13	4.3%
Tri-Cities	253	25.5%	760	24.3%	33	21.1%	67	22.9%
Intrastate Trade	30	3.0%	195	6.2%	13	8.1%	5	1.6%
Textile Product Mills:								
State	953		5,993		271		365	
Chattanooga	220	23.1%	1,621	27.0%	67	24.8%	86	23.6%
Knoxville	175	18.4%	1,350	22.5%	52	19.4%	70	19.2%
Memphis	125	13.1%	714	11.9%	36	13.4%	50	13.6%
Nashville	344	36.1%	1,897	31.7%	90	33.4%	126	34.4%
Tri-Cities	18	1.9%	146	2.4%	5	2.0%	7	1.9%
Intrastate Trade	71	7.4%	265	4.4%	19	7.1%	27	7.3%
Apparel Manufacturing:								
State	642		5,444		243		301	
Chattanooga	152	23.7%	1,332	24.5%	50	20.4%	63	20.8%
Knoxville	62	9.6%	588	10.8%	19	7.6%	24	8.0%
Memphis	79	12.3%	794	14.6%	31	12.8%	36	12.0%
Nashville	320	49.8%	2,487	45.7%	133	54.6%	164	54.4%
Tri-Cities	11	1.7%	111	2.0%	4	1.6%	5	1.5%
Intrastate Trade	19	2.9%	132	2.4%	7	2.9%	10	3.2%
Leather & Allied Product Manufacturing:								
State	539		3,010		216		264	
Chattanooga	13	2.4%	120	4.0%	4	1.8%	4	1.5%
Knoxville	265	49.2%	1,435	47.7%	121	55.7%	146	55.2%
Memphis	69	12.7%	421	14.0%	16	7.3%	21	8.0%
Nashville	179	33.2%	981	32.6%	70	32.3%	86	32.6%
Tri-Cities	4	0.8%	22	0.7%	2	1.0%	2	0.9%
Intrastate Trade	9	1.8%	31	1.0%	4	1.9%	5	1.7%

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

^cValues of 0 are nonzero values that are less than 1.

Memphis Region had the largest output values for agricultural chemicals (*pesticides and other agricultural chemicals*) and agricultural machinery (*lawn and garden equipment*). Leather and allied product manufacturing (*footwear manufacturing*), textile product mills (*other textile product mills*), agricultural chemicals (*lime manufacturing*), beverage manufacturing (*bottle and canned soft drinks and*

water and distilleries), and food manufacturing (primarily from grain and oilseed milling (*wet corn milling*), fruit and vegetable preserving and specialty foods (*canned fruits and vegetables manufacturing*), animal slaughtering and processing, and other foods (*coffee and tea manufacturing*) are important industries for the Knoxville Region. The Chattanooga Region had significant economic activity for animal slaughtering and processing (*poultry processing*), bakeries and tortillas (*cookie and cracker manufacturing*), textile product mills (*hosiery and sock mills*), apparel manufacturing (*men's and boy's cut and sew apparel manufacturing*), and textile mills (*fiber, yarn, and thread mills*). Textile mills (*fabric coating mills; fiber, yard, and thread mills; and nonwoven fabric mills*), agricultural machinery (*lawn and garden equipment manufacturing*), and agricultural chemicals (*pesticide and other agricultural chemical manufacturing*) are important industries in the Tri-Cities Region.

Primary Forest Products Total Impacts:

Figures 24 and 25 show the estimated direct, indirect, and induced impacts for sawmills and commercial logging. The top five indirect and induced sectors based on output value are also listed. Paper mills contributed the largest values for all the indicators analyzed compared to the other primary forest products sectors (Table 16). The Memphis Region dominated all value indicators for this sector, with the Chattanooga Region having the next largest values. The Memphis Region also had the largest

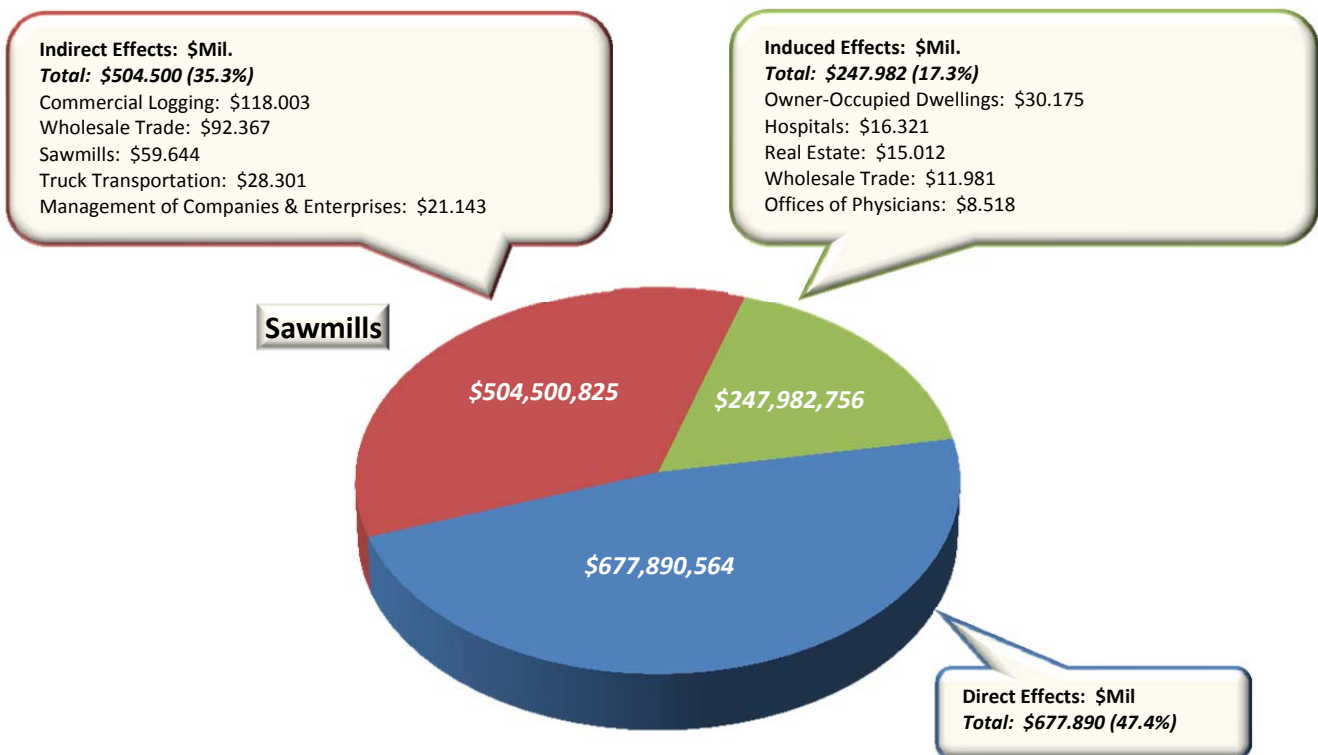


Figure 24. Estimated Direct, Indirect, and Induced Impacts for Sawmills.

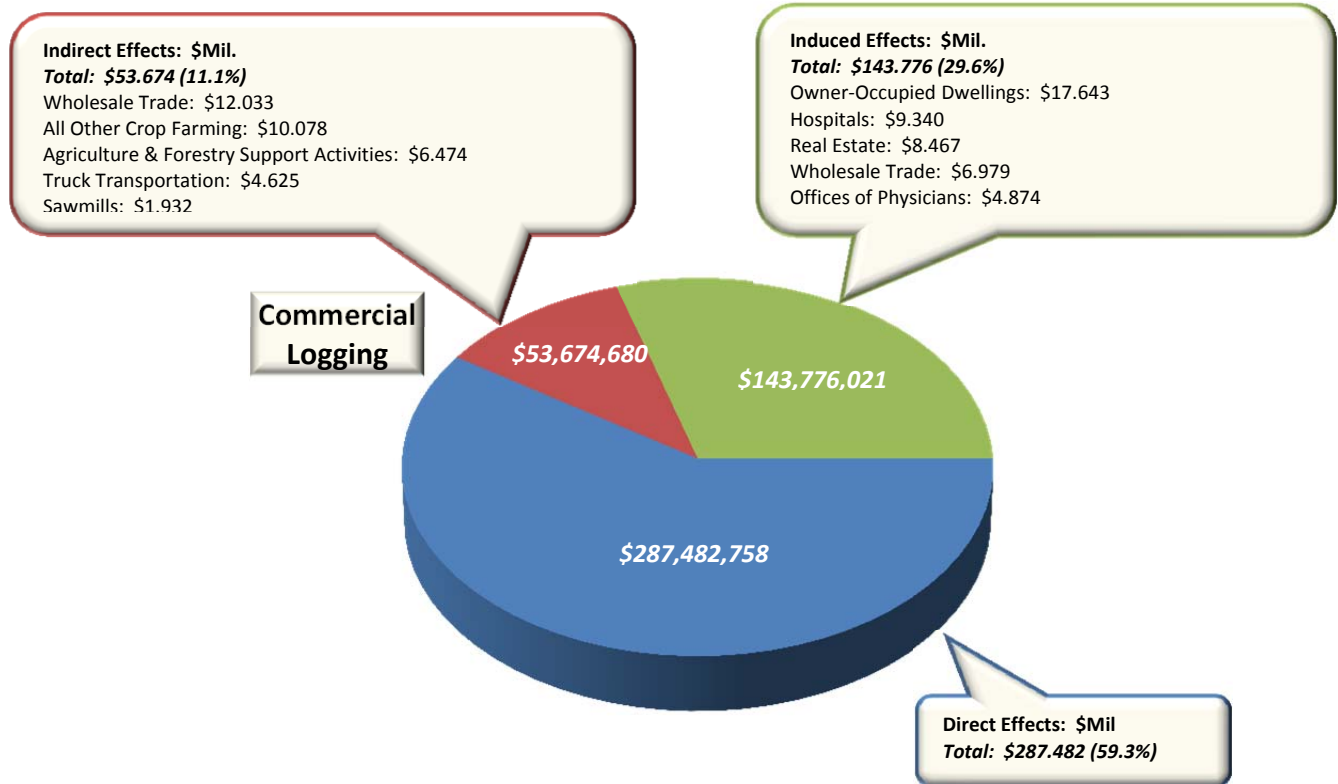


Figure 25. Estimated Direct, Indirect, and Induced Impacts for Commercial Logging.

values for paperboard mills; pulp mills; and forestry, forest products, and timber tract production. The Nashville Region had the largest output values for sawmills and commercial logging. The Chattanooga Region had the largest output value for sawmills, woodworking, and paper machinery, whereas the Tri-Cities Region had the largest economic activity for wood preservation. For all the primary forest products indicators, the largest output value for the Knoxville Region came from sawmills; sawmills, woodworking, and paper machinery; and forestry, forest products, and timber tract production.

Table 16. Estimated Total Economic Impacts from Primary Forest Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Total Primary Forest Products:								
State	11,015		40,211		2,689		4,470	
Chattanooga	1,336	12.1%	4,207	10.5%	276	10.3%	501	11.2%
Knoxville	399	3.6%	1,576	3.9%	73	2.7%	107	2.4%
Memphis	7,094	64.4%	22,848	56.8%	1,740	64.7%	2,894	64.7%
Nashville	1,165	10.6%	6,814	16.9%	318	11.8%	470	10.5%
Tri-Cities	516	4.7%	1,689	4.2%	86	3.2%	174	3.9%
Intrastate Trade	505	4.6%	3,076	7.7%	195	7.3%	325	7.3%

Table 16. Estimated Total Economic Impacts from Primary Forest Products (Cont.)

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Paper Mills:								
State	7,063		21,557		1,642		2,872	
Chattanooga	843	11.9%	2,354	10.9%	155	9.4%	306	10.7%
Knoxville	127	1.8%	0 ^c	0.0%	0 ^c	0.0%	0 ^c	0.0%
Memphis	5,079	71.9%	14,922	69.2%	1,220	74.3%	2,079	72.4%
Nashville	246	3.5%	742	3.4%	49	3.0%	94	3.3%
Tri-Cities	398	5.6%	1,073	5.0%	63	3.9%	136	4.7%
Intrastate Trade	370	5.2%	2,466	11.4%	155	9.4%	257	9.0%
Paperboard Mills:								
State	1,583		5,096		374		636	
Chattanooga	221	14.0%	667	13.1%	61	16.2%	96	15.0%
Knoxville	57	3.6%	190	3.7%	17	4.6%	26	4.1%
Memphis	1,225	77.4%	3,769	74.0%	271	72.4%	470	73.9%
Nashville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tri-Cities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Intrastate Trade	80	5.1%	469	9.2%	25	6.7%	44	6.9%
Sawmills:								
State	1,232		6,406		290		426	
Chattanooga	24	1.9%	123	1.9%	5	1.8%	8	1.8%
Knoxville	160	13.0%	844	13.2%	37	12.8%	55	13.0%
Memphis	326	26.5%	1,675	26.1%	76	26.1%	110	25.9%
Nashville	678	55.1%	3,521	55.0%	165	56.9%	241	56.7%
Tri-Cities	39	3.2%	207	3.2%	7	2.5%	11	2.6%
Intrastate Trade	4	0.3%	37	0.6%	0 ^c	-0.1%	0 ^c	0.1%
Pulp Mills:								
State	490		1,615		122		195	
Chattanooga	179	36.5%	531	32.9%	28	23.2%	56	28.7%
Knoxville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Memphis	271	55.3%	862	53.4%	81	66.5%	119	60.8%
Nashville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tri-Cities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Intrastate Trade	40	8.2%	222	13.7%	13	10.3%	20	10.5%
Commercial Logging:								
State	470		4,648		216		274	
Chattanooga	34	7.3%	359	7.7%	16	7.6%	21	7.6%
Knoxville	33	7.1%	422	9.1%	13	6.1%	17	6.3%
Memphis	173	36.8%	1,518	32.6%	86	40.0%	106	38.8%
Nashville	226	48.1%	2,439	52.5%	100	46.4%	129	47.0%
Tri-Cities	11	2.3%	131	2.8%	5	2.1%	6	2.2%
Intrastate Trade	-7	-1.6%	-220	-4.7%	-5	-2.2%	-5	-1.8%
Wood Preservation:								
State	99		405		19		33	
Chattanooga	9	9.1%	34	8.4%	2	8.9%	3	8.9%
Knoxville	7	6.8%	28	7.0%	1	5.7%	2	6.3%
Memphis	6	6.3%	25	6.1%	1	6.2%	2	6.2%

Table 16. Estimated Total Economic Impacts from Primary Forest Products (Cont.)

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Nashville	4	3.7%	15	3.7%	1	3.9%	1	3.8%
Tri-Cities	58	58.7%	222	54.8%	9	45.5%	17	50.5%
Intrastate Trade	15	15.5%	81	20.0%	6	29.8%	8	24.3%
Sawmills, Woodworking, & Paper Machinery:								
State	64		341		21		28	
Chattanooga	27	41.8%	140	40.9%	9	42.7%	12	42.0%
Knoxville	12	18.6%	65	19.0%	4	17.8%	5	18.1%
Memphis	6	9.3%	31	9.0%	2	10.6%	3	10.1%
Nashville	6	9.9%	35	10.3%	2	8.4%	2	8.8%
Tri-Cities	9	13.5%	48	14.0%	2	11.4%	3	11.7%
Intrastate Trade	4	6.8%	24	6.9%	2	9.0%	3	9.3%
Forestry, Forest Products, & Timber Tract Production:								
State	14		142		5		7	
Chattanooga	0 ^c	2.2%	0 ^c	0.0%	0 ^c	0.0%	0 ^c	0.0%
Knoxville	2	17.1%	27	18.8%	1	9.5%	1	19.1%
Memphis	7	51.8%	47	33.4%	3	56.4%	5	67.6%
Nashville	5	36.7%	62	43.6%	2	32.0%	2	32.3%
Tri-Cities	1	8.1%	9	6.4%	0 ^c	0.0%	1	10.8%
Intrastate Trade	-2	-15.8%	-3	-2.2%	0 ^c	2.1%	-2	-29.8%

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses

^cValues of 0 are nonzero values that are less than 1.

Secondary Forest Products Total Impacts:

Paper manufacturing and furniture and related product manufacturing were the largest contributors for all indicators for secondary forest products (Table 17). The Memphis and Nashville Regions had the largest output values for paper manufacturing (for Memphis, primarily from paperboard containers and other converted paper products (*sanitary paper product manufacturing*); for Nashville, from paperboard containers); however, for employment, labor income, and total value added, the Nashville Region had the largest values. For furniture, the Nashville (primarily from office furniture (showcase, partition, shelving, and locker manufacturing) and other furniture related products (mattress manufacturing), Chattanooga (primarily household and institutional furniture (*upholstered household furniture manufacturing*), and Knoxville Regions (primarily from household and institutional furniture (*upholstered household furniture manufacturing*) were the leaders. The Knoxville Region had the largest output values for manufactured home manufacturing. For wood windows and doors and millwork, the Memphis Region had the largest value followed by the Nashville and Knoxville Regions. The Nashville Region also had the largest economic activity for other woods products manufacturing (primarily all

Table 17. Estimated Total Economic Impacts from Secondary Forest Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Total Secondary Forest Products:								
State	11,187		55,303		2,823		4,131	
Chattanooga	1,782	15.9%	8,997	16.3%	412	14.6%	582	14.1%
Knoxville	2,168	19.4%	11,810	21.4%	582	20.6%	831	20.1%
Memphis	2,623	23.4%	11,520	20.8%	609	21.6%	964	23.3%
Nashville	3,419	30.6%	17,331	31.3%	920	32.6%	1,302	31.5%
Tri-Cities	776	6.9%	3,466	6.3%	154	5.5%	238	5.8%
Intrastate Trade	418	3.7%	2,180	3.9%	147	5.2%	213	5.2%
Paper Manufacturing:								
State	5,853		22,132		1,307		2,020	
Chattanooga	766	13.1%	2,945	13.3%	153	11.7%	229	11.3%
Knoxville	918	15.7%	3,768	17.0%	224	17.1%	327	16.2%
Memphis	1,746	29.8%	5,735	25.9%	345	26.4%	599	29.7%
Nashville	1,669	28.5%	6,630	30.0%	420	32.1%	604	29.9%
Tri-Cities	553	9.4%	1,992	9.0%	94	7.2%	156	7.7%
Intrastate Trade	201	3.4%	1,061	4.8%	71	5.4%	104	5.2%
Furniture & Related Products Manufacturing:								
State	2,407		14,356		667		870	
Chattanooga	715	29.7%	4,312	30.0%	178	26.7%	232	26.7%
Knoxville	572	23.7%	3,591	25.0%	161	24.1%	211	24.3%
Memphis	143	5.9%	940	6.5%	46	6.9%	57	6.6%
Nashville	793	33.0%	4,537	31.6%	221	33.1%	287	33.0%
Tri-Cities	75	3.1%	413	2.9%	20	3.1%	26	2.9%
Intrastate Trade	110	4.6%	564	3.9%	40	6.0%	56	6.5%
Other Wood Products Manufacturing:								
State	1,014		7,378		305		430	
Chattanooga	136	13.4%	998	13.5%	45	14.6%	60	13.8%
Knoxville	73	7.2%	560	7.6%	21	6.8%	29	6.8%
Memphis	248	24.4%	1,845	25.0%	77	25.4%	105	24.5%
Nashville	463	45.7%	3,280	44.5%	136	44.4%	197	45.9%
Tri-Cities	63	6.2%	514	7.0%	17	5.7%	23	5.5%
Intrastate Trade	31	3.1%	180	2.4%	10	3.2%	15	3.5%
Wood Windows & Doors & Millwork:								
State	877		5,319		246		372	
Chattanooga	48	5.4%	265	5.0%	12	5.0%	21	5.6%
Knoxville	132	15.0%	821	15.4%	32	13.0%	53	14.2%
Memphis	367	41.8%	2,246	42.2%	104	42.3%	152	40.8%
Nashville	233	26.5%	1,393	26.2%	68	27.8%	103	27.6%
Tri-Cities	60	6.9%	380	7.1%	16	6.6%	24	6.6%
Intrastate Trade	37	4.3%	213	4.0%	13	5.3%	20	5.3%
Manufactured Homes Manufacturing:								
State	669		4,223		207		305	
Chattanooga	5	0.8%	35	0.8%	1	0.6%	2	0.7%
Knoxville	423	63.3%	2,744	65.0%	130	62.8%	192	63.0%
Memphis	92	13.7%	589	14.0%	28	13.6%	41	13.5%

Table 17. Estimated Total Economic Impacts from Secondary Forest Products (Cont.)

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Nashville	116	17.4%	714	16.9%	37	17.9%	55	18.0%
Tri-Cities	7	1.0%	44	1.0%	2	0.9%	3	1.0%
Intrastate Trade	25	3.8%	96	2.3%	9	4.3%	12	3.8%
Veneer, Plywood, & Engineered Wood Products Manufacturing:								
State	367		1,895		90		134	
Chattanooga	112	30.5%	441	23.2%	22	24.5%	38	28.6%
Knoxville	50	13.7%	327	17.2%	14	15.9%	19	14.2%
Memphis	28	7.6%	164	8.7%	7	8.0%	10	7.3%
Nashville	146	39.7%	776	41.0%	38	42.3%	56	41.4%
Tri-Cities	18	5.0%	122	6.4%	4	4.7%	6	4.2%
Intrastate Trade	13	3.5%	65	3.4%	4	4.6%	6	4.4%

^aTotal Industry Output – annual value of production by industry.

^bTotal Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses.

other miscellaneous wood products manufacturing) and veneer, plywood, and engineered wood products manufacturing. Economic activity for veneer, plywood, and engineered wood product manufacturing was large for the Chattanooga Region. Important secondary forest products industries for the Tri-Cities Region included paper manufacturing (paper bags and coated and treated paper manufacturing), other wood products manufacturing (wood containers and pallet manufacturing), and wood windows and doors and millwork.

The 2013 output and employment multipliers for primary agricultural and forestry activities ranged from 1.18 to 1.92 (highlighted in yellow) for total industrial output and 1.05 to 5.61 for employment (Table 18). For interpretation, if commercial logging increased total industry output by \$1 million, the state's economy would increase by an estimated \$0.68 million overall and for each job created in this same industry an estimated 0.65 additional jobs would be added in other industries. Beef cattle farmers that produce \$1 million of total industry output generated an additional \$0.34 million indirectly through the purchase of inputs and \$0.45 million in total economic activity (purchased inputs plus household spending) within the state.

Table 18. Output and Employment Multipliers for Selected Agriculture and Forestry Sectors

IMPLAN Sector	TIO ^a		Employment	
	Indirect	Indirect & Induced	Indirect	Indirect & Induced
Oilseed farming	1.21	1.32	1.45	1.62
Grain farming	1.58	1.76	1.65	1.79
Vegetable & melon farming	1.11	1.29	1.10	1.20
Fruit farming	1.14	1.37	1.06	1.12
Tree nut farming	1.12	1.34	1.11	1.22

Table 18. Output and Employment Multipliers for Selected Agriculture and Forestry Sectors (Cont.)

IMPLAN Sector	TIO ^a		Employment	
	Indirect	Indirect & Induced	Indirect	Indirect & Induced
Greenhouse, nursery, and floriculture	1.15	1.39	1.10	1.21
Tobacco farming	1.21	1.47	1.12	1.22
Cotton farming	1.23	1.47	1.30	1.51
All other crop farming	1.25	1.49	1.05	1.08
Dairy cattle & milk production	1.27	1.39	1.12	1.16
Beef cattle ranching & farming	1.34	1.45	1.21	1.24
Poultry & egg production	1.25	1.35	1.33	1.53
Animal production, except cattle/poultry/eggs	1.06	1.18 ^b	1.02	1.05 ^b
Commercial hunting & trapping	1.34	1.72	1.16	1.33
Agriculture & forestry support activities	1.10	1.70	1.03	1.19
Commercial logging	1.18	1.68	1.27	1.65
Sawmills	1.54	1.82	1.73	2.25
Wood preservation	1.62	1.86	2.35	3.07
Pulp mills	1.45	1.73	3.42	5.61 ^b
Paper mills	1.38	1.63	2.73	4.50
Paperboard mills	1.46	1.73	3.20	5.19
Forestry, forest products, & timber tracts	1.47	1.92 ^b	2.74	3.35

^aTotal Industry Output – annual value of production by industry.

^bMultipliers highlighted in yellow denote either low or high range for total industrial output and employment.

Figures 23 through 31 show the estimated direct and total level of economic activity derived from agriculture, forestry, and both agriculture and forestry combined by county for Tennessee. These values were based on total industry output and were compared to the total level of economic activity for each county. In this analysis, direct agriculture included crop production and livestock breeding and feeding, whereas direct forestry included the management and logging of trees. Total agriculture included direct agriculture, plus the input supplying industries and agriculture manufacturing. Likewise, total forestry included direct forestry, plus input supplying industries and forestry manufacturing. Lake County in the Memphis Region and Bledsoe County in the Chattanooga Region had the highest level of economic activity for commodity agriculture at 22.5 percent and 9.5 percent, respectively (Table 19); for total agriculture, Moore County in the Nashville Region and Loudon County in the Knoxville Region had the highest level at 81.8 percent and 27.8 percent, respectively. For forestry, Van Buren County in the Nashville Region had the highest level of economic activity at 3.1 percent; for total forestry, Hardin County in the Memphis Region had the highest level at 39.4 percent. Likewise, for both agriculture and forestry combined, Lake County in the Memphis Region (22.5 percent for direct) and Moore County (82.3 percent for total) in the Nashville Region had the largest levels of economic activity.

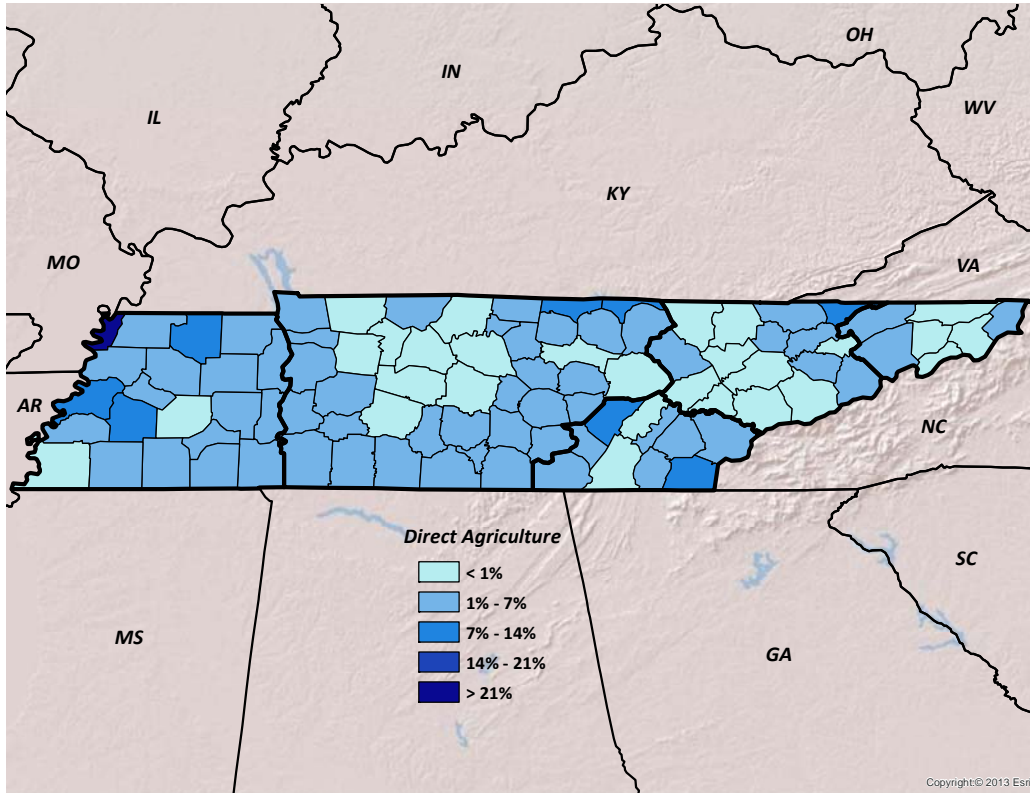


Figure 26. Percent of Economic Activity from Direct Agriculture, 2013
 (Source: IMPLAN Group, LLC, 2013)

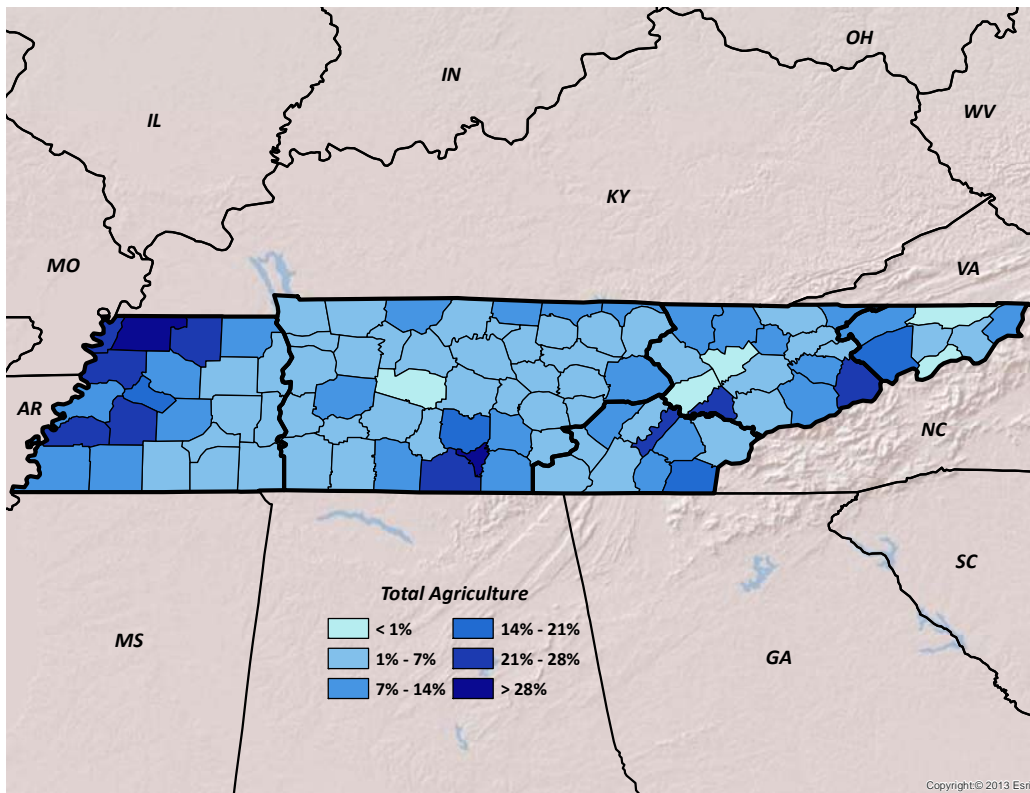


Figure 27. Percent of Economic Activity from Total Agriculture, 2013
 (Source: IMPLAN Group, LLC, 2013)

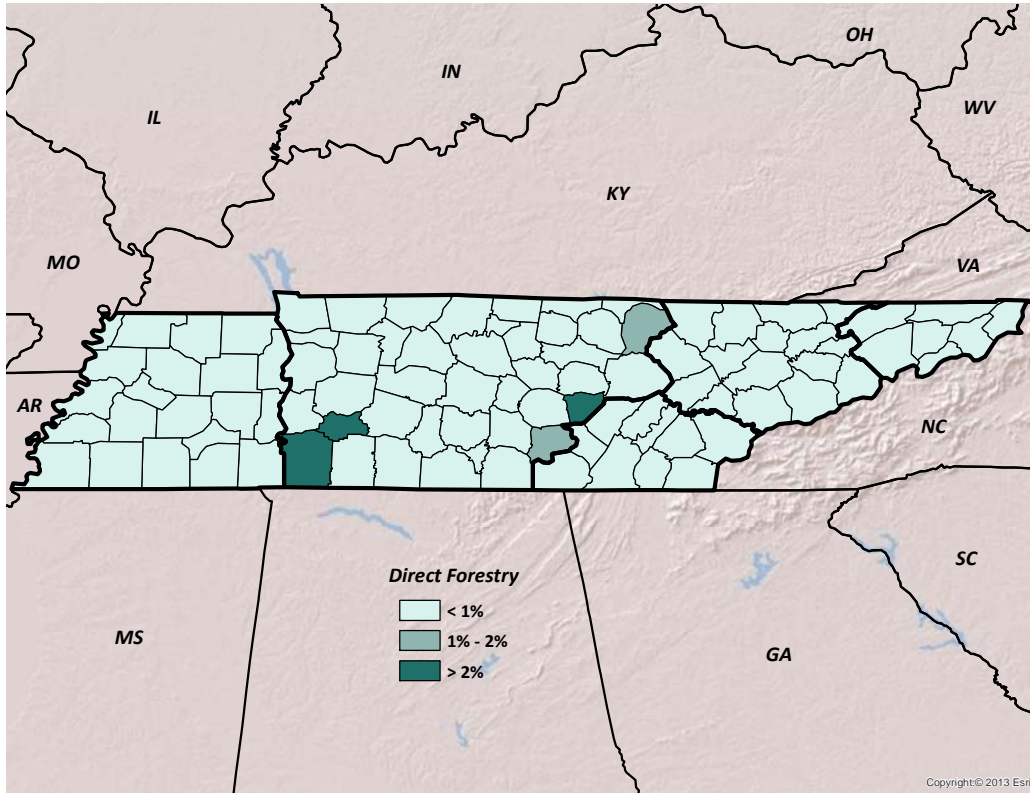


Figure 28. Percent of Economic Activity from Direct Forestry, 2013
 (Source: IMPLAN Group, LLC, 2013)

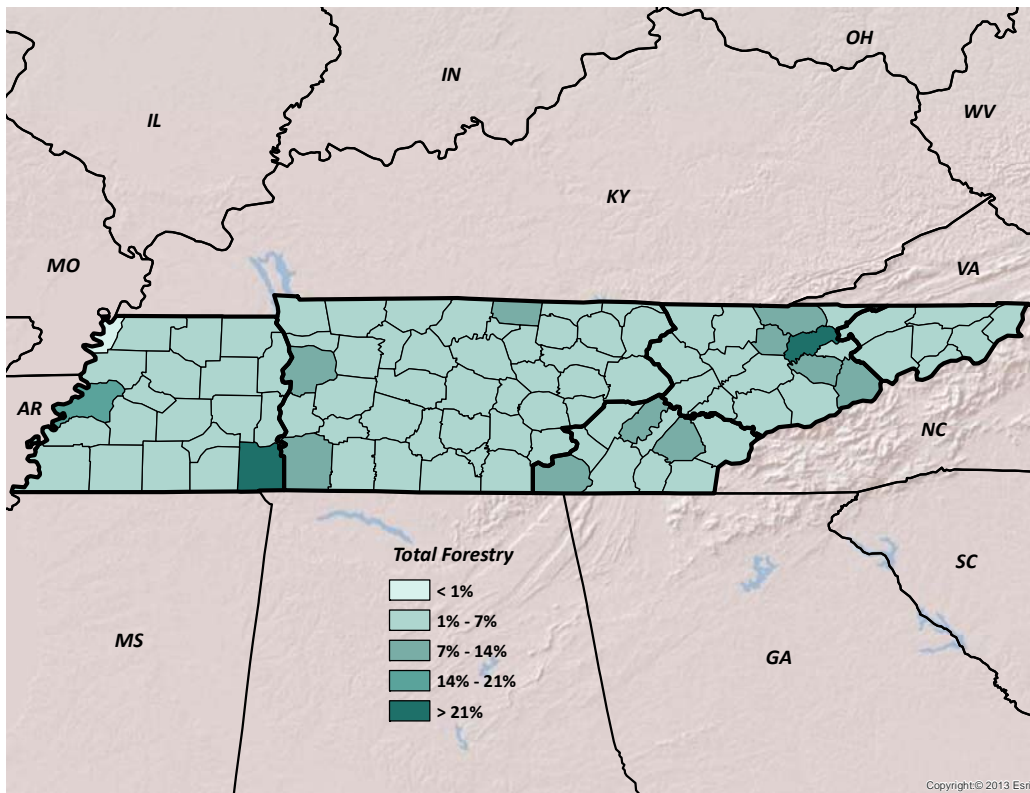


Figure 29. Percent of Economic Activity from Total Forestry, 2013
 (Source: IMPLAN Group, LLC, 2013)

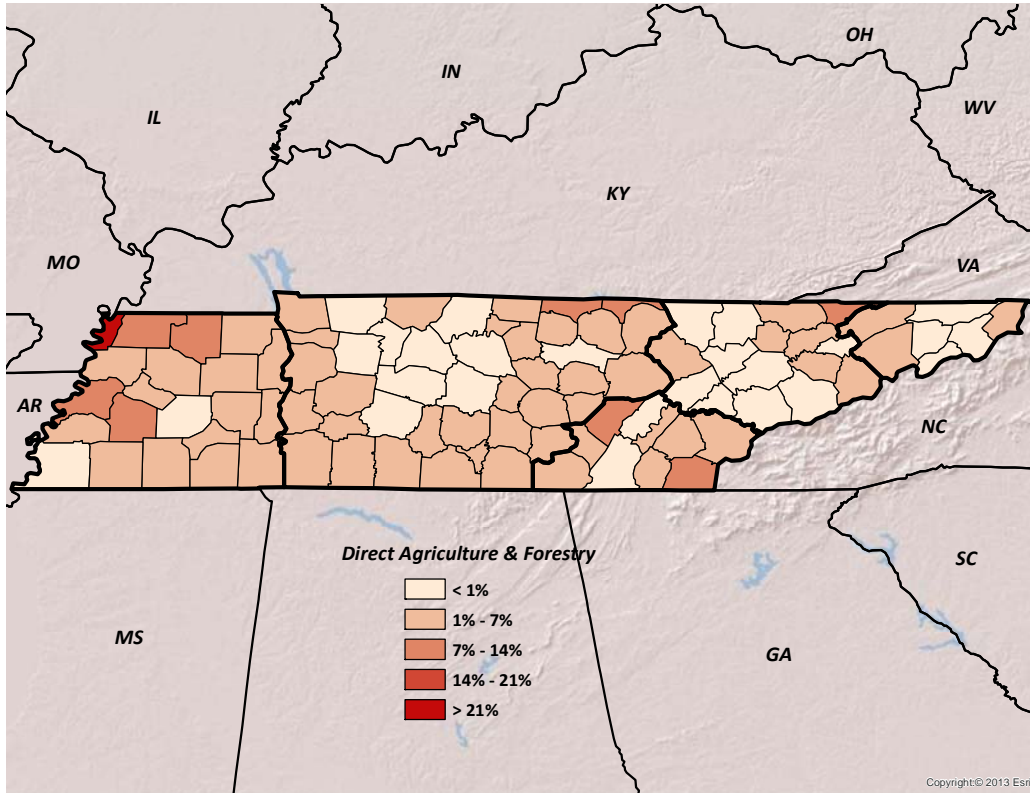


Figure 30. Percent of Economic Activity from Direct Agriculture and Forestry, 2013
 (Source: IMPLAN Group, LLC, 2013)

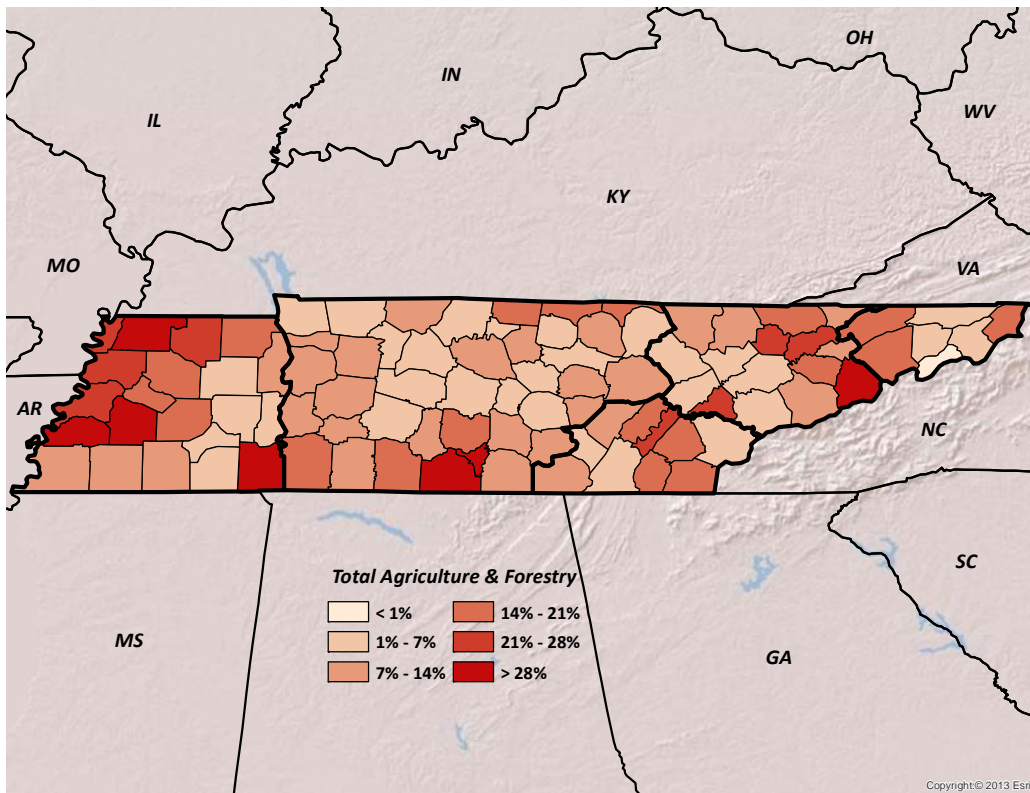


Figure 31. Percent of Economic Activity from Total Agriculture and Forestry, 2013
 (Source: IMPLAN Group, LLC, 2013)

Table 19. Tennessee Counties with the Highest Proportion of Economic Activity for Agriculture and Forestry by Analysis Region, 2013

	Chatt	%	Knox	%	Memphis	%	Nash	%	Tri	%
Ag:										
Direct	Bledsoe	9.5	Hancock	7.1	Lake	22.5	Pickett	9.2	Greene	2.0
Total	Meigs	25.5	Loudon	27.8	Obion	30.1	Moore	81.8	Greene	15.5
Forestry:							Van			
Direct	Sequatchie	0.6	Morgan	0.4	Hardeman	0.9	Buren	3.1	Johnson	0.1
Total	McMinn	13.1	Grainger	21.6	Hardin	39.4	Wayne	12.6	Greene	6.4
Combined:										
Direct	Bledsoe	9.8	Hancock	7.1	Lake	22.5	Pickett	9.4	Greene	2.0
Total	Meigs	26.0	Cocke	32.4	Hardin	42.5	Moore	82.3	Greene	21.0

Tennessee Agriculture and Forestry Tax Impacts

Actual Tennessee revenue for 2013 was estimated at \$11.8 billion in the form of taxes (TN Department of Revenue, 2016). Based on the IMPLAN data for Tennessee in 2013, tax impacts at the state and local level as a result of direct and multiplier effects for agriculture and forestry (includes the production and processing of agricultural and forest products and the input suppliers of these products) are estimated at \$1.93 billion (Table 20). An additional \$3.4 billion is generated for the federal

Table 20. Estimated State/Local and Federal Tax Revenues from Tennessee Agriculture and Forestry, 2013

	State & Local Revenues	Federal Revenues
	(Million \$)	
Agriculture^a		
Production & Import Taxes ^b	\$1,117.5	\$151.9
Corporate Profits Taxes ^c	\$140.9	\$566.2
Personal (Household) Taxes ^d	\$58.2	\$1,480.9
Total	\$1,316.6	\$2,199.0
Forestry^a		
Production & Import Taxes ^b	\$527.6	\$71.7
Corporate Profits Taxes ^c	\$46.3	\$186.1
Personal (Household) Taxes ^d	\$38.7	\$979.3
Total	\$612.6	\$1,237.1
Agriculture & Forestry Total	\$1,929.2	\$3,436.1

^aIncludes the production and processing of agricultural and forest products and the input suppliers of these products.

^bFor state/local, sales taxes, property taxes, motor vehicle licenses taxes, severance taxes, other taxes, and state/local non-taxes; for federal, excise taxes, custom duty taxes, and non-taxes.

^cFor state/local, includes dividends and corporate profits tax; for federal, corporate profit tax only.

^dFor state/local, income taxes, non-taxes (fines & fees), motor vehicle license taxes, property taxes, and other taxes (fishing/hunting); for federal, income taxes.

Source: IMPLAN Group, LLC, 2012 and 2013

government. Agriculture tax revenues are estimated at \$1.3 billion for state/local and \$2.2 billion for federal; for forestry, \$0.6 billion in tax revenues are generated for state/local and \$1.2 billion in federal. For state/local tax revenues, taxes on imports and product for both agriculture and forestry have the largest value; for federal tax revenues, personal taxes have the largest value.

Summary and Conclusion

Input-output modeling is useful for evaluating and analyzing information on the interrelationships of a regional economy and impacts of changes on that economy. The model is a useful planning tool for policy-makers in evaluating potential impacts of their decisions concerning agriculture and forestry industries for the state. For this analysis, a baseline for 2013 was developed using Tennessee Agricultural Statistics Service information, along with the IMPLAN Group's input-output model information. The state was divided into five trade regions. These five regions will continue to be used in future analyses to gauge the performance of individual sectors and the impacts of new sectors to the state's agri-forestry industrial complex.

Comparing 2011 and 2013 agricultural data for the state revealed a decrease in the numbers of cattle and calves, broilers, eggs and dairy cattle, while the numbers of chickens (excluding broilers) and hogs increased. Prices increased for all livestock products except for cattle and calves (Table 5). Many of the traditional row crops grown in the state experienced increased planted acreage except for cotton and the vegetable crops snap beans and tomatoes. Crop prices increased for all major crops grown except for corn and cotton including the vegetable crop snap beans (Table 6). Below average rainfall occurred in the state for the years 2010 and 2012 followed by above normal rainfall for the years 2011 and 2013 (Figure 16).

The agri-forestry industrial complex included the primary industries typically associated with agriculture and forest operations such as crop production, livestock breeding and feeding, and the management and logging of trees. Also included in the industrial complex were the input supplying industries and value-added subsectors, which included food and beverage manufacturing, apparel and textiles, and forestry products manufacturing. In 2013, the agri-forestry industrial complex contributed \$74.8 billion to the Tennessee economy accounting for multiplier effects, which was 12.8 percent of the economic activity conducted within the state, and employed an estimated 349,398 individuals, or 9.4 percent of the total number of workers. Agriculture, a subset of the agri-forestry industrial complex, includes farming and related industries, as well as value-added food and fiber production, processing and manufacturing. Agriculture accounted for 9.0 percent of the state's economy and generated \$52.6 billion in output. Agriculture employed close to 254,000 Tennesseans, with over 109,000 (both full- and part-time) in agricultural production.

Forestry included the management and logging of trees; sawmills (primary forestry products), including pulp and paper mills, plus forestry products manufacturing (secondary forestry products). Forestry accounted for 3.8 percent of the state’s economy, employed over 95,500 Tennesseans, and generated \$22.2 billion in output.

From a regional perspective, the agri-forestry industrial complex was more important to the economies of Memphis and Chattanooga Regions relative to other regions in the state followed by the Knoxville, Nashville, and Tri-Cities Regions (Table 21). The Memphis Region contributed the largest amount of economic activity for agriculture and forestry, \$29.1 billion, representing 19.7 percent of the total for the region.

Table 21. Regional Importance of Agriculture to that Region’s Economy, 2013

Location	Total Economic Activity (Million \$)	Estimated Agri-Forestry Industrial Complex Contributions to the State’s Economy			Proportion ^a (Ratio)
		Agriculture (Million \$)	Forestry (Million \$)	Total Ag & Forestry (Million \$)	
State	\$582,586	\$52,616	\$22,202	\$74,818	0.13
Chattanooga	\$64,506	\$5,726	\$3,118	\$8,844	0.14
Knoxville	\$90,453	\$7,126	\$2,567	\$9,693	0.11
Memphis	\$148,070	\$19,435	\$9,717	\$29,151	0.20
Nashville	\$239,324	\$16,849	\$4,585	\$21,434	0.09
Tri-Cities	\$40,233	\$2,284	\$1,292	\$3,576	0.09

^aTotal Economic Activity ÷ Total Ag & Forestry

Source: IMPLAN Group, LLC, 2013

When comparing county level total economic activity (across all industries) with county level agricultural economic activity, the counties with the highest percentage levels were Moore (81.8 percent) in the Nashville Region, Obion (30.1 percent) in the Memphis Region, Loudon (27.8 percent) in the Knoxville Region, Meigs (25.5 percent) in the Chattanooga Region, and Greene (15.5 percent) in the Tri-Cities Region. Likewise, for forestry, Hardin County (39.4 percent) had the highest level of forestry economic activity percentage in the Memphis Region, followed by Grainer County (21.6 percent) in the Knoxville Region, McMinn County (13.1 percent) in the Chattanooga Region, Wayne County (12.6 percent) in the Nashville Region, and Greene County (6.4 percent) in the Tri-Cities Region. Combining both agriculture and forestry economic activity levels and comparing to the total, the counties with the highest percentages were Moore (82.3 percent) in the Nashville Region, Hardin (42.5 percent) in the Memphis Region, Cocke (32.4 percent) in the Knoxville Region, Meigs (26.0 percent) in the Chattanooga Region, and Greene (21.0 percent) in the Tri-Cities Region.

Comparing some 2013 major industry sectors to previous similar studies for 2006, 2009, and 2011, direct economic activity for agriculture increased an average of 8.0 percent, whereas economic activity for forestry decreased an average of 3.2 percent in nominal terms. Most other major industry sectors had increases in economic activity for this timeframe with government having the largest average increase at 18.6 percent followed by mining (17.0 percent), services (16.3 percent), construction (15.8 percent), wholesale trade (9.5 percent), retail trade (2.8 percent), and manufacturing (1.9 percent). For workers or jobs in agriculture and forestry, forestry had the largest average decrease at 12.0 percent with agriculture having a 4.4 percent decrease. For workers or jobs in other industries, the largest average increase was for mining at 9.5 percent followed by services (5.9 percent) and government (4.4 percent). The largest average decrease was for construction at 5.6 percent followed by manufacturing (5.2 percent), retail trade (2.7 percent), and wholesale trade (1.8 percent).

Literature Cited

- Clatterbuck, Wayne. 2013. "Tennessee Forest Resource Statistics, 2012." Forestry, Wildlife & Fisheries Update Newsletter. The University of Tennessee Extension. January, 2013.
- English, B., K. Jensen, and J. Menard. 2001. "Economic Impacts of Agriculture and Forestry in Tennessee, 1997." Research Series 04-01. Available at <http://aimag.ag.utk.edu/pubimpact.html>.
- English, B., K. Jensen, and J. Menard. 2003. "Economic Impacts of Agriculture and Forestry in Tennessee, 2000." Research Series 02-03. Available at <http://aimag.ag.utk.edu/pubimpact.html>.
- IMPLAN Group LLC, IMPLAN System (2013a data and V. 3 software), 16905 Northcross Dr., Suite 120, Huntersville, NC 28078. Available at <http://www.implan.com/>.
- IMPLAN Group LLC, IMPLAN System. 2013b. "Industry Sectoring Schemes." (2013 data and V. 3 software), 16905 Northcross Dr., Suite 120, Huntersville, NC 28078. http://www.implan.com/index.php?option=com_content&view=article&layout=edit&id=244#ea-benchmark-i-o-sectoring.
- Leontief, Wassily. 1936. "Quantitative Input and Output Relations in the Economic System of the United States." *Review of Economics and Statistics* 18(3):105-125.
- Lindall, S., D. Olson, and G. Alward. 2006. "Deriving Multi-Regional Models Using the IMPLAN National Trade Flows Model". *The Journal of Regional Analysis & Policy* 36(1):76-83.
- Menard, J., B. English, and K. Jensen. 2006. "Economic Impacts of Agriculture and Forestry in Tennessee, 2003." Available at <http://aimag.ag.utk.edu/pubimpact.html>.
- Menard, J., B. English, and K. Jensen. 2009. "Economic Impacts of Agriculture and Forestry in Tennessee, 2006." Available at <http://aimag.ag.utk.edu/pubimpact.html>.
- Menard, J., B. English, and K. Jensen. 2011. "Economic Impacts of Agriculture and Forestry in Tennessee, 2009." Available at <http://aimag.ag.utk.edu/pubimpact.html>.
- Menard, J., B. English, and K. Jensen. 2013. "Economic Impacts of Agriculture and Forestry in Tennessee, 2011." Available at <http://aimag.ag.utk.edu/pubimpact.html>.
- Minnesota IMPLAN Group, Inc. 2012. "Tax Impact Report – Generation and Interpretation of IMPLAN's Tax Impact Report." IMPLAN System (data and software), 502 2nd Street, Suite 301, Hudson, WI 54016. Available at http://implan.com/V4/index.php?option=com_docman&task=cat_view&gid=144&Itemid=60.
- Olson, D. and S. Lindall. 1999. "IMPLAN Professional Software, Analysis, and Data Guide." Minnesota IMPLAN Group, Inc., 502 2nd Street, Suite 301, Hudson, WI 54016. Available at <http://www.implan.com/>.
- Pyatt, G., and J. Round. 1985. "Social Accounting Matrices, A Basis for Planning." The World Bank, Washington, D.C.

- Steinback, S. 2004. "Using Ready-Made Regional Input-Output Models to Estimate Backward-Linkage Effects of Exogenous Output Shocks." *Review of Regional Studies* 34(1): 57-71.
- Tennessee Department of Agriculture, Division of Forestry. 2011. "Plan 2020: Harvest Plan for Sustainable State Forests." Available at http://www.tn.gov/assets/entities/agriculture/attachments/AgForSF2020_Plan.pdf.
- Tennessee Department of Agriculture. 2012. "Tennessee Agriculture 2012." Department Report & Statistical Summary. Available at <http://www.tennessee.gov/assets/entities/agriculture/attachments/annualreport12.pdf>.
- Tennessee Department of Agriculture. 2013. "Tennessee Agriculture 2013." Department Report & Statistical Summary. Available at <http://www.tennessee.gov/assets/entities/agriculture/attachments/annualreport13.pdf>.
- Tennessee Department of Agriculture. 2014. "Tennessee Agriculture 2014." Department Report & Statistical Summary. Available at <http://www.tennessee.gov/assets/entities/agriculture/attachments/annualreport14.pdf>.
- Tennessee Department of Revenue. 2016. "Additional Resources for Researchers". Historical Collections Data. Available at <https://www.tn.gov/revenue/article/additional-resources-for-researchers>.
- U.S. Census Bureau. 2002. North American Industry Classification System (NAICS). Available at <http://www.census.gov/eos/www/naics/>.
- U.S. Census Bureau. 2007. North American Industry Classification System (NAICS). Available at <http://www.census.gov/eos/www/naics/>.
- U.S. Census Bureau. 2012. North American Industry Classification System (NAICS). Available at <http://www.census.gov/eos/www/naics/>.
- U.S. Census Bureau. 2013a. "2013 County Business Patterns (NAICS)." Censtats Databases. Available at <http://censtats.census.gov/>.
- U.S. Census Bureau. 2013b. "Statistics for All Manufacturing by State: 2013." Annual Survey of Manufacturers, Geographic Area Statistics. Available at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ASM_2013_31AS101&prodType=table.
- U.S. Department of Agriculture, Economic Research Service. 2013. "State Export Data." Available at <http://www.ers.usda.gov/data-products/state-export-data.aspx>.
- U.S. Department of Agriculture, Economic Research Service. 2015. "Glossary – Farm." Available at <http://www.ers.usda.gov/topics/farm-economy/farm-household-well-being/glossary.aspx>.
- U.S. Department of Agriculture, Forest Service. 2013. "Forest Inventory Data Online (FIDO)" Available at <http://apps.fs.fed.us/fido/>.

- U.S. Department of Agriculture, National Agricultural Statistical Service. 2012a. "Tennessee State and County Data." 2012 Census of Agriculture Report. Volume 1, Geographic Area Series, Part 42. Available at http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Tennessee/tnv1.pdf.
- U.S. Department of Agriculture, National Agricultural Statistical Service. 2012b. "U.S. Summary and State Data." 2012 Census of Agriculture Report. Volume 1, Geographic Area Series, Part 51. Available at http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_US/usv1.pdf.
- U.S. Department of Agriculture, National Agricultural Statistical Service. 2014a. "Milk Production, Disposition, and Income, 2013 Summary." Available at <http://usda.mannlib.cornell.edu/usda/nass/MilkProdDi//2010s/2014/MilkProdDi-04-29-2014.pdf>
- U.S. Department of Agriculture, National Agricultural Statistical Service. 2014b. "Poultry—Production and Value, 2013 Summary." Available at <http://usda.mannlib.cornell.edu/usda/current/PoulProdVa/PoulProdVa-04-30-2015.pdf>.
- U.S. Department of Commerce, Bureau of Economic Analysis. 2011. "BEA Economic Areas (EAs)." Regional Economic Accounts, Component Counties. Available at <http://www.bea.gov/regional/docs/econlist.cfm>.
- U.S. Department of Commerce, Bureau of Economic Analysis. 2015. Industry Economic Accounts, Benchmark Input-Output Data, 2007 Data Files. Available at <http://www.bea.gov/industry/>.
- U.S. Department of Commerce, International Trade Administration (ITA). 2013. "TradeStats Express™ Home." State Export Data, Office of Trade and Industry Information, Manufacturing and Services. Available at <http://tse.export.gov/TSE/TSEHome.aspx>.
- U.S. Department of Commerce. 2015. National Climatic Data Center, NOAA Environmental Satellite, Data, and Information Service. Available at <http://www7.ncdc.noaa.gov/CDO/CDODivisionalSelect.jsp#>.

Appendix A: IMPLAN Methodology

Input-output model results from previous studies (English, Jensen, and Menard, 2001 and 2003) in this series were based on the Standard Industrial Classification (SIC) system as defined by the United States Census Bureau. Beginning in 2006 (Menard, English, and Jensen), results are based on the North American Industrial Classification System (NAICS) (Census NAICS, 2002, 2007, 2012). The reader is cautioned to not compare industry sector level results from the previous studies using the SIC system with the results from this most recent study using NAICS. For readers who are interested in time series data, this creates a problem since many industries are grouped in different or entirely new categories. Plus, changes in input-output modeling and data sources are additional reasons the reader should be wary with respect to evaluating changes in impacts over time.

Like the previous analysis conducted for 2011, this analysis uses IMPLAN Version 3.0. IMPLAN's sectoring scheme relies on the Bureau of Economic (BEA) Analysis's Benchmark input-output study (IMPLAN Group, LLC, 2013b; USDOC, 2015). When a new BEA Benchmark is released, the IMPLAN sectoring scheme requires modification. Previous studies used IMPLAN Pro 2.0 and had either a 528 or 509 industrial sectoring scheme and for IMPLAN Version 3.0 a 440 industrial sectoring scheme. With the release of the 2014 Benchmark, which is what IMPLAN Version 3.0 uses and affects the IMPLAN 2013 data release year, a 536 industrial sectoring scheme is used.

IMPLAN employs a regional social accounting system and can be used to generate a set of balanced economic/social accounts and multipliers. The social accounting system is an extension of input-output analysis.¹¹ Input-output analysis can provide important and timely information on the interrelationships in a regional economy and the impacts of changes on that economy. Input-output analysis has been expanded beyond market-based transaction accounting to include non-market financial flows by using a social accounting matrix or SAM framework (Pyatt and Round, 1985). The model describes the transfer of money between industries and institutions and contains both market-based transactions and non-market financial flows, such as inter-institutional transfers (see Figure A.1). The 'Make' and 'Use' components of the SAM include the commodities made and used by industries. Factors represent the value-added by industries, including wages and compensation to workers, interest, profits, and indirect business taxes. Capital includes expenditures made by industries and institutions to obtain equipment and construction. The SAM takes into account corporate profits as 'Enterprises'. The SAM also accounts for non-industrial financial flows, including factor exports and imports, institution exports, factor distribution, and inter-institutional transfers. Factor exports include

¹¹ Input-output (I-O) analysis, also known as inter-industry analysis, is the name given to an analytical work conducted by Wassily Leontief (1936) in the late 1930's. The fundamental purpose of the I-O framework is to analyze the interdependence of industries in an economy through market-based transactions.

payments reimbursed from outside the region for exports less the payments for imports. Institutional exports would include situations such as jobs commuting outside the region. Factor distributions are payments from the factor sectors to institutions, such as households or governments. Inter-institutional transfers include payments between institutions, such as federal government grants to state governments, welfare, social security payments, and taxes paid to governments.

	Industry	Commodity	Factors	Institutions	Enterprises	Capital	Trade	Total
Industry		<i>Make</i>					<i>Exports</i>	Total Industry Income
Commodity	<i>Use</i>			<i>Consumption</i>		<i>Consumption</i>		Total Commodity Income
Factors	<i>Value Added</i>						<i>Exports</i>	Total Factor Income
Institutions		<i>Sales</i>	<i>Transfers</i>	<i>Transfers</i>	<i>Transfers</i>		<i>Exports</i>	Total Institutional Income
Enterprises								Total Enterprise Income
Capital						<i>Transfers</i>	<i>Exports</i>	Total Capital Income
Trade	<i>Imports</i>		<i>Factor Trade</i>	<i>Imports</i>		<i>Transfers</i>	<i>Exports</i>	Total Trade Income
Total	Total Industry Outlay	Total Commodity Outlay	Total Factor Outlay	Total Institution Outlay	Total Enterprise Outlay	Total Capital Outlay	Total Trade Exports	

Figure A.1. Social Accounting Matrix Framework

Source: Olson and Lindall, 1999.

Appendix B: IMPLAN/NAICS Sector Bridge

Table B.1. IMPLAN 536 Industry Sector Descriptions, NAICS, and Agri-Forestry Designation

Sector	Description	2012 NAICS	Agri-Forestry
1	Oilseed farming	11111-2	Primary Ag
2	Grain farming	11113-6, 11119	Primary Ag
3	Vegetable and melon farming	1112	Primary Ag
		111331-2, 111331-4,	
4	Fruit farming	111336, 111339	Primary Ag
5	Tree nut farming	111335, 111336	Primary Ag
6	Greenhouse, nursery, and floriculture production	1114, 1125	Primary Ag
7	Tobacco farming	11191	Primary Ag
8	Cotton farming	11192	Primary Ag
9	Sugarcane and sugar beet farming	11193, 111991	Primary Ag
10	All other crop farming	11194, 111992, 111998	Primary Ag
	Beef cattle ranching and farming, including feedlots and dual-		
11	purpose ranching and farming	11211, 11213	Primary Ag
12	Dairy cattle and milk production	11212	Primary Ag
13	Poultry and egg production	1123	Primary Ag
14	Animal production, except cattle and poultry and eggs	1122, 1124, 1125, 1129	Primary Ag
15	Forestry, forest products, and timber tract production	1131-2	For Inputs
16	Commercial logging	1133	For Inputs
17	Commercial fishing	1141	Primary Ag
18	Commercial hunting and trapping	1142	Primary Ag
19	Support activities for agriculture and forestry	115	Primary Ag
20	Extraction of natural gas and crude petroleum	21111	
21	Extraction of natural gas liquids	21112	
22	Coal mining	2121	
23	Iron ore mining	212210	
24	Gold ore mining	212221	
25	Silver ore mining	212222	
26	Lead and zinc ore mining	212231	
27	Copper ore mining	212234	
28	Uranium-radium-vanadium ore mining	212291	
29	Other metal ore mining	212299	
30	Stone mining and quarrying	21231	
31	Sand and gravel mining	212321-4	
32	Other clay, ceramic, refractory minerals mining	212325	
33	Potash, soda, and borate mineral mining	212391	
34	Phosphate rock mining	212392	
35	Other chemical and fertilizer mineral mining	212393	
36	Other nonmetallic minerals	212399	
37	Drilling oil and gas wells	213111	
38	Support activities for oil and gas operations	213112	
39	Metal mining services	213114	
40	Other nonmetallic minerals services	213113, 213115	
41	Electric power generation - Hydroelectric	221111	
42	Electric power generation - Fossil fuel	221112	
43	Electric power generation - Nuclear	221113	
44	Electric power generation - Solar	221114	
45	Electric power generation - Wind	221115	
46	Electric power generation - Geothermal	221116	
47	Electric power generation - Biomass	221117	
48	Electric power generation - All other	221118	
49	Electric power transmission and distribution	22112	
50	Natural gas distribution	2212	

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2012 NAICS	Agri-Forestry
51	Water, sewage and other systems	2213	
52	Construction of new health care structures	23	
53	Construction of new manufacturing structures	23	
54	Construction of new power and communication structures	23	
55	Construction of new educational and vocational structures	23	
56	Construction of new highways and streets	23	
57	Construction of new commercial structures, including farm structures	23	
58	Construction of other new nonresidential structures	23	
59	Construction of new single-family residential structures	23	
60	Construction of new multifamily residential structures	23	
61	Construction of other new residential structures	23	
62	Maintenance and repair construction of nonresidential structures	23	
63	Maintenance and repair construction of residential structures	23	
64	Maintenance and repair construction of highways, streets, bridges, and tunnels	23	
65	Dog and cat food manufacturing	311111	Secondary Ag
66	Other animal food manufacturing	311119	Secondary Ag
67	Flour milling	311211	Secondary Ag
68	Rice milling	311212	Secondary Ag
69	Malt manufacturing	311213	Secondary Ag
70	Wet corn milling	311221	Secondary Ag
71	Soybean and other oilseed processing	311224	Secondary Ag
72	Fats and oils refining and blending	311225	Secondary Ag
73	Breakfast cereal manufacturing	31123	Secondary Ag
74	Beet sugar manufacturing	311313	Secondary Ag
75	Sugar cane mills and refining	311314	Secondary Ag
76	Nonchocolate confectionery manufacturing	31134	Secondary Ag
77	Chocolate and confectionery manufacturing from cacao beans	311351	Secondary Ag
78	Confectionery manufacturing from purchased chocolate	311352	Secondary Ag
79	Frozen fruits, juices and vegetables manufacturing	311411	Secondary Ag
80	Frozen specialties manufacturing	311412	Secondary Ag
81	Canned fruits and vegetables manufacturing	311421	Secondary Ag
82	Canned specialties	311422	Secondary Ag
83	Dehydrated food products manufacturing	311423	Secondary Ag
84	Fluid milk manufacturing	311511	Secondary Ag
85	Creamery butter manufacturing	311512	Secondary Ag
86	Cheese manufacturing	311513	Secondary Ag
87	Dry, condensed, and evaporated dairy product manufacturing	311514	Secondary Ag
88	Ice cream and frozen dessert manufacturing	31152	Secondary Ag
89	Animal, except poultry, slaughtering	311611	Secondary Ag
90	Meat processed from carcasses	311612	Secondary Ag
91	Rendering and meat byproduct processing	311613	Secondary Ag
92	Poultry processing	311615	Secondary Ag
93	Seafood product preparation and packaging	3117	Secondary Ag
94	Bread and bakery product, except frozen, manufacturing	311811-2	Secondary Ag
95	Frozen cakes and other pastries manufacturing	311813	Secondary Ag
96	Cookie and cracker manufacturing	311821	Secondary Ag

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
97	Dry pasta, mixes, and dough manufacturing	311824	Secondary Ag
98	Tortilla manufacturing	31183	Secondary Ag
99	Roasted nuts and peanut butter manufacturing	311911	Secondary Ag
100	Other snack food manufacturing	311919	Secondary Ag
101	Coffee and tea manufacturing	31192	Secondary Ag
102	Flavoring syrup and concentrate manufacturing	31193	Secondary Ag
103	Mayonnaise, dressing, and sauce manufacturing	311941	Secondary Ag
104	Spice and extract manufacturing	311942	Secondary Ag
105	All other food manufacturing	31199	Secondary Ag
106	Bottled and canned soft drinks & water	312111-2	Secondary Ag
107	Manufactured ice	312113	
108	Breweries	31212	Secondary Ag
109	Wineries	31213	Secondary Ag
110	Distilleries	31214	Secondary Ag
111	Tobacco product manufacturing	3122	Secondary Ag
112	Fiber, yarn, and thread mills	3131	Secondary Ag
113	Broadwoven fabric mills	31321	Secondary Ag
114	Narrow fabric mills and schiffli machine embroidery	31322	Secondary Ag
115	Nonwoven fabric mills	31323	Secondary Ag
116	Knit fabric mills	31324	Secondary Ag
117	Textile and fabric finishing mills	31331	Secondary Ag
118	Fabric coating mills	31332	Secondary Ag
119	Carpet and rug mills	31411	Secondary Ag
120	Curtain and linen mills	31412	Secondary Ag
121	Textile bag and canvas mills	31491	Secondary Ag
122	Rope, cordage, twine, tire cord and tire fabric mills	314994	Secondary Ag
123	Other textile product mills	314999	Secondary Ag
124	Hosiery and sock mills	31511	Secondary Ag
125	Other apparel knitting mills	31519	Secondary Ag
126	Cut and sew apparel contractors	31521	Secondary Ag
127	Men's and boys' cut and sew apparel manufacturing	31522	Secondary Ag
128	Women's and girls' cut and sew apparel manufacturing	31524	Secondary Ag
129	Other cut and sew apparel manufacturing	31528	Secondary Ag
130	Apparel accessories and other apparel manufacturing	3159	Secondary Ag
131	Leather and hide tanning and finishing	3161	Secondary Ag
132	Footwear manufacturing	3162	Secondary Ag
133	Other leather and allied product manufacturing	3169	Secondary Ag
134	Sawmills	321113	Primary For
135	Wood preservation	321114	Primary For
136	Veneer and plywood manufacturing	321211-2	Secondary For
137	Engineered wood member and truss manufacturing	321213-4	Secondary For
138	Reconstituted wood product manufacturing	321219	Secondary For
139	Wood windows and door manufacturing	321911	Secondary For
140	Cut stock, resawing lumber, and planing	321912	Secondary For
141	Other millwork, including flooring	321918	Secondary For
142	Wood container and pallet manufacturing	32192	Secondary For
143	Manufactured home (mobile home) manufacturing	321991	Secondary For
144	Prefabricated wood building manufacturing	321992	Secondary For
145	All other miscellaneous wood product manufacturing	321999	Secondary For
146	Pulp mills	32211	Primary For
147	Paper mills	32212	Primary For
148	Paperboard mills	32213	Primary For

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
149	Paperboard container manufacturing	32221	Secondary For
150	Paper bag and coated and treated paper manufacturing	32222	Secondary For
151	Stationery product manufacturing	32223	Secondary For
152	Sanitary paper product manufacturing	322291	Secondary For
153	All other converted paper product manufacturing	322299	Secondary For
154	Printing	32311	
155	Support activities for printing	32312	
156	Petroleum refineries	32411	
157	Asphalt paving mixture and block manufacturing	324121	
158	Asphalt shingle and coating materials manufacturing	324122	
159	Petroleum lubricating oil and grease manufacturing	324191	
160	All other petroleum and coal products manufacturing	324199	
161	Petrochemical manufacturing	32511	
162	Industrial gas manufacturing	32512	
163	Synthetic dye and pigment manufacturing	32513	
164	Other basic inorganic chemical manufacturing	32518	
165	Other basic organic chemical manufacturing	32519	
166	Plastics material and resin manufacturing	325211	
167	Synthetic rubber manufacturing	325212	
168	Artificial and synthetic fibers and filaments manufacturing	32522	
169	Nitrogenous fertilizer manufacturing	325311	Ag Inputs
170	Phosphatic fertilizer manufacturing	325312	Ag Inputs
171	Fertilizer mixing	325314	Ag Inputs
172	Pesticide and other agricultural chemical manufacturing	32532	Ag Inputs
173	Medicinal and botanical manufacturing	325411	
174	Pharmaceutical preparation manufacturing	325412	
175	In-vitro diagnostic substance manufacturing	325413	
176	Biological product (except diagnostic) manufacturing	325414	
177	Paint and coating manufacturing	32551	
178	Adhesive manufacturing	32552	
179	Soap and other detergent manufacturing	325611	
180	Polish and other sanitation good manufacturing	325612	
181	Surface active agent manufacturing	325613	
182	Toilet preparation manufacturing	32562	
183	Printing ink manufacturing	32591	
184	Explosives manufacturing	32592	
185	Custom compounding of purchased resins	325991	
186	Photographic film and chemical manufacturing	325992	
187	Other miscellaneous chemical product manufacturing	325998	
188	Plastics packaging materials and unlaminated film and sheet manufacturing	32611	
189	Unlaminated plastics profile shape manufacturing	326121	
190	Plastics pipe and pipe fitting manufacturing	326122	
191	Laminated plastics plate, sheet (except packaging), and shape manufacturing	326130	
192	Polystyrene foam product manufacturing	326140	
193	Urethane and other foam product (except polystyrene) manufacturing	326150	
194	Plastics bottle manufacturing	326160	
195	Other plastics product manufacturing	326190	
196	Tire manufacturing	326210	
197	Rubber and plastics hoses and belting manufacturing	326220	

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
198	Other rubber product manufacturing	326290	
199	Pottery, ceramics, and plumbing fixture manufacturing	327110	
200	Brick, tile, and other structural clay product manufacturing	327120	
201	Flat glass manufacturing	327211	
202	Other pressed and blown glass and glassware manufacturing	327212	
203	Glass container manufacturing	327213	
204	Glass product manufacturing made of purchased glass	327215	
205	Cement manufacturing	32731	
206	Ready-mix concrete manufacturing	32732	
207	Concrete block and brick manufacturing	327331	
208	Concrete pipe manufacturing	327332	
209	Other concrete product manufacturing	32739	
210	Lime manufacturing	32741	Ag Inputs
211	Gypsum product manufacturing	32742	
212	Abrasive product manufacturing	32791	
213	Cut stone and stone product manufacturing	327991	
214	Ground or treated mineral and earth manufacturing	327992	
215	Mineral wool manufacturing	327993	
216	Miscellaneous nonmetallic mineral products manufacturing	327999	
217	Iron and steel mills and ferroalloy manufacturing	33111	
218	Iron, steel pipe and tube manufacturing from purchased steel	33121	
219	Rolled steel shape manufacturing	331221	
220	Steel wire drawing	331222	
221	Alumina refining and primary aluminum production	331313	
222	Secondary smelting and alloying of aluminum	331314	
223	Aluminum sheet, plate, and foil manufacturing	331315	
224	Other aluminum rolling, drawing and extruding	331318	
225	Nonferrous metal (exc aluminum) smelting and refining	33141	
226	Copper rolling, drawing, extruding and alloying	33142	
227	Nonferrous metal, except copper and aluminum, shaping	331491	
228	Secondary processing of other nonferrous metals	331492	
229	Ferrous metal foundries	33151	
230	Nonferrous metal foundries	33152	
231	Iron and steel forging	332111	
232	Nonferrous forging	332112	
233	Custom roll forming	332114	
234	Crown and closure manufacturing and metal stamping	332117-9	
235	Cutlery, utensil, pot, and pan manufacturing	332215	
236	Hand tool manufacturing	332216	
237	Prefabricated metal buildings and components manufacturing	332311	
238	Fabricated structural metal manufacturing	332312	
239	Plate work manufacturing	332313	
240	Metal window and door manufacturing	332321	
241	Sheet metal work manufacturing	332322	
242	Ornamental and architectural metal work manufacturing	332323	
243	Power boiler and heat exchanger manufacturing	33241	
244	Metal tank (heavy gauge) manufacturing	33242	
245	Metal cans manufacturing	332431	
246	Metal barrels, drums and pails manufacturing	332439	
247	Hardware manufacturing	3325	
248	Spring and wire product manufacturing	3326	

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
249	Machine shops	33271	
250	Turned product and screw, nut, and bolt manufacturing	33272	
251	Metal heat treating	332811	
252	Metal coating and nonprecious engraving	332812	
253	Electroplating, anodizing, and coloring metal	332813	
		332911, 332912,	
254	Valve and fittings, other than plumbing, manufacturing	332919	
255	Plumbing fixture fitting and trim manufacturing	332913	
256	Ball and roller bearing manufacturing	332991	
257	Small arms ammunition manufacturing	332992	
258	Ammunition, except for small arms, manufacturing	332993	
259	Small arms, ordnance, and accessories manufacturing	332994	
260	Fabricated pipe and pipe fitting manufacturing	332996	
261	Other fabricated metal manufacturing	332999	
262	Farm machinery and equipment manufacturing	333111	Ag Inputs
263	Lawn and garden equipment manufacturing	333112	Ag Inputs
264	Construction machinery manufacturing	33312	
265	Mining machinery and equipment manufacturing	333131	
266	Oil and gas field machinery and equipment manufacturing	333132	
267	Food product machinery manufacturing	333241	
268	Semiconductor machinery manufacturing	333242	
269	Sawmill, woodworking, and paper machinery	333243	Primary For
270	Printing machinery and equipment manufacturing	333244	
271	All other industrial machinery manufacturing	333249	
272	Optical instrument and lens manufacturing	333314	
273	Photographic and photocopying equipment manufacturing	333316	
274	Other commercial service industry machinery manufacturing	333318	
275	Air purification and ventilation equipment manufacturing	333413	
	Heating equipment (except warm air furnaces)		
276	manufacturing	333414	
	Air conditioning, refrigeration, and warm air heating		
277	equipment manufacturing	333415	
278	Industrial mold manufacturing	333511	
279	Special tool, die, jig, and fixture manufacturing	333514	
280	Cutting tool and machine tool accessory manufacturing	333515	
281	Machine tool manufacturing	333517	
	Rolling mill and other metalworking machinery		
282	manufacturing	333519	
283	Turbine and turbine generator set units manufacturing	333611	
	Speed changer, industrial high-speed drive, and gear		
284	manufacturing	333612	
285	Mechanical power transmission equipment manufacturing	333613	
286	Other engine equipment manufacturing	333618	
287	Pump and pumping equipment manufacturing	333911	
288	Air and gas compressor manufacturing	333912	
289	Measuring and dispensing pump manufacturing	333913	
290	Elevator and moving stairway manufacturing	333921	
291	Conveyor and conveying equipment manufacturing	333922	
	Overhead cranes, hoists, and monorail systems		
292	manufacturing	333923	
293	Industrial truck, trailer, and stacker manufacturing	333924	

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
294	Power-driven hand tool manufacturing	333991	
295	Welding and soldering equipment manufacturing	333992	
296	Packaging machinery manufacturing	333993	
297	Industrial process furnace and oven manufacturing	333994	
298	Fluid power cylinder and actuator manufacturing	333995	
299	Fluid power pump and motor manufacturing	333996	
300	Scales, balances, and miscellaneous general purpose machinery manufacturing	333997-9	
301	Electronic computer manufacturing	334111	
302	Computer storage device manufacturing	334112	
303	Computer terminals and other computer peripheral equipment manufacturing	334118	
304	Telephone apparatus manufacturing	33421	
305	Broadcast and wireless communications equipment manufacturing	33422	
306	Other communications equipment manufacturing	33429	
307	Audio and video equipment manufacturing	3343	
308	Bare printed circuit board manufacturing	334412	
309	Semiconductor and related device manufacturing	334413	
310	Capacitor, resistor, coil, transformer, and other inductor manufacturing	334416	
311	Electronic connector manufacturing	334417	
312	Printed circuit assembly (electronic assembly) manufacturing	334418	
313	Other electronic component manufacturing	334419	
314	Electromedical and electrotherapeutic apparatus manufacturing	334510	
315	Search, detection, and navigation instruments manufacturing	334511	
316	Automatic environmental control manufacturing	334512	
317	Industrial process variable instruments manufacturing	334513	
318	Totalizing fluid meter and counting device manufacturing	334514	
319	Electricity and signal testing instruments manufacturing	334515	
320	Analytical laboratory instrument manufacturing	334516	
321	Irradiation apparatus manufacturing	334517	
322	Watch, clock, and other measuring and controlling device manufacturing	334519	
323	Blank magnetic and optical recording media manufacturing	334613	
324	Software and other prerecorded and record reproducing	334614	
325	Electric lamp bulb and part manufacturing	33511	
326	Lighting fixture manufacturing	335120	
327	Small electrical appliance manufacturing	33521	
328	Household cooking appliance manufacturing	335221	
329	Household refrigerator and home freezer manufacturing	335222	
330	Household laundry equipment manufacturing	335224	
331	Other major household appliance manufacturing	335228	
332	Power, distribution, and specialty transformer manufacturing	335311	
333	Motor and generator manufacturing	335312	
334	Switchgear and switchboard apparatus manufacturing	335313	
324	Relay and industrial control manufacturing	335314	
325	Storage battery manufacturing	335911	
326	Primary battery manufacturing	335912	
327	Fiber optic cable manufacturing	335921	
328	Other communication and energy wire manufacturing	335929	

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
329	Wiring device manufacturing	33593	
330	Carbon and graphite product manufacturing	335991	
331	All other miscellaneous electrical equipment and component manufacturing	335999	
332	Automobile manufacturing	336111	
333	Light truck and utility vehicle manufacturing	336112	
334	Heavy duty truck manufacturing	33612	
335	Motor vehicle body manufacturing	336211	
336	Truck trailer manufacturing	336212	
337	Motor home manufacturing	336213	
338	Travel trailer and camper manufacturing	336214	
339	Motor vehicle gasoline engine and engine parts manufacturing	33631	
340	Motor vehicle electrical and electronic equipment manufacturing	33632	
341	Motor vehicle steering, suspension component (except spring), and brake systems manufacturing	33633-4	
342	Motor vehicle transmission and power train parts manufacturing	33635	
343	Motor vehicle seating and interior trim manufacturing	33636	
344	Household cooking appliance manufacturing	335221	
345	Household refrigerator and home freezer manufacturing	335222	
346	Household laundry equipment manufacturing	335224	
347	Other major household appliance manufacturing	335228	
348	Power, distribution, and specialty transformer manufacturing	335311	
349	Motor and generator manufacturing	335312	
350	Switchgear and switchboard apparatus manufacturing	335313	
351	Relay and industrial control manufacturing	335314	
352	Storage battery manufacturing	335911	
353	Primary battery manufacturing	335912	
354	Fiber optic cable manufacturing	335921	
355	Motor vehicle metal stamping	33637	
356	Other motor vehicle parts manufacturing	33639	
357	Aircraft manufacturing	336411	
358	Aircraft engine and engine parts manufacturing	336412	
359	Other aircraft parts and auxiliary equipment manufacturing	336413	
360	Guided missile and space vehicle manufacturing	336414	
361	Propulsion units and parts for space vehicles and guided missiles manufacturing	336415-9	
362	Railroad rolling stock manufacturing	3365	
363	Ship building and repairing	336611	
364	Boat building	336612	
365	Motorcycle, bicycle, and parts manufacturing	336991	
366	Military armored vehicle, tank, and tank component manufacturing	336992	
367	All other transportation equipment manufacturing	336999	
368	Wood kitchen cabinet and countertop manufacturing	33711	Secondary For
369	Upholstered household furniture manufacturing	337121	Secondary For
370	Nonupholstered wood household furniture manufacturing	337122	Secondary For
371	Other household nonupholstered furniture manufacturing	337124-5	Secondary For
372	Institutional furniture manufacturing	337127	Secondary For

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
373	Wood office furniture manufacturing	337211	Secondary For
374	Custom architectural woodwork and millwork	337212	Secondary For
375	Office furniture, except wood, manufacturing	337214	
376	Showcase, partition, shelving, and locker manufacturing	337215	Secondary For
377	Mattress manufacturing	33791	Secondary For
378	Blind and shade manufacturing	33792	Secondary For
379	Surgical and medical instrument manufacturing	339112	
380	Surgical appliance and supplies manufacturing	339113	
381	Dental equipment and supplies manufacturing	339114	
382	Ophthalmic goods manufacturing	339115	
383	Dental laboratories	339116	
384	Jewelry and silverware manufacturing	33991	
385	Sporting and athletic goods manufacturing	33992	
386	Doll, toy, and game manufacturing	33993	
387	Office supplies (except paper) manufacturing	33994	
388	Sign manufacturing	33995	
389	Gasket, packing, and sealing device manufacturing	339991	
390	Musical instrument manufacturing	339992	
391	Fasteners, buttons, needles, and pins manufacturing	339993	
392	Broom, brush, and mop manufacturing	339994	
393	Burial casket manufacturing	339995	
394	All other miscellaneous manufacturing	339999	
395	Wholesale trade	42	
396	Retail - Motor vehicle and parts dealers	441	
397	Retail - Furniture and home furnishings stores	442	
398	Retail - Electronics and appliance stores	443	
399	Retail - Building material and garden equipment and supplies stores	444	
400	Retail - Food and beverage stores	445	
401	Retail - Health and personal care stores	446	
402	Retail - Gasoline stores	447	
403	Retail - Clothing and clothing accessories stores	448	
404	Retail - Sporting goods, hobby, musical instrument and book stores	451	
405	Retail - General merchandise stores	452	
406	Retail - Miscellaneous store retailers	453	
407	Retail - Nonstore retailers	454	
408	Air transportation	481	
409	Rail transportation	482	
410	Water transportation	483	
411	Truck transportation	484	
412	Transit and ground passenger transportation	485	
413	Pipeline transportation	486	
414	Scenic and sightseeing transportation and support activities for transportation	487, 488	
415	Couriers and messengers	492	
416	Warehousing and storage	493	
417	Newspaper publishers	51111	
418	Periodical publishers	51112	
419	Book publishers	51113	
420	Directory, mailing list, and other publishers	51114, 511199	

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
421	Greeting card publishing		511191
422	Software publishers		5112
423	Motion picture and video industries		5121
424	Sound recording industries		5122
425	Radio and television broadcasting		5151
426	Cable and other subscription programming		5152
427	Wired telecommunications carriers		51711
428	Wireless telecommunications carriers (except satellite) Satellite, telecommunications resellers, and all other		51721
429	telecommunications	51741, 51791	
430	Data processing, hosting, and related services		5182
431	News syndicates, libraries, archives and all other information services	51911-2, 51919	
432	Internet publishing and broadcasting and web search portals		51913
433	Monetary authorities and depository credit intermediation	5,215,221	
434	Nondepository credit intermediation and related activities	5222-3	
435	Securities and commodity contracts intermediation and brokerage		5231-2
436	Other financial investment activities		5239
437	Insurance carriers		5241
438	Insurance agencies, brokerages, and related activities		5242
439	Funds, trusts, and other financial vehicles		525
440	Real estate		531
441	Owner-occupied dwellings		NA
442	Automotive equipment rental and leasing		5321
443	General and consumer goods rental except video tapes and discs	532221-2, 53229, 5323	
444	Video tape and disc rental		53223
445	Commercial and industrial machinery and equipment rental and leasing		5324
446	Lessors of nonfinancial intangible assets		533
447	Legal services		5411
448	Accounting, tax preparation, bookkeeping, and payroll services		5412
449	Architectural, engineering, and related services		5413
450	Specialized design services		5414
451	Custom computer programming services	541511	
452	Computer systems design services	541512	
453	Other computer related services, including facilities management	54151A	
454	Management consulting services	54161	
455	Environmental and other technical consulting services	54162-9	
456	Scientific research and development services	5417	
457	Advertising, public relations, and related services	5418	
458	Photographic services	54192	
459	Veterinary services	54194	
460	Marketing research and all other miscellaneous professional, scientific, and technical services	54191, 54193, 54199	
461	Management of companies and enterprises		55
462	Office administrative services		5611
463	Facilities support services		5612
464	Employment services		5613

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
465	Business support services		5614
466	Travel arrangement and reservation services		5615
467	Investigation and security services		5616
468	Services to buildings	56171-2, 56174-9	
469	Landscape and horticultural services		56173
470	Other support services		5619
471	Waste management and remediation services		562
472	Elementary and secondary schools		6111
473	Junior colleges, colleges, universities, and professional schools		6112-3
474	Other educational services		6114-7
475	Offices of physicians		6211
476	Offices of dentists		6212
477	Offices of other health practitioners		6213
478	Outpatient care centers		6214
479	Medical and diagnostic laboratories		6215
480	Home health care services		6216
481	Other ambulatory health care services		6219
482	Hospitals		622
483	Nursing and community care facilities	6231, 6233	
484	Residential mental retardation, mental health, substance abuse and other facilities	6232, 6239	
485	Individual and family services		6241
486	Community food, housing, and other relief services, including rehabilitation services		6242-3
487	Child day care services		6244
488	Performing arts companies		7111
489	Commercial Sports Except Racing	711211, 711219	
490	Racing and Track Operation		711212
491	Promoters of performing arts and sports and agents for public figures		7113-4
492	Independent artists, writers, and performers		7115
493	Museums, historical sites, zoos, and parks		712
494	Amusement parks and arcades		7131
495	Gambling industries (except casino hotels)		7132
496	Other amusement and recreation industries	71391-3, 71399	
497	Fitness and recreational sports centers		71394
498	Bowling centers		71395
499	Hotels and motels, including casino hotels		72111-2
500	Other accommodations	72119, 7212-3	
501	Full-service restaurants		722511
502	Limited-service restaurants		722513
503	All other food and drinking places	7223-4, 722514-5	
504	Automotive repair and maintenance, except car washes		81111-2, 811191, 811198
505	Car washes		811192
506	Electronic and precision equipment repair and maintenance		8112
507	Commercial and industrial machinery and equipment repair and maintenance		8113
508	Personal and household goods repair and maintenance		8114
509	Personal care services		8121
510	Death care services		8122

Table B.1. IMPLAN 536 Industry Sector Descriptions and NAICS (Cont.)

Sector	Sector	Sector	Sector
511	Dry-cleaning and laundry services		8123
512	Other personal services		8129
513	Religious organizations		8131
514	Grant making, giving, and social advocacy organizations		8132-3
515	Business and professional associations		81391-2
516	Labor and civic organizations	8134, 81393-9	
517	Private households		814
518	Postal service		491
519	Federal electric utilities		92
520	Other federal government enterprises		92
521	State government passenger transit		92
522	State government electric utilities		92
523	Other state government enterprises		92
524	Local government passenger transit		92
525	Local government electric utilities		92
526	Other local government enterprises		92
527	Used and secondhand goods ^a		n/a
528	Scrap ^b		n/a
529	Rest of the world adjustment ^c		n/a
530	Non-comparable imports ^d		n/a
531	Employment and payroll of state govt, non-education		92
532	Employment and payroll of state govt, education		92
533	Employment and payroll of local govt, non-education		92
534	Employment and payroll of local govt, education		92
535	Employment and payroll of federal govt, non-military		92
536	Employment and payroll of federal govt, military		92

^aGoods (commodities) previously used and then resold.

^bCommodities cast off as part of a production process and then resold as scrap.

^cNet foreign flows of factor income.

^dGoods not available in the nation.

Appendix C: County Region Identification Table

Table C.1. County Assignment to TNAIM's Modeling Regions

Memphis	Nashville		Chattanooga	Knoxville	Tri-Cities
Benton	Bedford	Macon	Bledsoe	Anderson	Carter
Carroll	Cannon	Marshall	Bradley	Blount	Greene
Chester	Cheatham	Maury	Hamilton	Campbell	Hawkins
Crockett	Clay	Montgomery	McMinn	Claiborne	Johnson
Decatur	Coffee	Moore	Marion	Cocke	Sullivan
Dyer	Cumberland	Overton	Meigs	Grainger	Unicoi
Fayette	Davidson	Perry	Monroe	Hamblen	Washington
Gibson	DeKalb	Pickett	Polk	Hancock	
Hardeman	Dickson	Putnam	Rhea	Jefferson	
Hardin	Fentress	Robertson	Sequatchie	Knox	
Haywood	Franklin	Rutherford		Loudon	
Henderson	Giles	Smith		Morgan	
Henry	Grundy	Stewart		Roane	
Lake	Hickman	Sumner		Scott	
Lauderdale	Houston	Trousdale		Sevier	
McNairy	Humphreys	Van Buren		Union	
Madison	Jackson	Warren			
Obion	Lawrence	Wayne			
Shelby	Lewis	White			
Tipton	Lincoln	Williamson			
Weakley		Wilson			

Source: U.S. Department of Commerce, 2011

Appendix D: Total Industry Output, Employment, Labor Income, and Total Value-Added by Agriculture and Forestry Sectors for Tennessee, 2013

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2013

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Nitrogenous fertilizer	0	0	0	0
Phosphatic fertilizer	59	36	2	8
Fertilizer mixing	30	51	2	4
Pesticide & other agricultural chemical	560	357	48	218
Lime	72	145	9	17
Total --	722	589	61	247
<u>Agricultural Machinery</u>				
Farm machinery & equipment	158	238	17	45
Lawn & garden equipment	576	1,143	52	114
Total --	734	1,381	69	159
<i>Agricultural Inputs Total --</i>	1,456	1,970	130	406
<i>Primary Agriculture</i>				
Oilseed farming	895	4,714	52	556
Grain farming	876	9,020	14	-1
Vegetable & melon farming	56	764	9	46
Fruit farming	9	292	2	7
Tree nut farming	1	11	0 ^b	1
Greenhouse, nursery, & floriculture production	320	5,706	75	222
Tobacco farming	106	2,226	23	66
Cotton farming	196	1,805	38	121
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	458	28,386	84	275
Dairy cattle & milk production	165	1,113	12	74
Beef cattle ranching & farming	639	15,935	30	258
Poultry & egg production	554	2,237	34	179
Animal production, except cattle & poultry & eggs	123	3,751	15	107
Commercial fishing	0	0	0	0
Commercial hunting & trapping	35	609	11	16
Support activities for agriculture & forestry	261	7,375	173	187
<i>Primary Agriculture Total --</i>	4,694	83,944	572	2,112
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	683	431	46	246
Other animal food	154	96	11	32
Total --	837	527	57	277
<u>Grain & Oilseed Milling</u>				
Flour milling	430	280	21	59
Rice milling	52	52	2	6
Malt	0	0	0	0
Wet corn milling	806	339	41	154
Soybean & other oilseed processing	3,234	617	70	242
Fats & oils refining & blending	433	207	19	45

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Breakfast cereal	545	579	51	212
Total --	5,499	2,073	205	718
<u>Sugar & Confectionary Products</u>				
Beet sugar	0	0	0	0
Sugar cane mills & refining	33	31	2	7
Nonchocolate confectionery	491	1,154	70	139
Chocolate & confectionery (from cacao beans)	32	51	1	4
Confectionery (from purchased chocolate)	509	1,415	85	162
Total --	1,065	2,650	158	311
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen fruits, juices & vegetables	411	857	74	119
Frozen specialties	590	1,748	97	124
Canned fruits & vegetables	865	1,564	131	196
Canned specialties	0	0	0	0
Dehydrated food products	145	297	29	42
Total --	2,011	4,465	331	482
<u>Dairy Products</u>				
Fluid milk	512	671	43	79
Creamery butter	0	0	0	0
Cheese	223	239	12	21
Dry, condensed, & evaporated dairy product	673	468	47	98
Ice cream & frozen dessert	324	861	42	85
Total --	1,733	2,238	143	282
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering	1,988	3,318	147	299
Meat processed from carcasses	667	1,456	60	87
Rendering & meat byproduct processing	114	186	10	15
Poultry processing	1,698	6,635	232	294
Total --	4,466	11,595	449	694
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product, except frozen	767	6,429	258	327
Frozen cakes & other pastries	73	461	14	23
Cookie & cracker	976	2,400	170	350
Dry pasta, mixes, & dough	185	333	18	53
Tortilla	31	141	7	11
Total --	2,032	9,764	467	765
<u>Other Foods</u>				
Roasted nuts & peanut butter	6	10	0 ^b	1
Other snack food	1,603	1,844	131	582
Coffee & tea	792	1,042	62	155
Flavoring syrup & concentrate	38	6	3	29

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Mayonnaise, dressing, & sauce	298	447	23	59
Spice & extract	24	48	2	3
All other food	133	369	22	31
Total --	2,894	3,766	243	860
<u>Beverages</u>				
Bottled & canned soft drinks & water	2,718	3,360	229	542
Breweries	65	80	3	15
Wineries	57	192	5	10
Distilleries	1,031	814	63	521
Total --	3,872	4,445	300	1,088
<u>Tobacco Products</u>				
	2,406	910	82	1,255
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	470	1,465	68	78
Broadwoven fabric mills	18	70	4	5
Narrow fabric mills & schiffli machine embroidery	12	74	4	4
Nonwoven fabric mills	351	795	64	84
Knit fabric mills	30	141	7	8
Textile & fabric finishing mills	131	612	22	26
Fabric coating mills	130	411	23	30
Total --	1,141	3,567	192	235
<u>Textile Products Mills</u>				
Carpet & rug mills	65	214	10	11
Curtain & linen mills	18	133	4	5
Textile bag & canvas mills	90	698	32	34
Rope, cordage, twine, tire cord & tire fabric mills	168	660	34	47
Other textile product mills	145	1,186	43	47
Total --	485	2,891	122	143
<u>Apparel</u>				
Hosiery & sock mills	67	568	22	22
Other apparel knitting mills	34	202	8	8
Cut & sew apparel contractors	53	913	25	20
Men's & boy's cut & sew apparel	265	2,086	105	107
Women's & girl's cut & sew apparel	11	61	1	2
Other cut & sew apparel	18	180	6	6
Apparel accessories & other apparel	11	93	3	3
Total --	459	4,103	170	168
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	26	79	3	3
Footwear	264	1,129	127	126
Other leather & allied product	19	180	6	4
Total --	309	1,388	136	134

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Agriculture Total --</i>	29,211	54,382	3,055	7,413
<i>Agriculture Total --</i>	35,361	140,297	3,757	9,930
<i>Forestry Inputs</i>				
<u>Sawmill, Woodworking, & Paper Machinery</u>	40	167	12	14
<u>Timber</u>				
Forestry, forest products, & timber tract production	10	42	2	5
Commercial logging	287	2,816	154	169
Total --	297	2,858	156	173
<i>Forestry Inputs Total --</i>	337	3,026	168	188
<i>Primary Forestry</i>				
Sawmills	678	2,844	106	136
Wood preservation	53	131	5	11
Pulp mills	283	288	55	88
Paper mills	4,324	4,791	760	1,441
Paperboard Mills	914	981	160	289
<i>Primary Forestry Total --</i>	6,252	9,035	1,086	1,965
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	12	56	2	2
Engineered wood member & truss	112	683	29	30
Reconstituted wood product	102	236	12	27
Total --	226	975	43	59
<u>Wood Windows & Doors & Millwork</u>				
Wood windows & door	171	914	46	58
Cut stock, resawing lumber, & planning	102	493	19	37
Other millwork, including flooring	259	1,528	61	85
Total --	532	2,935	126	180
<u>Wood Containers & Pallets</u>				
	285	2,253	76	96
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	340	1,986	100	136
Prefabricated wood building	61	325	17	25
Total --	401	2,310	117	161
<u>All Other Miscellaneous Wood Products</u>				
	128	715	25	44
<u>Paperboard Containers</u>				
	2,121	5,012	362	466
<u>Paper Bags & Coated & Treated Paper</u>				
	756	1,658	124	194
<u>Stationery Products</u>				
	361	1,009	61	91

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Converted Paper Products</u>				
Sanitary paper product	472	551	47	147
All other converted paper product	186	597	32	43
Total --	659	1,148	79	190
<u>Wood Kitchen Cabinets & Countertops</u>	184	1,487	60	60
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	675	3,918	163	164
Nonupholstered wood household furniture	81	705	25	25
Other household nonupholstered furniture	62	266	14	13
Institutional furniture	65	437	18	18
Total --	884	5,326	219	220
<u>Office Furniture</u>				
Wood office furniture	12	74	3	3
Custom architectural woodwork & millwork	47	318	18	18
Showcase, partition, shelving, & locker	239	1,321	71	71
Total --	299	1,714	92	92
<u>Other Furniture Related Products</u>				
Mattress	252	772	30	29
Blind & shade	8	60	2	2
Total --	260	833	32	31
Secondary Forestry Total --	7,097	27,377	1,414	1,884
Forestry Total --	13,686	39,437	2,668	4,037
Agriculture & Forestry Total --	49,047	179,734	6,426	13,967
Construction --	31,716	183,960	11,603	10,893
Finance --	17,334	115,798	6,449	7,441
Government --	50,038	476,412	27,698	34,805
Insurance --	13,306	61,246	3,875	6,135
Manufacturing --	121,265	239,557	17,068	32,566
Mining --	2,246	6,960	357	1,437
Miscellaneous --	4,538	76,435	2,740	2,852
Real Estate --	45,458	131,627	2,496	33,982
Retail Trade --	29,455	375,404	11,939	18,658
Services --	166,630	1,640,492	82,322	101,597
Transportations --	17,752	103,981	5,827	7,300
Utilities --	4,230	3,733	356	1,529
Wholesale Trade --	29,570	134,567	9,571	18,956
Total Economy --	582,586	3,729,906	188,725	292,119

^aTotals may not add due to rounding.

^bValues of zero are nonzero values less than 1.

Table D.2. Direct Impacts from Agriculture and Forestry^a, Chattanooga, 2013

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Nitrogenous fertilizer	0	0	0	0
Phosphatic fertilizer	0	0	0	0
Fertilizer mixing	0	0	0	0
Pesticide & other agricultural chemical	17	11	1	6
Lime	0	0	0	0
Total --	17	11	1	6
<u>Agricultural Machinery</u>				
Farm machinery & equipment	124	185	14	35
Lawn & garden equipment	0	0	0	0
Total --	124	185	14	35
<i>Agricultural Inputs Total --</i>	140	196	15	41
<i>Primary Agriculture</i>				
Oilseed farming	20	122	1	12
Grain farming	14	184	0 ^b	0 ^b
Vegetable & melon farming	11	134	2	9
Fruit farming	1	38	0 ^b	1
Tree nut farming	0 ^b	1	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	14	221	2	10
Tobacco farming	2	47	0 ^b	1
Cotton farming	0	0	0	0
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	49	2,644	9	29
Dairy cattle & milk production	41	240	2	19
Beef cattle ranching & farming	60	1,303	3	24
Poultry & egg production	165	628	10	53
Animal production, except cattle & poultry & eggs	7	224	1	6
Commercial fishing	0	0	0	0
Commercial hunting & trapping	6	120	1	3
Support activities for agriculture & forestry	13	420	7	8
<i>Primary Agriculture Total --</i>	403	6,325	40	176
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	0	0	0	0
Other animal food	13	8	1	3
Total --	13	8	1	3
<u>Grain & Oilseed Milling</u>				
Flour milling	96	63	3	12
Rice milling	0	0	0	0
Malt	0	0	0	0
Wet corn milling	0	0	0	0
Soybean & other oilseed processing	0	0	0	0
Fats & oils refining & blending	93	45	4	10

Table D.2. Direct Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Breakfast cereal	16	17	2	6
Total --	205	125	9	28
<u>Sugar & Confectionary Products</u>				
Beet sugar	0	0	0	0
Sugar cane mills & refining	0	0	0	0
Nonchocolate confectionery	150	351	22	43
Chocolate & confectionery (from cacao beans)	5	8	0 ^b	0 ^b
Confectionery (from purchased chocolate)	228	622	42	76
Total --	383	981	64	119
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen fruits, juices & vegetables	303	622	58	91
Frozen specialties	0	0	0	0
Canned fruits & vegetables	0	0	0	0
Canned specialties	0	0	0	0
Dehydrated food products	0	0	0	0
Total --	303	622	58	91
<u>Dairy Products</u>				
Fluid milk	0	0	0	0
Creamery butter	0	0	0	0
Cheese	10	10	1	1
Dry, condensed, & evaporated dairy product	0	0	0	0
Ice cream & frozen dessert	170	440	25	47
Total --	179	451	26	48
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering	30	48	4	6
Meat processed from carcasses	10	17	3	3
Rendering & meat byproduct processing	8	13	1	1
Poultry processing	506	2,018	60	79
Total --	554	2,097	67	89
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product, except frozen	271	2,072	107	130
Frozen cakes & other pastries	3	21	1	1
Cookie & cracker	514	1,240	98	191
Dry pasta, mixes, & dough	4	7	1	1
Tortilla	0	0	0	0
Total --	793	3,339	207	323
<u>Other Foods</u>				
Roasted nuts & peanut butter	3	4	0 ^b	1
Other snack food	0	0	0	0
Coffee & tea	1	1	0 ^b	0 ^b
Flavoring syrup & concentrate	38	6	3	29

Table D.2. Direct Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Mayonnaise, dressing, & sauce	0	0	0	0
Spice & extract	0	0	0	0
All other food	0	0	0	0
Total --	41	11	3	29
<u>Beverages</u>				
Bottled & canned soft drinks & water	487	591	49	104
Breweries	1	1	0 ^b	0 ^b
Wineries	0 ^b	1	0 ^b	0 ^b
Distilleries	0	0	0	0
Total --	488	593	49	104
<u>Tobacco Products</u>				
	0	0	0	0
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	254	817	30	35
Broadwoven fabric mills	14	55	3	3
Narrow fabric mills & schiffli machine embroidery	0	0	0	0
Nonwoven fabric mills	14	30	4	4
Knit fabric mills	20	93	4	5
Textile & fabric finishing mills	2	9	0 ^b	0 ^b
Fabric coating mills	0	0	0	0
Total --	303	1,005	41	48
<u>Textile Products Mills</u>				
Carpet & rug mills	6	19	1	1
Curtain & linen mills	2	13	0 ^b	0 ^b
Textile bag & canvas mills	30	248	10	10
Rope, cordage, twine, tire cord & tire fabric mills	0	0	0	0
Other textile product mills	13	104	4	4
Total --	51	384	15	16
<u>Apparel</u>				
Hosiery & sock mills	67	568	22	22
Other apparel knitting mills	25	145	6	6
Cut & sew apparel contractors	3	47	1	1
Men's & boy's cut & sew apparel	94	839	29	30
Women's & girl's cut & sew apparel	0 ^b	1	0 ^b	0 ^b
Other cut & sew apparel	0 ^b	1	0 ^b	0 ^b
Apparel accessories & other apparel	0	0	0	0
Total --	188	1,602	58	60
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	0	0	0	0
Footwear	0	0	0	0
Other leather & allied product	8	84	2	1
Total --	8	84	2	1

Table D.2. Direct Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Agriculture Total --</i>	3,510	11,300	600	960
<i>Agriculture Total --</i>	4,053	17,822	654	1,177
<i>Forestry Inputs</i>				
<u>Sawmill, Woodworking, & Paper Machinery</u>	18	74	6	7
<u>Timber</u>				
Forestry, forest products, & timber tract production	0 ^b	1	0 ^b	0 ^b
Commercial logging	21	187	12	13
Total --	21	188	12	13
<i>Forestry Inputs Total --</i>	40	262	18	20
<i>Primary Forestry</i>				
Sawmills	15	63	2	3
Wood preservation	6	14	1	1
Pulp mills	119	139	9	25
Paper mills	570	671	71	167
Paperboard Mills	140	136	35	53
<i>Primary Forestry Total --</i>	851	1,023	119	250
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	0	0	0	0
Engineered wood member & truss	13	77	4	4
Reconstituted wood product	65	149	8	17
Total --	78	226	12	21
<u>Wood Windows & Doors & Millwork</u>				
Wood windows & door	0	0	0	0
Cut stock, resawing lumber, & planning	25	124	4	9
Other millwork, including flooring	9	39	4	4
Total --	34	163	8	13
<u>Wood Containers & Pallets</u>	53	395	16	20
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	0	0	0	0
Prefabricated wood building	4	22	1	1
Total --	4	22	1	1
<u>All Other Miscellaneous Wood Products</u>	7	33	3	4
<u>Paperboard Containers</u>	482	1,172	71	95
<u>Paper Bags & Coated & Treated Paper</u>	24	49	5	7
<u>Stationery Products</u>	39	124	2	6

Table D.2. Direct Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Converted Paper Products</u>				
Sanitary paper product	0	0	0	0
All other converted paper product	0	0	0	0
Total --	0	0	0	0
<u>Wood Kitchen Cabinets & Countertops</u>	27	211	9	10
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	411	2,425	94	95
Nonupholstered wood household furniture	1	6	0 ^b	0 ^b
Other household nonupholstered furniture	0	0	0	0
Institutional furniture	0	0	0	0
Total --	412	2,431	94	95
<u>Office Furniture</u>				
Wood office furniture	8	52	2	2
Custom architectural woodwork & millwork	2	16	1	1
Showcase, partition, shelving, & locker	7	36	2	2
Total --	17	104	5	5
<u>Other Furniture Related Products</u>				
Mattress	51	156	6	6
Blind & shade	0	0	0	0
Total --	51	156	6	6
Secondary Forestry Total --	1,228	5,086	232	282
Forestry Total --	2,118	6,371	369	552
Agriculture & Forestry Total --	6,172	24,193	1,023	1,729
Construction --	3,218	18,639	1,181	1,108
Finance --	1,470	10,590	444	551
Government --	7,482	49,687	3,069	4,250
Insurance --	2,606	10,212	679	1,225
Manufacturing --	16,023	31,217	2,155	4,238
Mining --	158	573	20	95
Miscellaneous --	464	7,569	253	268
Real Estate --	4,255	11,790	127	3,149
Retail Trade --	2,948	36,211	1,241	1,903
Services --	14,466	156,869	6,709	8,493
Transportations --	2,343	15,132	791	962
Utilities --	417	422	37	160
Wholesale Trade --	2,483	11,674	748	1,562
Total Economy --	64,506	384,777	18,478	29,693

^aTotals may not add due to rounding.^bValues of zero are nonzero values less than 1.

Table D.3. Direct Impacts from Agriculture and Forestry^a, Knoxville, 2013

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Nitrogenous fertilizer	0	0	0	0
Phosphatic fertilizer	0	0	0	0
Fertilizer mixing	0	0	0	0
Pesticide & other agricultural chemical	55	36	3	21
Lime	64	129	8	15
Total --	120	165	12	36
<u>Agricultural Machinery</u>				
Farm machinery & equipment	6	9	0	1
Lawn & garden equipment	0	0	0	0
Total --	6	9	0 ^b	1
<i>Agricultural Inputs Total --</i>	125	174	12	37
<i>Primary Agriculture</i>				
Oilseed farming	13	126	1	8
Grain farming	10	198	0 ^b	0 ^b
Vegetable & melon farming	14	230	2	11
Fruit farming	1	42	0 ^b	1
Tree nut farming	0 ^b	3	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	37	927	13	26
Tobacco farming	4	109	1	2
Cotton farming	0	0	0	0
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	68	5,272	21	41
Dairy cattle & milk production	28	260	4	13
Beef cattle ranching & farming	89	2,809	5	36
Poultry & egg production	37	200	4	12
Animal production, except cattle & poultry & eggs	10	451	1	8
Commercial fishing	0	0	0	0
Commercial hunting & trapping	4	78	1	1
Support activities for agriculture & forestry	30	1,014	18	20
<i>Primary Agriculture Total --</i>	345	11,718	73	179
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	0	0	0	0
Other animal food	43	28	2	8
Total --	43	28	2	8
<u>Grain & Oilseed Milling</u>				
Flour milling	66	43	3	8
Rice milling	0	0	0	0
Malt	0	0	0	0
Wet corn milling	806	339	41	154
Soybean & other oilseed processing	0	0	0	0
Fats & oils refining & blending	0	0	0	0

Table D.3. Direct Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Breakfast cereal	0	0	0	0
Total --	872	382	44	162
<u>Sugar & Confectionary Products</u>				
Beet sugar	0	0	0	0
Sugar cane mills & refining	0	0	0	0
Nonchocolate confectionery	17	44	1	4
Chocolate & confectionery (from cacao beans)	0	0	0	0
Confectionery (from purchased chocolate)	37	110	4	10
Total --	54	154	5	13
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen fruits, juices & vegetables	0	0	0	0
Frozen specialties	32	95	5	6
Canned fruits & vegetables	566	1,033	80	124
Canned specialties	0	0	0	0
Dehydrated food products	0	0	0	0
Total --	597	1,128	85	130
<u>Dairy Products</u>				
Fluid milk	12	15	1	2
Creamery butter	0	0	0	0
Cheese	4	3	1	1
Dry, condensed, & evaporated dairy product	0	0	0	0
Ice cream & frozen dessert	10	25	2	3
Total --	25	43	4	6
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering	181	295	17	31
Meat processed from carcasses	255	566	19	30
Rendering & meat byproduct processing	23	37	2	3
Poultry processing	164	651	20	26
Total --	623	1,548	59	90
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product, except frozen	111	1,016	30	41
Frozen cakes & other pastries	7	45	1	2
Cookie & cracker	0	0	0	0
Dry pasta, mixes, & dough	1	2	0 ^b	1
Tortilla	0	0	0	0
Total --	119	1,063	32	44
<u>Other Foods</u>				
Roasted nuts & peanut butter	0	0	0	0
Other snack food	0	0	0	0
Coffee & tea	732	964	55	142
Flavoring syrup & concentrate	0	0	0	0

Table D.3. Direct Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Mayonnaise, dressing, & sauce	0	0	0	0
Spice & extract	0	0	0	0
All other food	21	57	4	5
Total --	752	1,021	59	147
<u>Beverages</u>				
Bottled & canned soft drinks & water	599	745	47	116
Breweries	3	4	0 ^b	1
Wineries	10	36	0 ^b	1
Distilleries	261	212	9	128
Total --	873	997	56	246
<u>Tobacco Products</u>				
	0	0	0	0
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	4	14	0 ^b	1
Broadwoven fabric mills	0	0	0	0
Narrow fabric mills & schiffli machine embroidery	12	74	4	4
Nonwoven fabric mills	21	49	3	4
Knit fabric mills	10	48	2	3
Textile & fabric finishing mills	27	139	2	3
Fabric coating mills	13	41	2	3
Total --	87	366	14	18
<u>Textile Products Mills</u>				
Carpet & rug mills	0 ^b	1	0 ^b	0 ^b
Curtain & linen mills	2	13	0 ^b	0 ^b
Textile bag & canvas mills	27	210	9	10
Rope, cordage, twine, tire cord & tire fabric mills	11	43	3	3
Other textile product mills	75	632	20	23
Total --	115	899	32	36
<u>Apparel</u>				
Hosiery & sock mills	0	0	0	0
Other apparel knitting mills	0	0	0	0
Cut & sew apparel contractors	4	86	2	1
Men's & boy's cut & sew apparel	30	290	7	8
Women's & girl's cut & sew apparel	1	4	0 ^b	0 ^b
Other cut & sew apparel	1	7	0 ^b	0 ^b
Apparel accessories & other apparel	0 ^b	3	0 ^b	0 ^b
Total --	36	390	10	9
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	0	0	0	0
Footwear	155	585	84	83
Other leather & allied product	1	13	1	0 ^b
Total --	156	598	84	84

Table D.3. Direct Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Agriculture Total --</i>	4,353	8,620	485	993
<i>Agriculture Total --</i>	4,823	20,512	570	1,210
<i>Forestry Inputs</i>				
<u>Sawmill, Woodworking, & Paper Machinery</u>	8	33	2	3
<u>Timber</u>				
Forestry, forest products, & timber tract production	1	6	0 ^b	1
Commercial logging	21	250	9	10
Total --	22	256	9	11
<i>Forestry Inputs Total --</i>	30	289	11	13
<i>Primary Forestry</i>				
Sawmills	90	372	15	19
Wood preservation	4	10	0 ^b	1
Pulp mills	0	0	0	0
Paper mills	80	80	20	32
Paperboard Mills	34	31	10	14
<i>Primary Forestry Total --</i>	207	492	45	65
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	3	12	1	1
Engineered wood member & truss	27	166	7	7
Reconstituted wood product	0	0	0	0
Total --	30	179	7	8
<u>Wood Windows & Doors & Millwork</u>				
Wood windows & door	12	68	3	4
Cut stock, resawing lumber, & planning	30	148	5	10
Other millwork, including flooring	43	265	9	13
Total --	85	481	16	27
<u>Wood Containers & Pallets</u>				
	18	142	5	6
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	245	1,433	72	98
Prefabricated wood building	18	92	5	8
Total --	263	1,525	77	106
<u>All Other Miscellaneous Wood Products</u>				
	9	50	2	3
<u>Paperboard Containers</u>				
	322	736	64	79
<u>Paper Bags & Coated & Treated Paper</u>				
	28	56	7	9
<u>Stationery Products</u>				
	172	470	32	46

Table D.3. Direct Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Converted Paper Products</u>				
Sanitary paper product	0	0	0	0
All other converted paper product	84	262	16	21
Total --	84	262	16	21
<u>Wood Kitchen Cabinets & Countertops</u>				
	18	157	5	5
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	245	1,389	63	64
Nonupholstered wood household furniture	31	268	9	9
Other household nonupholstered furniture	12	54	2	2
Institutional furniture	16	107	5	5
Total --	304	1,817	79	79
<u>Office Furniture</u>				
Wood office furniture	0 ^b	1	0 ^b	0 ^b
Custom architectural woodwork & millwork	8	64	2	2
Showcase, partition, shelving, & locker	23	116	8	8
Total --	31	180	10	10
<u>Other Furniture Related Products</u>				
Mattress	20	62	2	2
Blind & shade	0	0	0	0
Total --	20	62	2	2
Secondary Forestry Total --	1,384	6,117	323	402
Forestry Total --	1,620	6,898	379	480
Agriculture & Forestry Total --	6,443	27,410	950	1,690
Construction --	5,883	34,931	2,064	1,929
Finance --	2,868	20,850	863	1,079
Government --	7,253	74,812	4,268	5,318
Insurance --	1,394	7,079	360	594
Manufacturing --	16,416	38,342	2,734	4,849
Mining --	556	1,616	95	357
Miscellaneous --	785	13,443	449	480
Real Estate --	8,093	23,508	440	6,050
Retail Trade --	5,486	72,054	2,128	3,416
Services --	27,682	277,444	12,664	15,877
Transportations --	2,525	16,232	878	1,082
Utilities --	410	394	35	166
Wholesale Trade --	4,659	21,717	1,432	2,947
Total Economy --	90,453	629,831	29,359	45,833

^aTotals may not add due to rounding.^bValues of zero are nonzero values less than 1.

Table D.4. Direct Impacts from Agriculture and Forestry^a, Memphis, 2013

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Nitrogenous fertilizer	0	0	0	0
Phosphatic fertilizer	59	36	2	8
Fertilizer mixing	22	36	1	3
Pesticide & other agricultural chemical	376	237	36	149
Lime	0	0	0	0
Total --	457	309	40	161
<u>Agricultural Machinery</u>				
Farm machinery & equipment	5	8	1	2
Lawn & garden equipment	370	736	33	73
Total --	376	744	33	74
<i>Agricultural Inputs Total --</i>	833	1,053	74	235
<i>Primary Agriculture</i>				
Oilseed farming	606	2,776	35	376
Grain farming	638	5,842	9	-1
Vegetable & melon farming	9	83	1	7
Fruit farming	2	46	0 ^b	1
Tree nut farming	0 ^b	2	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	47	706	8	32
Tobacco farming	5	60	2	3
Cotton farming	186	1,688	36	115
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	53	2,680	8	32
Dairy cattle & milk production	10	43	1	5
Beef cattle ranching & farming	71	1,438	3	29
Poultry & egg production	43	123	3	14
Animal production, except cattle & poultry & eggs	54	1,152	6	47
Commercial fishing	0	0	0	0
Commercial hunting & trapping	11	136	6	7
Support activities for agriculture & forestry	118	2,752	85	90
<i>Primary Agriculture Total --</i>	1,852	19,528	204	756
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	267	168	19	97
Other animal food	12	7	2	4
Total --	279	175	21	100
<u>Grain & Oilseed Milling</u>				
Flour milling	103	67	5	14
Rice milling	52	52	2	6
Malt	0	0	0	0
Wet corn milling	0	0	0	0
Soybean & other oilseed processing	3,234	617	70	242
Fats & oils refining & blending	304	146	13	32

Table D.4. Direct Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Breakfast cereal	512	544	48	200
Total --	4,206	1,425	139	494
<u>Sugar & Confectionary Products</u>				
Beet sugar	0	0	0	0
Sugar cane mills & refining	33	31	2	7
Nonchocolate confectionery	315	741	45	89
Chocolate & confectionery (from cacao beans)	3	5	0 ^b	0 ^b
Confectionery (from purchased chocolate)	45	123	8	15
Total --	396	899	55	111
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen fruits, juices & vegetables	108	235	16	28
Frozen specialties	330	956	60	75
Canned fruits & vegetables	44	73	10	13
Canned specialties	0	0	0	0
Dehydrated food products	0	0	0	0
Total --	482	1,264	86	117
<u>Dairy Products</u>				
Fluid milk	99	128	9	16
Creamery butter	0	0	0	0
Cheese	81	86	4	8
Dry, condensed, & evaporated dairy product	448	312	30	64
Ice cream & frozen dessert	137	375	14	33
Total --	764	901	58	120
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering	1,262	2,098	97	193
Meat processed from carcasses	188	409	17	25
Rendering & meat byproduct processing	83	136	7	11
Poultry processing	0	0	0	0
Total --	1,532	2,644	122	229
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product, except frozen	91	805	27	36
Frozen cakes & other pastries	27	157	7	10
Cookie & cracker	0	0	0	0
Dry pasta, mixes, & dough	6	11	1	2
Tortilla	0	0	0	0
Total --	124	972	35	48
<u>Other Foods</u>				
Roasted nuts & peanut butter	0 ^b	1	0 ^b	0 ^b
Other snack food	894	1,015	84	332
Coffee & tea	27	36	2	5
Flavoring syrup & concentrate	0	0	0	0

Table D.4. Direct Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Mayonnaise, dressing, & sauce	39	58	3	8
Spice & extract	1	2	0 ^b	0 ^b
All other food	101	282	17	23
Total --	1,062	1,394	106	368
<u>Beverages</u>				
Bottled & canned soft drinks & water	835	1,036	67	164
Breweries	40	49	2	9
Wineries	7	22	1	2
Distilleries	0	0	0	0
Total --	882	1,107	70	175
<u>Tobacco Products</u>				
	680	257	25	356
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	97	291	17	19
Broadwoven fabric mills	2	8	1	1
Narrow fabric mills & schiffli machine embroidery	0	0	0	0
Nonwoven fabric mills	7	15	1	1
Knit fabric mills	0	0	0	0
Textile & fabric finishing mills	21	98	4	5
Fabric coating mills	7	22	2	2
Total --	134	435	24	27
<u>Textile Products Mills</u>				
Carpet & rug mills	0	0	0	0
Curtain & linen mills	7	46	2	2
Textile bag & canvas mills	8	62	3	3
Rope, cordage, twine, tire cord & tire fabric mills	57	214	13	17
Other textile product mills	14	109	4	5
Total --	86	432	23	28
<u>Apparel</u>				
Hosiery & sock mills	0	0	0	0
Other apparel knitting mills	0	0	0	0
Cut & sew apparel contractors	25	432	12	9
Men's & boy's cut & sew apparel	8	42	5	5
Women's & girl's cut & sew apparel	10	54	1	1
Other cut & sew apparel	0	0	0	0
Apparel accessories & other apparel	1	7	1	1
Total --	44	536	19	16
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	12	35	1	1
Footwear	28	189	5	5
Other leather & allied product	2	25	0 ^b	0 ^b
Total --	42	249	7	7

Table D.4. Direct Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Agriculture Total --</i>	10,715	12,689	789	2,195
<i>Agriculture Total --</i>	13,400	33,270	1,066	3,186
<i>Forestry Inputs</i>				
<u>Sawmill, Woodworking, & Paper Machinery</u>	4	15	1	2
<u>Timber</u>				
Forestry, forest products, & timber tract production	5	15	2	3
Commercial logging	105	897	63	68
Total --	110	912	65	70
<i>Forestry Inputs Total --</i>	114	927	66	72
<i>Primary Forestry</i>				
Sawmills	188	790	30	38
Wood preservation	4	9	0 ^b	1
Pulp mills	164	149	46	63
Paper mills	3,231	3,513	618	1,117
Paperboard Mills	741	814	115	222
<i>Primary Forestry Total --</i>	4,327	5,274	808	1,440
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	8	37	1	1
Engineered wood member & truss	9	56	3	3
Reconstituted wood product	0	0	0	0
Total --	17	93	3	4
<u>Wood Windows & Doors & Millwork</u>				
Wood windows & door	121	655	31	40
Cut stock, resawing lumber, & planning	11	51	2	4
Other millwork, including flooring	100	595	22	32
Total --	232	1,301	56	76
<u>Wood Containers & Pallets</u>				
	107	834	30	37
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	58	338	17	23
Prefabricated wood building	2	14	1	1
Total --	60	352	17	24
<u>All Other Miscellaneous Wood Products</u>				
	8	48	1	3
<u>Paperboard Containers</u>				
	439	1,056	68	90
<u>Paper Bags & Coated & Treated Paper</u>				
	307	667	52	81
<u>Stationery Products</u>				
	28	80	4	6

Table D.4. Direct Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Converted Paper Products</u>				
Sanitary paper product	472	551	47	147
All other converted paper product	0	0	0	0
Total --	472	551	47	147
<u>Wood Kitchen Cabinets & Countertops</u>	39	302	14	14
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	0	0	0	0
Nonupholstered wood household furniture	11	94	4	4
Other household nonupholstered furniture	7	26	2	2
Institutional furniture	45	303	12	12
Total --	63	423	18	18
<u>Office Furniture</u>				
Wood office furniture	0 ^b	1	0 ^b	0 ^b
Custom architectural woodwork & millwork	6	36	3	3
Showcase, partition, shelving, & locker	13	68	5	5
Total --	20	105	8	8
<u>Other Furniture Related Products</u>				
Mattress	5	13	1	1
Blind & shade	2	10	1	1
Total --	6	22	2	2
Secondary Forestry Total --	1,799	5,834	321	509
Forestry Total --	6,240	12,035	1,195	2,021
Agriculture & Forestry Total --	19,639	45,305	2,261	5,207
Construction --	6,996	39,618	2,668	2,515
Finance --	4,504	29,253	2,063	2,222
Government --	15,952	133,070	8,236	10,288
Insurance --	2,289	11,802	636	993
Manufacturing --	24,520	48,516	3,668	7,160
Mining --	365	1,037	52	251
Miscellaneous --	1,132	17,991	772	785
Real Estate --	10,836	31,134	707	8,132
Retail Trade --	7,159	89,501	2,957	4,576
Services --	40,149	435,259	19,734	24,420
Transportations --	5,078	27,130	1,698	2,154
Utilities --	535	418	59	209
Wholesale Trade --	8,917	39,273	3,080	5,819
Total Economy --	148,070	949,308	48,590	74,730

^aTotals may not add due to rounding.^bValues of zero are nonzero values less than 1.

Table D.5. Direct Impacts from Agriculture and Forestry^a, Nashville, 2013

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Nitrogenous fertilizer	0	0	0	0
Phosphatic fertilizer	0	0	0	0
Fertilizer mixing	0	0	0	0
Pesticide & other agricultural chemical	10	6	1	4
Lime	8	16	1	2
Total --	18	22	2	5
<u>Agricultural Machinery</u>				
Farm machinery & equipment	24	36	2	7
Lawn & garden equipment	0	0	0	0
Total --	24	36	2	7
<i>Agricultural Inputs Total --</i>	41	58	4	12
<i>Primary Agriculture</i>				
Oilseed farming	252	1,658	15	156
Grain farming	206	2,675	3	0 ^b
Vegetable & melon farming	16	205	2	13
Fruit farming	4	146	1	3
Tree nut farming	0 ^b	4	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	197	3,336	48	136
Tobacco farming	86	1,719	18	53
Cotton farming	9	117	2	6
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	235	14,035	38	141
Dairy cattle & milk production	69	437	4	31
Beef cattle ranching & farming	351	8,458	16	142
Poultry & egg production	262	1,027	15	85
Animal production, except cattle & poultry & eggs	44	1,562	5	38
Commercial fishing	0	0	0	0
Commercial hunting & trapping	13	243	3	5
Support activities for agriculture & forestry	90	2,821	56	61
<i>Primary Agriculture Total --</i>	1,834	38,442	227	871
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	416	263	27	149
Other animal food	67	42	4	13
Total --	482	305	31	162
<u>Grain & Oilseed Milling</u>				
Flour milling	165	106	10	25
Rice milling	0	0	0	0
Malt	0	0	0	0
Wet corn milling	0	0	0	0
Soybean & other oilseed processing	0	0	0	0
Fats & oils refining & blending	35	17	2	4

Table D.5. Direct Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Breakfast cereal	16	18	1	6
Total --	216	140	13	35
<u>Sugar & Confectionary Products</u>				
Beet sugar	0	0	0	0
Sugar cane mills & refining	0	0	0	0
Nonchocolate confectionery	5	10	1	2
Chocolate & confectionery (from cacao beans)	25	38	1	3
Confectionery (from purchased chocolate)	199	559	31	62
Total --	228	608	34	67
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen fruits, juices & vegetables	0	0	0	0
Frozen specialties	228	697	32	43
Canned fruits & vegetables	253	454	40	59
Canned specialties	0	0	0	0
Dehydrated food products	0	0	0	0
Total --	482	1,151	72	102
<u>Dairy Products</u>				
Fluid milk	399	525	32	60
Creamery butter	0	0	0	0
Cheese	39	41	3	4
Dry, condensed, & evaporated dairy product	37	27	1	4
Ice cream & frozen dessert	8	20	1	2
Total --	483	613	37	71
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering	462	785	27	63
Meat processed from carcasses	214	464	20	29
Rendering & meat byproduct processing	0	0	0	0
Poultry processing	1,028	3,967	152	189
Total --	1,704	5,216	199	280
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product, except frozen	259	2,208	84	108
Frozen cakes & other pastries	33	220	5	9
Cookie & cracker	462	1,161	72	159
Dry pasta, mixes, & dough	174	313	16	49
Tortilla	31	141	7	11
Total --	958	4,042	184	337
<u>Other Foods</u>				
Roasted nuts & peanut butter	3	5	0	1
Other snack food	710	830	47	250
Coffee & tea	33	41	4	8
Flavoring syrup & concentrate	0	0	0	0

Table D.5. Direct Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Mayonnaise, dressing, & sauce	259	389	20	51
Spice & extract	23	46	2	3
All other food	10	30	2	2
Total --	1,038	1,340	75	315
<u>Beverages</u>				
Bottled & canned soft drinks & water	534	660	45	107
Breweries	21	25	1	5
Wineries	39	132	3	7
Distilleries	767	600	54	391
Total --	1,362	1,417	103	510
<u>Tobacco Products</u>	1,726	654	57	900
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	13	40	2	2
Broadwoven fabric mills	0 ^b	1	0 ^b	0 ^b
Narrow fabric mills & schiffli machine embroidery	0	0	0	0
Nonwoven fabric mills	218	486	42	54
Knit fabric mills	0	0	0	0
Textile & fabric finishing mills	48	210	11	13
Fabric coating mills	3	8	0 ^b	1
Total --	282	745	56	70
<u>Textile Products Mills</u>				
Carpet & rug mills	58	193	9	9
Curtain & linen mills	8	58	1	2
Textile bag & canvas mills	18	134	7	8
Rope, cordage, twine, tire cord & tire fabric mills	100	403	19	26
Other textile product mills	37	283	12	13
Total --	221	1,072	48	58
<u>Apparel</u>				
Hosiery & sock mills	0	0	0	0
Other apparel knitting mills	9	56	2	2
Cut & sew apparel contractors	18	307	9	7
Men's & boy's cut & sew apparel	130	883	62	63
Women's & girl's cut & sew apparel	0 ^b	2	0 ^b	0 ^b
Other cut & sew apparel	17	167	6	6
Apparel accessories & other apparel	9	81	2	2
Total --	184	1,496	81	80
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	14	43	2	2
Footwear	79	347	37	37
Other leather & allied product	7	57	3	3
Total --	100	447	41	41

Table D.5. Direct Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Agriculture Total --</i>	9,468	19,246	1,031	3,026
<i>Agriculture Total --</i>	11,343	57,745	1,261	3,909
<i>Forestry Inputs</i>				
<u>Sawmill, Woodworking, & Paper Machinery</u>	4	19	1	1
<u>Timber</u>				
Forestry, forest products, & timber tract production	3	18	1	1
Commercial logging	133	1,403	67	74
Total --	136	1,421	67	75
<i>Forestry Inputs Total --</i>	140	1,440	68	76
<i>Primary Forestry</i>				
Sawmills	359	1,506	56	72
Wood preservation	2	5	0 ^b	0 ^b
Pulp mills	0	0	0	0
Paper mills	154	183	18	44
Paperboard Mills	0	0	0	0
<i>Primary Forestry Total --</i>	514	1,694	74	116
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	0	0	0	0
Engineered wood member & truss	51	313	13	14
Reconstituted wood product	37	87	4	10
Total --	89	400	18	23
<u>Wood Windows & Doors & Millwork</u>				
Wood windows & door	34	169	10	13
Cut stock, resawing lumber, & planning	32	151	7	12
Other millwork, including flooring	73	430	17	24
Total --	139	750	34	49
<u>Wood Containers & Pallets</u>				
	84	687	20	26
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	37	215	12	15
Prefabricated wood building	32	169	9	13
Total --	69	384	20	29
<u>All Other Miscellaneous Wood Products</u>				
	103	581	19	35
<u>Paperboard Containers</u>				
	758	1,745	146	182
<u>Paper Bags & Coated & Treated Paper</u>				
	119	259	20	31
<u>Stationery Products</u>				
	122	334	22	32

Table D.5. Direct Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Converted Paper Products</u>				
Sanitary paper product	0	0	0	0
All other converted paper product	73	235	12	16
Total --	73	235	12	16
<u>Wood Kitchen Cabinets & Countertops</u>	81	664	25	25
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	6	36	2	2
Nonupholstered wood household furniture	39	337	12	12
Other household nonupholstered furniture	26	114	5	5
Institutional furniture	4	28	1	1
Total --	75	514	19	19
<u>Office Furniture</u>				
Wood office furniture	4	21	1	1
Custom architectural woodwork & millwork	27	174	11	11
Showcase, partition, shelving, & locker	190	1,073	54	53
Total --	221	1,268	65	65
<u>Other Furniture Related Products</u>				
Mattress	165	509	19	19
Blind & shade	6	45	1	1
Total --	171	554	20	20
Secondary Forestry Total --	2,104	8,375	442	554
Forestry Total --	2,758	11,508	584	745
Agriculture & Forestry Total --	14,101	69,253	1,845	4,654
Construction --	13,340	76,195	5,008	4,714
Finance --	7,378	46,707	2,768	3,184
Government --	16,357	183,020	10,291	12,644
Insurance --	6,728	30,376	2,140	3,218
Manufacturing --	50,485	96,699	6,443	12,784
Mining --	1,064	3,422	169	662
Miscellaneous --	1,852	31,916	1,097	1,135
Real Estate --	19,400	58,113	1,163	14,536
Retail Trade --	11,802	149,867	4,857	7,501
Services --	75,080	667,290	39,155	47,812
Transportations --	7,074	41,153	2,208	2,783
Utilities --	2,540	2,159	206	864
Wholesale Trade --	12,122	55,128	3,930	7,774
Total Economy --	239,324	1,511,298	81,280	124,266

^aTotals may not add due to rounding.^bValues of zero are nonzero values less than 1.

Table D.6. Direct Impacts from Agriculture and Forestry^a, TriCities, 2013

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Nitrogenous fertilizer	0	0	0	0
Phosphatic fertilizer	0	0	0	0
Fertilizer mixing	9	15	0 ^b	1
Pesticide & other agricultural chemical	102	67	6	38
Lime	0	0	0	0
Total --	111	82	7	39
<u>Agricultural Machinery</u>				
Farm machinery & equipment	0	0	0	0
Lawn & garden equipment	206	407	19	41
Total --	206	407	19	41
<i>Agricultural Inputs Total --</i>	317	489	26	80
<i>Primary Agriculture</i>				
Oilseed farming	4	32	0 ^b	2
Grain farming	7	122	0 ^b	0 ^b
Vegetable & melon farming	7	112	1	6
Fruit farming	1	21	0 ^b	0 ^b
Tree nut farming	0 ^b	1	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	26	516	4	18
Tobacco farming	10	290	2	6
Cotton farming	0	0	0	0
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	54	3,756	8	32
Dairy cattle & milk production	17	134	1	8
Beef cattle ranching & farming	68	1,927	3	27
Poultry & egg production	46	259	3	15
Animal production, except cattle & poultry & eggs	8	362	1	7
Commercial fishing	0	0	0	0
Commercial hunting & trapping	1	31	0 ^b	0 ^b
Support activities for agriculture & forestry	11	368	6	7
<i>Primary Agriculture Total --</i>	260	7,931	29	130
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	0	0	0	0
Other animal food	19	11	2	4
Total --	19	11	2	4
<u>Grain & Oilseed Milling</u>				
Flour milling	0	0	0	0
Rice milling	0	0	0	0
Malt	0	0	0	0
Wet corn milling	0	0	0	0
Soybean & other oilseed processing	0	0	0	0
Fats & oils refining & blending	0	0	0	0

Table D.6. Direct Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Breakfast cereal	0	0	0	0
Total --	0	0	0	0
<u>Sugar & Confectionary Products</u>				
Beet sugar	0	0	0	0
Sugar cane mills & refining	0	0	0	0
Nonchocolate confectionery	4	8	1	1
Chocolate & confectionery (from cacao beans)	0	0	0	0
Confectionery (from purchased chocolate)	0	0	0	0
Total --	4	8	1	1
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen fruits, juices & vegetables	0	0	0	0
Frozen specialties	0	0	0	0
Canned fruits & vegetables	2	4	0 ^b	0 ^b
Canned specialties	0	0	0	0
Dehydrated food products	145	297	29	42
Total --	146	301	29	42
<u>Dairy Products</u>				
Fluid milk	2	3	0 ^b	0 ^b
Creamery butter	0	0	0	0
Cheese	90	98	4	7
Dry, condensed, & evaporated dairy product	188	129	16	30
Ice cream & frozen dessert	0	0	0	0
Total --	281	230	20	37
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering	53	91	3	7
Meat processed from carcasses	0	0	0	0
Rendering & meat byproduct processing	0	0	0	0
Poultry processing	0	0	0	0
Total --	53	91	3	7
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product, except frozen	35	328	9	13
Frozen cakes & other pastries	3	18	0 ^b	1
Cookie & cracker	0	0	0	0
Dry pasta, mixes, & dough	0	0	0	0
Tortilla	0	0	0	0
Total --	38	347	10	13
<u>Other Foods</u>				
Roasted nuts & peanut butter	0	0	0	0
Other snack food	0	0	0	0
Coffee & tea	0	0	0	0
Flavoring syrup & concentrate	0	0	0	0

Table D.6. Direct Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Mayonnaise, dressing, & sauce	0	0	0	0
Spice & extract	0	0	0	0
All other food	0	0	0	0
Total --	0	0	0	0
<u>Beverages</u>				
Bottled & canned soft drinks & water	264	327	21	52
Breweries	1	1	0 ^b	0 ^b
Wineries	0	0	0	0
Distilleries	3	2	0 ^b	1
Total --	267	330	22	53
<u>Tobacco Products</u>				
	0	0	0	0
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	102	302	19	21
Broadwoven fabric mills	2	6	0 ^b	0 ^b
Narrow fabric mills & schiffli machine embroidery	0	0	0	0
Nonwoven fabric mills	92	215	14	20
Knit fabric mills	0	0	0	0
Textile & fabric finishing mills	32	155	4	5
Fabric coating mills	107	339	19	25
Total --	334	1,017	58	72
<u>Textile Products Mills</u>				
Carpet & rug mills	0	0	0	0
Curtain & linen mills	0 ^b	1	0 ^b	0 ^b
Textile bag & canvas mills	6	45	2	2
Rope, cordage, twine, tire cord & tire fabric mills	0	0	0	0
Other textile product mills	7	59	2	2
Total --	13	105	4	4
<u>Apparel</u>				
Hosiery & sock mills	0	0	0	0
Other apparel knitting mills	0	0	0	0
Cut & sew apparel contractors	2	40	1	1
Men's & boy's cut & sew apparel	4	30	2	2
Women's & girl's cut & sew apparel	0 ^b	1	0 ^b	0 ^b
Other cut & sew apparel	0 ^b	6	0 ^b	0 ^b
Apparel accessories & other apparel	0 ^b	2	0 ^b	0 ^b
Total --	7	79	3	3
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	0	0	0	0
Footwear	3	9	2	2
Other leather & allied product	0 ^b	1	0 ^b	0 ^b
Total --	3	9	2	2

Table D.6. Direct Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Agriculture Total --</i>	1,165	2,527	151	239
<i>Agriculture Total --</i>	1,742	10,947	205	449
<i>Forestry Inputs</i>				
<u>Sawmill, Woodworking, & Paper Machinery</u>	6	28	2	2
<u>Timber</u>				
Forestry, forest products, & timber tract production	1	3	0 ^b	1
Commercial logging	7	79	3	4
Total --	8	81	3	4
<i>Forestry Inputs Total --</i>	14	109	5	6
<i>Primary Forestry</i>				
Sawmills	26	114	3	5
Wood preservation	38	94	3	8
Pulp mills	0	0	0	0
Paper mills	289	344	33	82
Paperboard Mills	0	0	0	0
<i>Primary Forestry Total --</i>	354	552	40	95
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	1	7	0 ^b	0 ^b
Engineered wood member & truss	11	71	2	2
Reconstituted wood product	0	0	0	0
Total --	12	77	2	3
<u>Wood Windows & Doors & Millwork</u>				
Wood windows & door	4	21	1	1
Cut stock, resawing lumber, & planning	4	18	1	1
Other millwork, including flooring	35	199	9	12
Total --	43	239	11	15
<u>Wood Containers & Pallets</u>	23	196	5	7
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	0	0	0	0
Prefabricated wood building	5	27	1	2
Total --	5	27	1	2
<u>All Other Miscellaneous Wood Products</u>	1	4	0 ^b	0 ^b
<u>Paperboard Containers</u>	120	304	13	20
<u>Paper Bags & Coated & Treated Paper</u>	278	628	39	65
<u>Stationery Products</u>	0	0	0	0

Table D.6. Direct Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Converted Paper Products</u>				
Sanitary paper product	0	0	0	0
All other converted paper product	30	100	4	6
Total --	30	100	4	6
<u>Wood Kitchen Cabinets & Countertops</u>	19	154	6	6
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	13	69	4	4
Nonupholstered wood household furniture	0	0	0	0
Other household nonupholstered furniture	18	73	4	4
Institutional furniture	0	0	0	0
Total --	31	141	9	9
<u>Office Furniture</u>				
Wood office furniture	0	0	0	0
Custom architectural woodwork & millwork	4	28	1	1
Showcase, partition, shelving, & locker	6	28	3	3
Total --	10	56	4	4
<u>Other Furniture Related Products</u>				
Mattress	11	32	1	1
Blind & shade	1	6	0 ^b	0 ^b
Total --	11	38	1	1
Secondary Forestry Total --	583	1,964	95	137
Forestry Total --	951	2,625	141	238
Agriculture & Forestry Total --	2,693	13,572	346	687
Construction --	2,279	14,577	683	626
Finance --	1,114	8,398	310	405
Government --	2,995	35,823	1,833	2,305
Insurance --	288	1,777	60	104
Manufacturing --	13,820	24,783	2,069	3,535
Mining --	102	311	20	73
Miscellaneous --	306	5,516	170	184
Real Estate --	2,874	7,082	60	2,116
Retail Trade --	2,060	27,771	755	1,263
Services --	9,253	103,631	4,060	4,996
Transportations --	732	4,335	252	319
Utilities --	328	340	20	130
Wholesale Trade --	1,388	6,775	381	854
Total Economy --	40,233	254,691	11,019	17,596

^aTotals may not add due to rounding.^bValues of zero are nonzero values less than 1.

**Appendix E. Total Impacts from the Agriculture and Forestry Sectors,
Tennessee, 2013**

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2013

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<i>Agricultural Inputs</i>																
<i>Agricultural Chemicals</i>																
Nitrogenous fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Phosphatic fertilizer	1.36	81	1.48	88	4.07	145	5.57	199	3.67	9	4.61	11	2.39	20	2.92	24
Fertilizer mixing	1.26	37	1.37	41	1.83	94	2.34	120	2.28	4	2.86	5	2.18	8	2.76	10
Pesticide & other agricultural chemicals	1.29	725	1.44	806	3.35	1,198	5.06	1,809	2.15	102	2.69	128	1.39	303	1.62	352
Lime	1.56	113	1.78	129	2.23	324	3.06	444	2.16	20	2.71	25	2.21	38	2.78	47
Total --		956		1,063		1,761		2,571		136		170		368		433
<i>Agricultural Machinery</i>																
Farm machinery & equipment	1.27	201	1.43	226	2.05	488	2.83	674	1.82	31	2.29	39	1.49	67	1.83	82
Lawn & garden equipment	1.25	692	1.38	768	1.65	1,884	2.15	2,455	1.84	95	2.31	120	1.76	163	2.25	209
Total --		893		993		2,371		3,129		127		159		230		291
<i>Agricultural Inputs Total --</i>		1,849		2,056		4,132		5,700		262		329		598		724
<i>Primary Agriculture</i>																
Oilseed farming	1.21	1,083	1.32	1,182	1.45	6,856	1.62	7,641	2.27	118	2.95	153	1.20	664	1.30	722
Grain farming	1.58	1,384	1.76	1,545	1.65	14,908	1.79	16,176	13.96	190	18.16	247	0.00	0 ^c	0.00	0 ^c
Vegetable & melon farming	1.11	62	1.29	72	1.10	842	1.20	920	1.27	12	1.64	15	1.08	49	1.21	55
Fruit farming	1.14	10	1.37	12	1.06	310	1.12	326	1.28	2	1.66	3	1.10	8	1.27	9
Tree nut farming	1.12	1	1.34	1	1.11	12	1.22	13	1.26	0 ^b	1.64	0 ^b	1.09	1	1.25	1
Greenhouse, nursery, & floriculture production	1.15	368	1.39	445	1.10	6,280	1.21	6,893	1.22	92	1.59	119	1.13	250	1.33	295
Tobacco farming	1.21	129	1.47	156	1.12	2,501	1.22	2,714	1.38	32	1.79	41	1.20	79	1.44	95
Cotton farming	1.23	242	1.47	289	1.30	2,353	1.51	2,723	1.46	55	1.90	72	1.22	147	1.44	174
Sugarcane & sugar beet farming	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other crop farming	1.25	575	1.49	682	1.05	29,838	1.08	30,689	1.52	127	1.98	165	1.24	341	1.47	404
Dairy cattle & milk production	1.27	209	1.39	229	1.12	4,239	1.16	4,394	2.06	25	2.59	32	1.31	98	1.48	110
Beef cattle ranching & farming	1.34	857	1.45	925	1.21	19,204	1.24	19,747	2.68	81	3.49	106	1.41	363	1.56	403
Poultry & egg production	1.25	693	1.35	750	1.33	2,979	1.53	3,426	1.98	67	2.58	87	1.33	239	1.51	272

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Animal production, except cattle/poultry/eggs	1.06	131	1.18	145	1.02	3,841	1.05	3,954	1.16	17	1.51	22	1.04	111	1.12	119
Commercial fishing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Commercial hunting & trapping	1.34	46	1.72	60	1.16	703	1.33	808	1.39	16	1.80	21	1.39	22	1.87	30
Support activities for agriculture & forestry	1.10	288	1.70	443	1.03	7,587	1.19	8,805	1.06	182	1.38	237	1.08	202	1.57	292
Primary Agriculture Total --		6,078		6,936		102,453		109,232		1,018		1,322		2,572		2,981
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	1.30	889	1.42	973	3.15	1,357	4.68	2,015	2.15	99	2.80	129	1.34	330	1.54	379
Other animal food	1.39	214	1.53	236	3.49	337	5.27	508	2.37	26	3.08	34	1.80	57	2.20	69
Total --		1,103		1,208		1,693		2,524		125		162		387		449
<u>Grain & Oilseed Milling</u>																
Flour milling	1.45	623	1.61	692	4.43	1,241	6.35	1,778	3.83	81	4.98	105	2.61	154	3.28	194
Rice milling	1.28	67	1.40	73	2.55	133	3.50	182	2.98	7	3.87	10	2.34	15	2.92	18
Malt	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Wet corn milling	1.41	1,137	1.56	1,258	5.99	2,031	8.80	2,983	3.49	143	4.54	186	2.08	319	2.54	390
Soybean & other oilseed processing	1.33	4,316	1.43	4,637	9.10	5,612	13.21	8,143	5.42	380	7.06	495	3.14	761	3.91	949
Fats & oils refining & blending	1.52	658	1.64	709	4.18	864	6.14	1,268	3.12	61	4.07	79	2.63	119	3.29	149
Breakfast cereal	1.36	739	1.51	824	2.36	1,368	3.52	2,036	1.96	100	2.56	130	1.37	291	1.61	341
Total --		7,539		8,193		11,249		16,389		772		1,005		1,658		2,040
<u>Sugar & Confectionary Products</u>																
Beet sugar	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Sugar cane mills & refining	1.26	41	1.38	45	2.53	78	3.57	110	2.38	5	3.10	6	1.66	11	2.03	13
Nonchocolate confectionery	1.40	688	1.62	795	1.79	2,062	2.52	2,903	1.81	126	2.35	164	1.66	231	2.12	293
Chocolate & confectionery from cacao beans	1.39	45	1.52	49	2.27	115	2.95	150	3.89	5	5.07	7	2.54	10	3.17	13
Confectionery from purchased chocolate	1.35	685	1.57	801	1.58	2,234	2.22	3,146	1.61	137	2.10	178	1.53	248	1.95	315
Total --		1,459		1,690		4,489		6,309		273		355		500		635

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen fruits, juices & vegetables	1.49	613	1.77	728	2.16	1,852	3.22	2,760	1.85	136	2.40	177	1.86	222	2.43	289
Frozen specialties	1.40	828	1.63	964	1.60	2,791	2.21	3,868	1.66	162	2.17	210	1.85	231	2.50	311
Canned fruits & vegetables	1.31	1,133	1.52	1,311	1.83	2,869	2.73	4,271	1.61	210	2.10	274	1.66	326	2.19	430
Canned specialties	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Dehydrated food products	1.34	194	1.59	230	1.78	529	2.76	817	1.49	43	1.94	56	1.54	65	2.05	86
Total --		2,767		3,234		8,041		11,715		552		718		843		1,116
<u>Dairy Products</u>																
Fluid milk	1.34	688	1.50	768	2.35	1,577	3.30	2,212	2.24	95	2.91	124	2.05	162	2.65	209
Creamery butter	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Cheese	1.31	294	1.44	322	2.57	613	3.51	838	2.92	34	3.80	44	2.72	56	3.53	73
Dry, condensed, & evaporated dairy products	1.37	921	1.51	1,019	3.45	1,616	5.11	2,391	2.47	116	3.22	151	2.16	211	2.75	268
Ice cream & frozen desserts	1.37	446	1.57	510	1.64	1,411	2.22	1,912	1.78	75	2.32	98	1.63	138	2.06	175
Total --		2,348		2,619		5,217		7,353		321		417		567		725
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering	1.15	2,293	1.26	2,509	1.58	5,257	2.10	6,956	1.73	255	2.25	332	1.49	446	1.91	572
Meat processed from carcasses	1.28	855	1.42	944	1.55	2,256	2.03	2,956	1.76	105	2.29	137	1.82	158	2.42	210
Rendering & meat byproduct processing	1.60	182	1.85	211	3.20	596	4.40	819	3.28	33	4.27	44	3.05	46	4.16	62
Poultry processing	1.26	2,133	1.44	2,440	1.36	9,027	1.73	11,447	1.56	363	2.04	473	1.64	481	2.25	661
Total --		5,463		6,103		17,137		22,179		757		985		1,130		1,505
<u>Seafood Product Preparation & Packaging</u>																
	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Bakeries & Tortillas</u>																
Bread & bakery product, except frozen	1.37	1,048	1.75	1,339	1.21	7,791	1.57	10,075	1.33	343	1.73	446	1.40	459	1.92	629
Frozen cakes & other pastries	1.47	108	1.74	128	1.33	615	1.68	775	1.71	24	2.23	31	1.69	39	2.22	50

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Cookie & cracker	1.36	1,330	1.60	1,561	1.69	4,049	2.44	5,868	1.60	273	2.09	355	1.46	513	1.85	648
Dry pasta, mixes, & dough	1.48	274	1.66	308	2.08	692	2.89	960	2.22	40	2.88	53	1.70	90	2.07	110
Tortilla	1.48	46	1.76	55	1.39	196	1.87	264	1.50	10	1.96	13	1.51	17	1.95	22
Total --		2,805		3,390		13,342		17,941		691		899		1,118		1,460
<u>Other Foods</u>																
Roasted nuts & peanut butter	1.35	8	1.49	9	2.20	22	2.86	28	3.56	1	4.64	1	1.76	2	2.12	3
Other snack food	1.28	2,047	1.41	2,262	2.04	3,768	2.96	5,458	1.93	254	2.51	330	1.36	789	1.57	915
Coffee & tea	1.36	1,074	1.53	1,210	2.61	2,715	3.63	3,780	2.59	160	3.37	208	1.99	308	2.50	387
Flavoring syrup & concentrate	1.13	43	1.21	46	4.99	28	9.62	53	1.52	4	1.97	5	1.08	31	1.14	33
Mayonnaise, dressing, & sauce	1.32	394	1.45	433	1.86	831	2.55	1,140	2.03	46	2.64	60	1.66	98	2.04	121
Spice & extract	1.36	32	1.51	36	1.93	93	2.55	122	2.52	4	3.28	6	2.38	7	3.12	9
All other food	1.36	181	1.60	212	1.68	619	2.35	867	1.68	37	2.19	48	1.77	55	2.37	73
Total --		3,779		4,208		8,076		11,449		506		659		1,290		1,541
<u>Beverages</u>																
Bottled & canned soft drinks & water	1.34	3,650	1.50	4,089	2.54	8,522	3.57	11,979	2.27	519	2.95	676	1.89	1,023	2.36	1,280
Breweries	1.40	92	1.54	101	2.49	199	3.41	272	3.41	11	4.44	14	1.80	27	2.15	33
Wineries	1.40	81	1.60	92	1.67	321	2.13	408	2.58	13	3.35	17	2.23	23	2.87	29
Distilleries	1.21	1,249	1.32	1,364	2.45	1,991	3.56	2,894	2.16	136	2.81	176	1.23	638	1.35	705
Total --		5,071		5,646		11,033		15,554		679		883		1,712		2,048
<u>Tobacco Products</u>																
Tobacco Products	1.33	3,196	1.43	3,440	4.37	3,980	6.48	5,901	3.53	288	4.59	375	1.32	1,660	1.44	1,802
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.29	607	1.48	695	1.36	1,996	1.83	2,686	1.52	103	1.98	135	1.70	132	2.36	183
Broadwoven fabric mills	1.34	24	1.62	29	1.41	98	1.97	137	1.46	6	1.90	8	1.58	7	2.20	10
Narrow fabric mills & schiffli machine embroidery	1.31	16	1.69	20	1.24	92	1.72	127	1.28	5	1.66	7	1.39	6	1.99	9
Nonwoven fabric mills	1.33	465	1.56	548	1.66	1,316	2.47	1,966	1.53	97	1.99	127	1.62	135	2.20	184
Knit fabric mills	1.39	41	1.69	50	1.45	205	1.94	275	1.55	10	2.02	14	1.66	13	2.31	19

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Textile & fabric finishing mills	1.38	180	1.63	213	1.45	887	1.87	1,142	1.74	38	2.26	50	1.97	52	2.69	71
Fabric coating mills	1.32	172	1.56	202	1.50	616	2.09	858	1.55	36	2.02	47	1.65	50	2.25	68
Total --		1,505		1,757		5,211		7,191		297		387		396		543
<u>Textile Product Mills</u>																
Carpet & rug mills	1.31	85	1.51	98	1.37	293	1.83	392	1.51	15	1.97	19	1.73	19	2.41	26
Curtain & linen mills	1.30	24	1.55	28	1.22	162	1.48	197	1.49	5	1.94	7	1.59	7	2.14	10
Textile bag & canvas mills	1.20	108	1.56	140	1.15	804	1.51	1,055	1.19	38	1.55	49	1.27	43	1.83	61
Rope, cordage, twine, tire cord & tire fabric mills	1.35	227	1.61	270	1.42	938	1.93	1,275	1.47	51	1.92	66	1.56	73	2.10	98
Other textile product mills	1.35	195	1.68	244	1.22	1,451	1.55	1,836	1.36	58	1.76	75	1.50	71	2.11	99
Hosiery & sock mills	1.35	90	1.71	115	1.20	684	1.54	878	1.33	29	1.74	38	1.49	33	2.13	48
Other apparel knitting mills	1.42	48	1.74	59	1.37	276	1.79	361	1.54	13	2.00	17	1.81	15	2.55	22
Total --		777		953		4,607		5,993		208		271		262		365
<u>Apparel</u>																
Cut & sew apparel contractors	1.45	76	1.99	105	1.17	1,064	1.41	1,288	1.35	34	1.76	44	1.67	33	2.52	49
Men's & boy's cut & sew apparel	1.32	350	1.76	466	1.29	2,687	1.72	3,597	1.30	137	1.70	178	1.46	156	2.09	223
Women's & girl's cut & sew apparel	1.48	16	1.74	19	1.66	102	2.02	124	2.60	3	3.38	4	3.05	5	4.16	6
Other cut & sew apparel	1.37	25	1.78	32	1.25	225	1.57	283	1.41	9	1.83	11	1.61	10	2.28	15
Apparel accessories & other apparel	1.44	16	1.77	20	1.32	122	1.63	151	1.64	4	2.13	6	1.98	5	2.76	8
Total --		484		642		4,199		5,444		187		243		209		301
<u>Leather & Allied Products</u>																
Leather & hide tanning & finishing	1.53	41	1.76	47	1.94	153	2.53	200	2.33	7	3.04	9	3.16	10	4.31	13
Footwear	1.26	332	1.74	459	1.35	1,524	2.24	2,524	1.18	150	1.54	195	1.29	163	1.88	238
Other leather & allied products	1.42	26	1.83	34	1.26	226	1.60	286	1.42	9	1.85	12	1.93	9	2.93	13
Total --		399		539		1,903		3,010		166		216		182		264
Secondary Agriculture Total --		38,695		43,624		100,176		138,952		5,821		7,576		11,911		14,793
Agriculture Total --		46,622		52,616		206,761		253,884		7,101		9,226		15,081		18,497
<u>Forestry Inputs</u>																

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Sawmill, woodworking, & paper machinery</u>	1.27	51	1.60	64	1.41	235	2.04	341	1.32	16	1.72	21	1.40	20	1.96	28
<u>Timber</u>																
Forestry, forest products, & timber tract production	1.47	11	1.92	14	2.74	116	3.35	142	1.76	4	2.21	5	1.90	5	2.73	7
Commercial logging	1.18	330	1.68	470	1.27	3,587	1.65	4,648	1.11	171	1.41	216	1.18	190	1.70	274
Total --		341		484		3,703		4,790		175		221		194		281
Forestry Inputs Total --		392		548		3,938		5,132		191		242		214		309
Primary Forestry																
Sawmills	1.54	1,043	1.82	1,232	1.73	4,914	2.25	6,406	2.09	223	2.73	290	2.32	315	3.14	426
Wood preservation	1.62	86	1.86	99	2.35	307	3.10	405	2.97	15	3.87	19	2.41	26	3.08	33
Pulp mills	1.45	410	1.73	490	3.42	984	5.61	1,615	1.70	94	2.21	122	1.68	148	2.21	195
Paper mills	1.38	5,987	1.63	7,063	2.73	13,068	4.50	21,557	1.66	1,260	2.16	1,642	1.56	2,243	1.99	2,872
Paperboard Mills	1.46	1,336	1.73	1,583	3.20	3,142	5.19	5,096	1.79	286	2.33	374	1.70	491	2.20	636
Primary Forestry Total --		8,862		10,467		22,415		35,079		1,877		2,447		3,224		4,162
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	1.42	17	1.66	20	1.51	84	1.91	107	2.05	3	2.67	4	2.20	5	2.95	6
Engineered wood member & truss	1.40	157	1.74	195	1.40	954	1.83	1,253	1.55	45	2.01	58	1.81	54	2.55	76
Reconstituted wood products	1.31	134	1.49	152	1.67	393	2.27	535	1.77	21	2.30	28	1.55	41	1.94	52
Total --		308		367		1,432		1,895		69		90		100		134
<u>Wood Windows & Doors & Millwork</u>																
Wood windows & door	1.40	239	1.74	297	1.45	1,324	1.95	1,784	1.50	69	1.96	89	1.60	93	2.19	127
Cut stock, resawing lumber, & planing	1.25	128	1.48	151	1.31	647	1.69	832	1.49	28	1.94	36	1.37	51	1.74	65
Other millworks, including floors	1.35	350	1.65	429	1.36	2,080	1.77	2,703	1.52	93	1.98	121	1.57	134	2.12	180
Total --		716		877		4,051		5,319		189		246		278		372
<u>Wood Containers & Pallets</u>	1.34	383	1.67	475	1.25	2,826	1.58	3,558	1.44	109	1.87	142	1.53	147	2.10	201

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Manufactured Homes (Mobile Homes)</u>																
Manufactured homes (mobile homes)	1.33	453	1.67	568	1.36	2,703	1.82	3,613	1.35	136	1.76	177	1.40	191	1.90	258
Prefabricated wood buildings	1.32	80	1.64	100	1.40	454	1.88	610	1.42	23	1.84	30	1.41	35	1.87	47
Total --		534		669		3,157		4,223		159		207		226		305
<u>All Other Miscellaneous Wood Products</u>	1.39	179	1.68	215	1.44	1,030	1.84	1,315	1.69	43	2.20	55	1.59	71	2.07	92
<u>Paperboard Containers</u>																
	1.29	2,740	1.52	3,232	1.78	8,917	2.56	12,807	1.60	581	2.09	756	1.72	800	2.34	1,088
<u>Paper Bags & Coated & Treated Paper</u>																
	1.26	951	1.47	1,109	1.64	2,715	2.39	3,966	1.51	187	1.96	243	1.51	293	1.98	385
<u>Stationery Products</u>																
	1.30	468	1.53	551	1.60	1,615	2.25	2,272	1.59	97	2.08	127	1.60	146	2.14	195
<u>Other Converted Paper Products</u>																
Sanitary paper products	1.25	590	1.40	662	2.16	1,188	3.19	1,757	1.81	85	2.35	111	1.41	206	1.69	248
All other converted paper products	1.35	252	1.60	298	1.62	965	2.23	1,331	1.67	54	2.18	70	1.78	76	2.40	103
Total --		842		961		2,153		3,087		139		181		282		352
<u>Wood Kitchen Cabinets & Countertops</u>																
	1.37	253	1.75	324	1.31	1,950	1.68	2,505	1.39	83	1.81	108	1.60	96	2.28	137
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.36	920	1.66	1,123	1.34	5,247	1.75	6,851	1.47	240	1.92	312	1.78	291	2.50	410
Nonupholstered wood household furniture	1.38	112	1.75	142	1.27	897	1.60	1,132	1.42	35	1.84	46	1.65	41	2.35	58
Other household nonupholstered furniture	1.37	85	1.66	103	1.52	404	2.06	546	1.56	21	2.04	28	1.88	25	2.66	36
Institutional furniture	1.36	89	1.69	111	1.34	585	1.73	758	1.44	26	1.88	34	1.68	30	2.39	43
Total --		1,206		1,479		7,133		9,287		322		419		388		547
<u>Office Furniture</u>																
Wood office furniture	1.43	17	1.74	21	1.44	107	1.85	137	1.65	4	2.15	6	2.02	5	2.84	8

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Other household nonupholstered furniture	1.37	85	1.66	103	1.52	404	2.06	546	1.56	21	2.04	28	1.88	25	2.66	36
Institutional furniture	1.36	89	1.69	111	1.34	585	1.73	758	1.44	26	1.88	34	1.68	30	2.39	43
Total --		1,206		1,479		7,133		9,287		322		419		388		547
Office Furniture																
Wood office furniture	1.43	17	1.74	21	1.44	107	1.85	137	1.65	4	2.15	6	2.02	5	2.84	8
Custom architectural woodwork & millwork	1.29	61	1.70	81	1.29	409	1.77	562	1.26	23	1.64	30	1.40	26	2.02	37
Showcase, partition, shelving, & locker	1.32	317	1.67	398	1.36	1,793	1.85	2,438	1.36	96	1.77	125	1.55	110	2.23	158
Total --		395		500		2,309		3,137		124		161		141		202
Other Furniture Related Products																
Mattresses	1.43	361	1.65	415	1.82	1,408	2.38	1,839	2.17	64	2.82	84	2.86	84	3.95	116
Blind & shades	1.34	11	1.62	13	1.25	75	1.55	93	1.48	3	1.93	3	1.76	3	2.48	5
Total --		372		428		1,483		1,932		67		87		87		120
Secondary Forestry Total --		9,346		11,187		40,772		55,303		2,169		2,823		3,055		4,131
Forestry Total --		18,600		22,202		67,125		95,514		4,237		5,512		6,493		8,601
Agriculture & Forestry Total --		65,222		74,818		273,886		349,398		11,338		14,738		21,574		27,098
Construction --		86,162		99,504		306,894		408,398		16,660		20,955		58,136		66,251
Finance --		26,708		34,743		189,968		250,981		10,157		12,742		11,979		16,869
Government --		64,623		89,424		545,325		733,476		31,513		39,489		42,156		57,242
Insurance --		23,510		29,382		126,218		170,781		7,445		9,333		11,079		14,652
Manufacturing --		155,278		177,735		432,813		603,243		28,392		35,616		48,570		62,237
Mining --		5,638		5,995		8,463		11,178		447		562		4,691		4,908
Miscellaneous --		6,225		8,874		89,657		109,760		3,361		4,213		3,805		5,418
Real Estate --		57,914		63,067		174,026		199,171		4,119		5,183		41,193		44,328
Retail Trade --		40,475		52,782		452,801		546,284		15,516		19,476		25,081		32,569
Services --		254,638		336,048		2,073,108		2,691,826		102,318		128,518		166,036		215,567
Transportation --		24,577		31,419		156,579		208,550		8,631		10,833		10,699		14,862

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2013 (Cont.)

Sector	TIO (million \$)			Employment (number)				Labor Income (million \$)				TVA (million \$)				
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Utilities --		7,096		7,826		11,388		16,929		925		1,159		2,683		3,127
Wholesale Trade --		39,776		50,374		210,481		290,934		13,411		16,820		24,938		31,387

^aTotals may not add due to rounding.

^bValues of zero are nonzero values less than 1.

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2013

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<i>Agricultural Inputs</i>																
<i>Agricultural Chemicals</i>																
Nitrogenous fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Phosphatic fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Fertilizer mixing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Pesticide & other agricultural chemicals	1.25	21	1.34	22	3.25	36	4.38	49	2.50	2	3.07	3	1.34	8	1.49	9
Lime	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		21		22		36		49		2		3		8		9
<i>Agricultural Machinery</i>																
Farm machinery & equipment	1.21	150	1.34	165	1.88	349	2.55	472	1.61	22	1.98	27	1.39	49	1.64	58
Lawn & garden equipment	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		150		165		349		472		22		27		49		58
<i>Agricultural Inputs Total --</i>		171		187		385		521		24		30		57		67
<i>Primary Agriculture</i>																
Oilseed farming	1.19	23	1.27	25	1.39	171	1.50	184	2.09	2	2.57	3	1.17	14	1.25	15
Grain farming	1.51	22	1.64	24	1.54	283	1.62	297	12.04	3	14.77	3	0.00	0 ^c	0.00	0 ^c
Vegetable & melon farming	1.10	12	1.28	14	1.12	150	1.24	165	1.17	3	1.44	3	1.07	9	1.20	10
Fruit farming	1.14	2	1.31	2	1.08	41	1.14	43	1.26	0 ^b	1.55	0 ^b	1.10	1	1.23	1
Tree nut farming	1.12	0 ^b	1.25	0 ^b	1.17	1	1.26	1	1.32	0 ^b	1.62	0 ^b	1.08	0 ^b	1.18	0 ^b
Greenhouse, nursery, & floriculture production	1.10	16	1.23	18	1.09	241	1.15	256	1.25	3	1.53	3	1.08	11	1.19	12
Tobacco farming	1.19	3	1.39	3	1.13	53	1.21	57	1.33	1	1.63	1	1.18	2	1.36	2
Cotton farming	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Sugarcane & sugar beet farming	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other crop farming	1.24	60	1.41	69	1.06	2,810	1.09	2,881	1.47	13	1.80	16	1.22	36	1.39	41
Dairy cattle & milk production	1.24	51	1.32	55	1.55	373	1.68	402	2.17	5	2.66	6	1.28	24	1.39	26
Beef cattle ranching & farming	1.39	83	1.48	88	1.32	1,718	1.35	1,758	2.52	7	3.10	9	1.46	35	1.58	38
Poultry & egg production	1.17	192	1.23	204	1.28	801	1.43	895	1.74	17	2.14	21	1.24	66	1.36	73
Animal production, except cattle/poultry/eggs	1.05	7	1.14	8	1.02	230	1.05	235	1.14	1	1.41	1	1.03	6	1.09	7
Commercial fishing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Commercial hunting & trapping	1.28	8	1.50	9	1.14	136	1.23	148	1.49	2	1.84	2	1.36	3	1.68	4
Support activities for agriculture & forestry	1.10	14	1.53	19	1.02	430	1.13	475	1.06	8	1.30	10	1.09	9	1.46	12
Primary Agriculture Total --		493		537		7,435		7,796		64		79		217		241
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other animal food	1.21	15	1.32	17	2.84	22	4.36	34	1.61	2	1.97	3	1.45	4	1.73	5
Total --		15		17		22		34		2		3		4		5
<u>Grain & Oilseed Milling</u>																
Flour milling	1.36	130	1.46	140	3.88	246	5.09	323	4.12	14	5.04	17	2.42	29	2.88	34
Rice milling	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Malt	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Wet corn milling	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Soybean & other oilseed processing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Fats & oils refining & blending	1.18	110	1.25	116	2.99	133	4.13	184	2.16	9	2.64	11	1.87	18	2.24	22
Breakfast cereal	1.22	20	1.33	22	2.07	35	2.95	50	1.62	3	1.98	3	1.26	8	1.42	9
Total --		260		277		414		558		26		32		55		66
<u>Sugar & Confectionary Products</u>																
Beet sugar	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Sugar cane mills & refining	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Nonchocolate confectionery	1.26	189	1.42	212	1.64	575	2.18	766	1.55	34	1.90	42	1.47	63	1.78	77
Chocolate & confectionery from cacao beans	1.28	6	1.35	7	2.04	16	2.40	19	6.52	1	7.99	1	2.44	1	2.84	1
Confectionery from purchased chocolate	1.23	281	1.40	321	1.47	912	1.98	1,234	1.39	58	1.71	71	1.36	103	1.66	125
Total --		477		540		1,503		2,019		93		114		167		203
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen fruits, juices & vegetables	1.45	438	1.66	503	2.06	1,282	2.93	1,820	1.67	97	2.04	119	1.72	156	2.13	194
Frozen specialties	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Canned fruits & vegetables	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Canned specialties	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Dehydrated food products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		438		503		1,282		1,820		97		119		156		194
<u>Dairy Products</u>																
Fluid milk	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Creamery butter	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Cheese	1.22	12	1.31	13	2.30	24	2.99	31	2.20	1	2.69	2	2.17	2	2.68	3
Dry, condensed, & evaporated dairy products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Ice cream & frozen desserts	1.23	209	1.38	234	1.50	661	1.97	867	1.48	37	1.81	46	1.41	66	1.72	81
Total --		221		247		684		898		38		47		68		83
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering	1.12	34	1.23	37	1.55	74	2.11	102	1.36	5	1.68	6	1.31	8	1.64	9
Meat processed from carcasses	1.11	11	1.34	13	1.38	24	2.47	42	1.12	3	1.38	4	1.17	4	1.58	5
Rendering & meat byproduct processing	1.49	12	1.67	14	3.04	41	3.91	52	2.90	2	3.56	3	2.73	3	3.50	4
Poultry processing	1.21	614	1.34	676	1.32	2,664	1.57	3,172	1.52	91	1.87	112	1.58	124	2.04	160
Total --		672		740		2,803		3,368		102		125		139		178
<u>Seafood Product Preparation & Packaging</u>																
	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Bakeries & Tortillas</u>																
Bread & bakery product, except frozen	1.25	340	1.57	426	1.18	2,452	1.53	3,162	1.19	128	1.46	157	1.25	163	1.64	213
Frozen cakes & other pastries	1.31	4	1.52	5	1.27	26	1.55	32	1.46	1	1.79	1	1.47	2	1.84	2
Cookie & cracker	1.26	646	1.44	738	1.58	1,954	2.19	2,712	1.40	137	1.71	167	1.33	254	1.61	307
Dry pasta, mixes, & dough	1.32	5	1.46	6	1.85	13	2.53	18	1.61	1	1.97	1	1.44	2	1.71	2
Tortilla	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		996		1,176		4,446		5,924		267		327		420		524
<u>Other Foods</u>																
Roasted nuts & peanut butter	1.30	3	1.38	4	2.09	9	2.53	11	3.78	0 ^b	4.63	0 ^b	1.66	1	1.90	1

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Other snack food	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Coffee & tea	1.29	1	1.39	1	2.38	2	2.96	2	3.31	0 ^b	4.06	0 ^b	1.96	0 ^b	2.30	0 ^b
Flavoring syrup & concentrate	1.07	41	1.13	43	4.03	22	7.44	41	1.34	3	1.64	4	1.05	30	1.10	31
Mayonnaise, dressing, & sauce	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Spice & extract	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other food	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		45		48		33		54		4		5		31		33
<u>Beverages</u>																
Bottled & canned soft drinks & water	1.26	611	1.38	670	2.31	1,365	3.13	1,853	1.80	88	2.21	107	1.63	169	1.96	203
Breweries	1.29	1	1.38	1	2.23	2	2.81	2	3.15	0 ^b	3.87	0 ^b	1.61	0 ^b	1.83	0 ^b
Wineries	1.34	1	1.43	1	1.57	2	1.78	2	6.72	0 ^b	8.23	0 ^b	2.55	0 ^b	3.00	0 ^b
Distilleries	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		613		672		1,369		1,857		88		108		169		203
<u>Tobacco Products</u>																
	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.17	297	1.28	325	1.27	1,040	1.56	1,271	1.41	42	1.73	51	1.55	54	2.02	71
Broadwoven fabric mills	1.23	17	1.42	19	1.34	74	1.72	95	1.36	4	1.67	5	1.46	5	1.91	6
Narrow fabric mills & schiffli machine embroidery	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Nonwoven fabric mills	1.20	17	1.41	20	1.53	46	2.35	70	1.25	4	1.53	5	1.33	6	1.73	7
Knit fabric mills	1.30	25	1.51	30	1.40	130	1.77	165	1.42	6	1.74	8	1.52	8	1.98	10
Textile & fabric finishing mills	1.31	3	1.49	3	1.40	13	1.72	16	1.57	1	1.92	1	1.77	1	2.28	1
Fabric coating mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		359		397		1,303		1,617		57		69		73		96
<u>Textile Product Mills</u>																
Carpet & rug mills	1.14	7	1.31	8	1.26	24	1.70	33	1.18	2	1.45	2	1.28	2	1.72	2
Curtain & linen mills	1.21	2	1.38	2	1.18	15	1.36	18	1.37	0 ^b	1.68	1	1.46	1	1.85	1

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Textile bag & canvas mills	1.15	35	1.40	42	1.13	279	1.38	341	1.16	11	1.42	14	1.24	13	1.66	17
Rope, cordage, twine, tire cord & tire fabric mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other textile product mills	1.24	16	1.49	19	1.18	123	1.44	149	1.25	5	1.53	6	1.37	6	1.81	8
Hosiery & sock mills	1.33	89	1.61	108	1.20	680	1.47	836	1.29	28	1.58	34	1.45	33	1.94	44
Other apparel knitting mills	1.40	34	1.65	40	1.34	195	1.68	244	1.46	9	1.79	11	1.74	11	2.30	14
Total --		183		220		1,317		1,621		55		67		64		86
Apparel																
Cut & sew apparel contractors	1.37	4	1.78	5	1.15	55	1.35	64	1.27	2	1.55	2	1.52	2	2.15	2
Men's & boy's cut & sew apparel	1.29	121	1.57	147	1.25	1,050	1.51	1,265	1.33	39	1.63	48	1.51	45	2.02	60
Women's & girl's cut & sew apparel	1.42	0 ^b	1.57	0 ^b	1.61	2	1.83	2	2.97	0 ^b	3.64	0 ^b	3.39	0 ^b	4.32	0 ^b
Other cut & sew apparel	1.39	0 ^b	1.60	0 ^b	1.23	1	1.38	1	1.73	0 ^b	2.12	0 ^b	2.08	0 ^b	2.71	0 ^b
Apparel accessories & other apparel	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		125		152		1,107		1,332		41		50		47		63
Leather & Allied Products																
Leather & hide tanning & finishing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Footwear	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other leather & allied products	1.37	11	1.63	13	1.22	103	1.43	120	1.44	3	1.76	4	2.22	3	3.19	4
Total --		11		13		103		120		3		4		3		4
Secondary Agriculture Total --		4,414		5,002		16,387		21,222		872		1,068		1,398		1,739
Agriculture Total --		5,078		5,726		24,207		29,539		960		1,176		1,672		2,047
Forestry Inputs																
<u>Sawmill, woodworking, & paper machinery</u>	1.21	22	1.47	27	1.36	100	1.90	140	1.22	7	1.50	9	1.29	9	1.70	12
Timber																
Forestry, forest products, & timber tract production	1.53	0 ^b	1.88	0 ^b	3.01	3	3.49	4	1.86	0 ^b	2.29	0 ^b	2.09	0 ^b	2.79	0 ^b
Commercial logging	1.17	25	1.61	34	1.51	282	1.92	359	1.09	13	1.34	16	1.16	15	1.57	21
Total --		25		34		285		362		13		17		15		21

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Forestry Inputs Total --		47		61		384		502		21		25		24		33
Primary Forestry																
Sawmills	1.38	21	1.57	24	1.55	98	1.94	123	1.75	4	2.14	5	1.95	6	2.50	8
Wood preservation	1.36	8	1.52	9	1.89	26	2.44	34	1.89	1	2.32	2	1.79	2	2.19	3
Pulp mills	1.37	163	1.50	179	2.89	401	3.83	531	2.45	23	3.01	28	1.85	47	2.21	56
Paper mills	1.33	757	1.48	843	2.45	1,646	3.51	2,354	1.77	126	2.18	155	1.54	256	1.84	306
Paperboard Mills	1.33	187	1.58	221	2.84	386	4.90	667	1.40	49	1.72	61	1.42	76	1.80	96
Primary Forestry Total --		1,135		1,275		2,559		3,709		205		251		387		468
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Engineered wood member & truss	1.32	17	1.59	21	1.34	103	1.72	133	1.37	5	1.68	6	1.56	6	2.09	8
Reconstituted wood products	1.27	82	1.40	91	1.59	237	2.06	308	1.62	13	1.98	16	1.46	25	1.75	30
Total --		100		112		340		441		18		22		31		38
<u>Wood Windows & Doors & Millwork</u>																
Wood windows & door	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Cut stock, resawing lumber, & planing	1.20	30	1.36	34	1.27	158	1.53	190	1.42	6	1.74	7	1.30	11	1.56	14
Other millworks, including floors	1.21	11	1.55	14	1.31	51	1.93	76	1.17	4	1.44	5	1.23	5	1.63	7
Total --		41		48		209		265		10		12		17		21
<u>Wood Containers & Pallets</u>	1.25	67	1.52	81	1.22	481	1.51	598	1.28	21	1.56	26	1.35	27	1.77	35
<u>Manufactured Homes (Mobile Homes)</u>																
Manufactured homes (mobile homes)	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Prefabricated wood buildings	1.28	5	1.47	5	1.34	29	1.61	35	1.49	1	1.83	1	1.42	2	1.75	2
Total --		5		5		29		35		1		1		2		2
<u>All Other Miscellaneous Wood Products</u>	1.25	9	1.56	12	1.38	45	1.95	64	1.23	3	1.51	4	1.27	5	1.64	6
<u>Paperboard Containers</u>	1.25	603	1.41	679	1.69	1,984	2.23	2,610	1.59	112	1.94	138	1.67	159	2.14	203

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Paper Bags & Coated & Treated Paper</u>	1.18	28	1.37	33	1.54	75	2.30	112	1.27	7	1.55	8	1.30	10	1.66	12
<u>Stationery Products</u>	1.28	50	1.38	54	1.53	190	1.80	223	2.46	6	3.02	7	1.90	12	2.28	14
<u>Other Converted Paper Products</u>																
Sanitary paper products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other converted paper products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		0		0		0		0		0		0		0		0
<u>Wood Kitchen Cabinets & Countertops</u>	1.29	35	1.59	43	1.27	269	1.59	336	1.27	12	1.56	15	1.43	14	1.93	18
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.28	527	1.49	614	1.28	3,099	1.57	3,812	1.37	128	1.67	157	1.63	154	2.16	204
Nonupholstered wood household furniture	1.33	1	1.58	1	1.24	8	1.47	9	1.38	0 ^b	1.70	0 ^b	1.62	0 ^b	2.16	0 ^b
Other household nonupholstered furniture	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Institutional furniture	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		528		615		3,107		3,821		129		157		154		205
<u>Office Furniture</u>																
Wood office furniture	1.35	11	1.56	13	1.38	72	1.65	86	1.60	3	1.95	3	1.97	3	2.60	4
Custom architectural woodwork & millwork	1.24	3	1.52	4	1.24	20	1.58	26	1.22	1	1.50	1	1.35	1	1.83	1
Showcase, partition, shelving, & locker	1.24	8	1.51	10	1.30	47	1.72	62	1.24	3	1.53	3	1.38	3	1.88	4
Total --		22		26		139		174		6		8		7		10
<u>Other Furniture Related Products</u>																
Mattresses	1.32	67	1.46	74	1.64	256	2.03	317	1.82	11	2.24	13	2.37	14	3.10	18
Blind & shades	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		67		74		256		317		11		13		14		18
Secondary Forestry Total --		1,555		1,782		7,125		8,997		336		412		451		582
Forestry Total --		2,737		3,118		10,068		13,207		561		688		862		1,083

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2013 (Cont.)

Sector	TIO (million \$)			Employment (number)				Labor Income (million \$)				TVA (million \$)				
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<i>Agriculture & Forestry Total --</i>		7,815		8,844		34,275		42,746		1,521		1,864		2,535		3,130
<i>Construction --</i>		4,506		5,614		29,382		38,523		1,618		1,988		1,827		2,469
<i>Finance --</i>		2,193		2,656		16,483		20,297		684		838		892		1,160
<i>Government --</i>		11,521		14,187		63,082		85,033		3,952		4,840		5,834		7,379
<i>Insurance --</i>		3,576		4,239		16,229		21,693		982		1,203		1,694		2,078
<i>Manufacturing --</i>		19,729		21,991		53,400		72,028		3,340		4,094		6,153		7,464
<i>Mining --</i>		178		196		685		833		26		32		104		114
<i>Miscellaneous --</i>		622		827		8,848		10,541		304		373		351		471
<i>Real Estate --</i>		5,371		5,709		15,672		17,210		275		337		3,738		3,934
<i>Retail Trade --</i>		3,885		4,923		43,192		51,748		1,524		1,870		2,430		3,032
<i>Services --</i>		18,717		24,258		192,027		237,700		8,146		9,993		10,933		14,142
<i>Transportation --</i>		3,145		3,876		21,387		27,412		1,079		1,322		1,425		1,849
<i>Utilities --</i>		829		909		1,469		2,127		118		145		314		361
<i>Wholesale Trade --</i>		3,248		3,935		17,763		23,417		1,013		1,242		2,002		2,400

^aTotals may not add due to rounding.

^bValues of zero are nonzero values less than 1.

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2013

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<i>Agricultural Inputs</i>																
<i>Agricultural Chemicals</i>																
Nitrogenous fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Phosphatic fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Fertilizer mixing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Pesticide & other agricultural chemicals	1.30	72	1.43	79	3.60	130	5.26	189	2.56	9	3.25	11	1.41	29	1.61	33
Lime	1.51	97	1.73	111	2.24	290	3.14	405	2.05	17	2.59	22	2.08	32	2.60	40
Total --		169		190		419		595		26		33		61		73
<i>Agricultural Machinery</i>																
Farm machinery & equipment	1.27	7	1.39	8	2.03	18	2.66	24	2.37	1	3.00	1	1.57	2	1.85	3
Lawn & garden equipment	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		7		8		18		24		1		1		2		3
<i>Agricultural Inputs Total --</i>		176		198		437		618		27		34		63		76
<i>Primary Agriculture</i>																
Oilseed farming	1.21	16	1.32	18	1.33	167	1.43	180	2.11	2	2.67	2	1.19	10	1.30	11
Grain farming	1.57	16	1.76	18	1.45	287	1.54	304	6.36	3	8.05	3	0.00	0 ^c	0.00	0 ^c
Vegetable & melon farming	1.12	15	1.29	18	1.12	257	1.20	277	1.28	3	1.62	4	1.09	12	1.21	13
Fruit farming	1.15	1	1.37	1	1.07	45	1.11	46	1.31	0 ^b	1.66	0 ^b	1.11	1	1.27	1
Tree nut farming	1.14	0 ^b	1.34	0 ^b	1.13	4	1.20	4	1.30	0 ^b	1.65	0 ^b	1.10	0 ^b	1.24	0 ^b
Greenhouse, nursery, & floriculture production	1.13	42	1.45	54	1.08	1,000	1.19	1,102	1.14	15	1.45	19	1.11	29	1.38	36
Tobacco farming	1.23	4	1.61	6	1.12	122	1.22	133	1.23	2	1.56	2	1.21	3	1.57	3
Cotton farming	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Sugarcane & sugar beet farming	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other crop farming	1.25	85	1.58	108	1.06	5,568	1.09	5,755	1.32	28	1.67	35	1.24	51	1.56	64
Dairy cattle & milk production	1.26	35	1.45	40	1.40	364	1.57	408	1.55	7	1.96	8	1.32	16	1.56	19
Beef cattle ranching & farming	1.30	116	1.41	126	1.19	3,345	1.22	3,426	2.32	12	2.94	15	1.38	50	1.54	55
Poultry & egg production	1.19	44	1.31	48	1.23	247	1.42	284	1.52	6	1.92	7	1.28	15	1.49	18
Animal production, except cattle/poultry/eggs	1.06	10	1.19	11	1.02	459	1.04	470	1.12	2	1.42	2	1.04	9	1.13	9
Commercial fishing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Commercial hunting & trapping	1.38	5	1.63	6	1.16	91	1.26	99	1.83	1	2.31	1	1.58	2	1.99	3
Support activities for agriculture & forestry	1.11	34	1.63	49	1.03	1,041	1.15	1,170	1.07	19	1.36	24	1.10	22	1.55	31
Primary Agriculture Total --		424		503		12,998		13,659		99		125		219		263
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other animal food	1.30	56	1.39	60	3.29	92	4.55	128	3.28	5	4.16	7	1.83	14	2.15	16
Total --		56		60		92		128		5		7		14		16
<u>Grain & Oilseed Milling</u>																
Flour milling	1.39	91	1.52	100	4.22	183	5.87	255	4.19	11	5.31	14	2.57	22	3.15	27
Rice milling	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Malt	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Wet corn milling	1.37	1,102	1.50	1,208	5.84	1,979	8.48	2,872	3.27	134	4.14	169	2.00	307	2.40	368
Soybean & other oilseed processing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Fats & oils refining & blending	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Breakfast cereal	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		1,193		1,308		2,162		3,127		145		183		328		395
<u>Sugar & Confectionary Products</u>																
Beet sugar	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Sugar cane mills & refining	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Nonchocolate confectionery	1.40	24	1.53	26	1.78	78	2.22	98	3.23	3	4.09	4	1.95	7	2.33	8
Chocolate & confectionery from cacao beans	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Confectionery from purchased chocolate	1.32	49	1.48	55	1.56	172	2.01	222	1.98	7	2.50	9	1.62	16	1.97	19
Total --		72		81		251		320		10		13		23		27
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen fruits, juices & vegetables	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Frozen specialties	1.33	42	1.53	48	1.54	147	2.08	198	1.61	8	2.04	10	1.80	11	2.36	15
Canned fruits & vegetables	1.28	724	1.46	826	1.80	1,855	2.62	2,704	1.58	127	2.00	161	1.63	202	2.10	260

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Canned specialties	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Dehydrated food products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		766		874		2,001		2,902		135		171		213		275
<u>Dairy Products</u>																
Fluid milk	1.28	15	1.42	16	2.28	34	3.16	48	2.08	2	2.63	3	1.94	3	2.46	4
Creamery butter	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Cheese	1.24	4	1.43	5	2.52	9	4.16	14	1.53	1	1.93	1	1.70	1	2.26	2
Dry, condensed, & evaporated dairy products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Ice cream & frozen desserts	1.26	13	1.49	15	1.58	39	2.35	58	1.39	3	1.76	4	1.40	5	1.80	6
Total --		32		37		82		120		6		7		9		12
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering	1.14	206	1.26	227	1.58	466	2.17	641	1.53	26	1.93	33	1.41	43	1.80	55
Meat processed from carcasses	1.24	317	1.35	345	1.52	858	1.93	1,093	1.82	35	2.30	45	1.84	55	2.38	71
Rendering & meat byproduct processing	1.55	35	1.77	40	3.16	116	4.32	158	3.03	6	3.83	8	2.85	9	3.82	12
Poultry processing	1.23	202	1.39	227	1.34	873	1.67	1,084	1.57	32	1.99	40	1.64	43	2.20	58
Total --		760		840		2,312		2,976		99		126		150		195
<u>Seafood Product Preparation & Packaging</u>																
	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Bakeries & Tortillas</u>																
Bread & bakery product, except frozen	1.39	154	1.70	188	1.21	1,234	1.50	1,520	1.41	43	1.79	54	1.48	61	1.96	81
Frozen cakes & other pastries	1.38	10	1.61	11	1.31	60	1.61	73	1.70	2	2.16	3	1.66	3	2.11	4
Cookie & cracker	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Dry pasta, mixes, & dough	1.39	2	1.64	2	2.07	4	3.41	7	1.44	0 ^b	1.82	1	1.43	1	1.81	1
Tortilla	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		166		202		1,298		1,600		45		57		65		86
<u>Other Foods</u>																
Roasted nuts & peanut butter	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Other snack food	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Coffee & tea	1.35	985	1.50	1,099	2.61	2,521	3.60	3,469	2.56	142	3.24	180	1.97	279	2.43	345
Flavoring syrup & concentrate	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Mayonnaise, dressing, & sauce	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Spice & extract	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other food	1.33	28	1.55	32	1.67	95	2.37	135	1.56	6	1.98	8	1.67	9	2.20	11
Total --		1,013		1,131		2,616		3,604		148		187		288		356
<u>Beverages</u>																
Bottled & canned soft drinks & water	1.37	817	1.51	905	2.59	1,933	3.57	2,662	2.34	109	2.97	138	1.93	224	2.37	275
Breweries	1.39	4	1.54	5	2.53	9	3.66	13	2.19	1	2.77	1	1.65	1	2.00	2
Wineries	1.42	15	1.56	16	1.69	61	2.02	73	4.98	2	6.31	2	2.73	4	3.34	4
Distilleries	1.20	314	1.28	335	2.45	520	3.28	695	2.95	26	3.74	33	1.22	157	1.32	169
Total --		1,150		1,261		2,523		3,444		138		175		386		449
<u>Tobacco Products</u>																
	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.16	5	1.28	6	1.28	18	1.60	23	1.47	1	1.86	1	1.62	1	2.18	1
Broadwoven fabric mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Narrow fabric mills & schiffli machine embroidery	1.20	14	1.53	18	1.20	89	1.65	122	1.20	5	1.52	6	1.29	6	1.82	8
Nonwoven fabric mills	1.26	26	1.43	29	1.60	78	2.21	108	1.59	5	2.01	6	1.65	7	2.16	9
Knit fabric mills	1.28	13	1.54	16	1.40	68	1.86	90	1.43	3	1.82	4	1.53	4	2.09	6
Textile & fabric finishing mills	1.36	37	1.53	42	1.43	199	1.71	238	2.32	6	2.93	7	2.51	9	3.28	11
Fabric coating mills	1.25	16	1.44	18	1.45	60	1.95	81	1.53	3	1.94	4	1.62	4	2.14	6
Total --		111		129		512		662		22		28		31		41
<u>Textile Product Mills</u>																
Carpet & rug mills	1.13	0 ^b	1.29	0 ^b	1.25	1	1.68	2	1.26	0 ^b	1.59	0 ^b	1.39	0 ^b	1.92	0 ^b
Curtain & linen mills	1.24	2	1.44	3	1.20	16	1.42	19	1.46	0 ^b	1.86	1	1.56	1	2.05	1

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Textile bag & canvas mills	1.16	31	1.49	40	1.14	238	1.49	312	1.16	11	1.47	14	1.23	12	1.74	18
Rope, cordage, twine, tire cord & tire fabric mills	1.22	14	1.45	16	1.35	58	1.86	80	1.30	3	1.65	4	1.39	5	1.84	6
Other textile product mills	1.27	94	1.55	116	1.20	760	1.48	937	1.32	27	1.67	34	1.47	33	2.01	45
Hosiery & sock mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other apparel knitting mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		142		175		1,074		1,350		41		52		51		70
<u>Apparel</u>																
Cut & sew apparel contractors	1.48	7	1.94	9	1.16	100	1.36	118	1.39	3	1.77	3	1.85	3	2.72	4
Men's & boy's cut & sew apparel	1.38	41	1.69	50	1.28	372	1.54	448	1.54	11	1.95	14	1.83	14	2.51	19
Women's & girl's cut & sew apparel	1.44	1	1.69	1	1.65	6	2.06	8	1.99	0 ^b	2.52	0 ^b	2.39	0 ^b	3.21	0 ^b
Other cut & sew apparel	1.41	1	1.73	1	1.25	9	1.49	11	1.55	0 ^b	1.97	0 ^b	1.86	0 ^b	2.54	0 ^b
Apparel accessories & other apparel	1.34	1	1.71	1	1.31	3	1.77	5	1.31	0 ^b	1.65	0 ^b	1.49	0 ^b	2.06	0 ^b
Total --		50		62		490		588		15		19		17		24
<u>Leather & Allied Products</u>																
Leather & hide tanning & finishing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Footwear	1.21	187	1.70	263	1.34	783	2.42	1,414	1.13	94	1.43	120	1.21	101	1.74	145
Other leather & allied products	1.38	2	1.78	3	1.25	16	1.61	21	1.34	1	1.69	1	1.75	1	2.58	1
Total --		189		265		799		1,435		95		121		102		146
Secondary Agriculture Total --		5,701		6,425		16,212		22,255		905		1,146		1,677		2,093
Agriculture Total --		6,302		7,126		29,647		36,532		1,030		1,305		1,960		2,433
<u>Forestry Inputs</u>																
<u>Sawmill, woodworking, & paper machinery</u>	1.25	10	1.55	12	1.39	45	1.99	65	1.30	3	1.65	4	1.38	4	1.89	5
<u>Timber</u>																
Forestry, forest products, & timber tract production	1.46	2	1.68	2	3.70	24	4.12	27	6.69	0 ^b	8.49	1	1.60	1	1.86	1
Commercial logging	1.23	25	1.63	33	1.41	353	1.69	422	1.20	10	1.51	13	1.27	13	1.74	17
Total --		27		36		377		449		11		14		14		19
Forestry Inputs Total --		37		48		423		514		14		17		17		24

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Primary Forestry																
Sawmills	1.52	137	1.79	160	1.74	647	2.27	844	1.97	29	2.49	37	2.22	42	2.94	55
Wood preservation	1.62	6	1.80	7	2.35	22	2.95	28	4.36	1	5.52	1	2.69	2	3.32	2
Pulp mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Paper mills	1.32	105	1.59	127	2.68	215	5.01	401	1.38	28	1.74	35	1.39	44	1.80	57
Paperboard Mills	1.37	46	1.69	57	3.20	98	6.20	190	1.37	14	1.74	17	1.43	20	1.88	26
Primary Forestry Total --		293		351		982		1,463		72		91		107		140
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	1.37	4	1.63	5	1.51	19	2.04	25	1.58	1	2.00	1	1.75	1	2.35	2
Engineered wood member & truss	1.39	37	1.70	46	1.40	232	1.81	301	1.54	10	1.95	13	1.81	13	2.50	17
Reconstituted wood products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		41		50		251		327		11		14		14		19
<u>Wood Windows & Doors & Millwork</u>																
Wood windows & door	1.40	17	1.69	21	1.45	99	1.88	128	1.54	4	1.95	6	1.65	6	2.19	8
Cut stock, resawing lumber, & planing	1.23	37	1.42	42	1.30	193	1.62	240	1.51	7	1.92	9	1.37	14	1.68	17
Other millworks, including floors	1.34	58	1.60	69	1.36	360	1.71	452	1.56	14	1.98	17	1.61	21	2.10	27
Total --		112		132		651		821		25		32		41		53
<u>Wood Containers & Pallets</u>																
	1.32	23	1.61	28	1.24	176	1.55	219	1.43	6	1.81	8	1.52	9	2.03	12
<u>Manufactured Homes (Mobile Homes)</u>																
Manufactured homes (mobile homes)	1.30	318	1.61	394	1.35	1,928	1.79	2,568	1.33	95	1.68	121	1.37	134	1.82	178
Prefabricated wood buildings	1.28	23	1.59	29	1.38	128	1.90	175	1.33	7	1.69	9	1.35	10	1.77	14
Total --		341		423		2,055		2,744		103		130		145		192
<u>All Other Miscellaneous Wood Products</u>																
	1.36	12	1.62	14	1.42	70	1.79	89	1.63	3	2.07	4	1.55	5	1.98	6
<u>Paperboard Containers</u>																
	1.28	412	1.51	487	1.79	1,320	2.65	1,954	1.48	95	1.87	120	1.61	127	2.16	171

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Paper Bags & Coated & Treated Paper</u>	1.22	35	1.47	42	1.64	91	2.72	152	1.28	9	1.62	11	1.33	13	1.77	17
<u>Stationery Products</u>	1.28	221	1.51	260	1.60	754	2.30	1,080	1.49	48	1.89	61	1.54	71	2.02	94
<u>Other Converted Paper Products</u>																
Sanitary paper products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other converted paper products	1.31	110	1.54	130	1.58	414	2.22	581	1.51	25	1.92	31	1.63	34	2.17	46
Total --		110		130		414		581		25		31		34		46
<u>Wood Kitchen Cabinets & Countertops</u>	1.37	25	1.68	30	1.31	204	1.61	252	1.44	7	1.83	9	1.70	8	2.36	12
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.33	324	1.61	394	1.32	1,835	1.74	2,422	1.38	88	1.75	111	1.66	106	2.29	146
Nonupholstered wood household furniture	1.35	42	1.69	52	1.26	339	1.59	425	1.38	13	1.74	16	1.61	15	2.24	21
Other household nonupholstered furniture	1.37	16	1.59	19	1.51	81	1.90	102	1.78	3	2.25	4	2.26	4	3.09	5
Institutional furniture	1.32	21	1.63	26	1.33	141	1.72	183	1.37	6	1.73	8	1.58	7	2.21	10
Total --		403		491		2,396		3,133		110		139		132		183
<u>Office Furniture</u>																
Wood office furniture	1.42	0 ^b	1.67	0 ^b	1.43	1	1.76	1	1.78	0 ^b	2.25	0 ^b	2.27	0 ^b	3.09	0 ^b
Custom architectural woodwork & millwork	1.31	10	1.60	13	1.27	81	1.58	101	1.39	3	1.76	4	1.61	3	2.24	5
Showcase, partition, shelving, & locker	1.28	29	1.62	37	1.35	156	1.91	221	1.25	10	1.59	12	1.40	11	1.98	15
Total --		39		50		238		323		13		16		14		20
<u>Other Furniture Related Products</u>																
Mattresses	1.35	27	1.53	31	1.70	106	2.17	135	2.03	4	2.57	6	2.75	6	3.70	8
Blind & shades	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		27		31		106		135		4		6		6		8
Secondary Forestry Total --		1,801		2,168		8,727		11,810		459		582		620		831
Forestry Total --		2,131		2,567		10,132		13,788		545		690		744		995
Agriculture & Forestry Total --		8,433		9,693		39,779		50,319		1,575		1,995		2,704		3,428

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2013 (Cont.)

Sector	TIO (million \$)			Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam Total	Type I	Indirect	Type Sam Total	Type I	Indirect	Type Sam Total	Type I	Indirect	Type Sam Total			
Construction --		8,665	11,038		58,609	78,513		2,975	3,765		3,480	4,846			
Finance --		4,551	5,682		34,105	43,582		1,412	1,789		1,866	2,517			
Government --		9,069	12,905		84,724	116,853		4,784	6,061		6,099	8,302			
Insurance --		2,571	3,154		14,996	19,882		728	922		1,127	1,462			
Manufacturing --		21,648	25,204		68,413	98,211		4,421	5,606		7,533	9,580			
Mining --		641	737		2,101	2,912		121	153		400	456			
Miscellaneous --		1,071	1,510		15,881	19,554		547	693		630	882			
Real Estate --		10,330	11,266		31,633	36,611		745	942		7,228	7,767			
Retail Trade --		7,480	9,670		86,177	104,534		2,738	3,467		4,553	5,813			
Services --		37,086	49,764		349,714	455,999		15,857	20,079		21,233	28,523			
Transportation --		3,433	4,397		23,126	31,206		1,205	1,526		1,597	2,152			
Utilities --		648	714		1,122	1,682		83	106		256	294			
Wholesale Trade --		6,220	7,801		33,468	46,719		1,975	2,501		3,843	4,753			

^aTotals may not add due to rounding.

^bValues of zero are nonzero values less than 1.

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2013

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<i>Agricultural Inputs</i>																
<i>Agricultural Chemicals</i>																
Nitrogenous fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Phosphatic fertilizer	1.38	82	1.49	88	4.14	147	5.68	202	3.85	9	4.81	12	2.41	20	2.87	24
Fertilizer mixing	1.28	28	1.39	30	1.86	67	2.41	87	2.30	3	2.86	4	2.00	6	2.43	8
Pesticide & other agricultural chemicals	1.28	481	1.41	531	3.19	757	4.95	1,172	1.97	71	2.45	89	1.36	203	1.56	232
Lime	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		590		649		972		1,462		84		105		229		264
<i>Agricultural Machinery</i>																
Farm machinery & equipment	1.24	7	1.39	7	1.97	15	2.80	22	1.70	1	2.12	1	1.45	2	1.74	3
Lawn & garden equipment	1.22	453	1.34	496	1.62	1,192	2.11	1,550	1.88	61	2.35	77	1.63	119	1.98	144
Total --		459		503		1,207		1,572		63		78		121		147
<i>Agricultural Inputs Total --</i>		1,049		1,153		2,179		3,034		147		183		350		410
<i>Primary Agriculture</i>																
Oilseed farming	1.20	724	1.29	781	1.38	3,833	1.55	4,298	2.20	77	2.76	97	1.18	444	1.27	477
Grain farming	1.56	997	1.71	1,091	1.56	9,123	1.69	9,898	13.88	131	17.34	164	0.00	0 ^c	0.00	0 ^c
Vegetable & melon farming	1.10	10	1.24	11	1.11	93	1.23	103	1.28	2	1.61	2	1.07	8	1.17	8
Fruit farming	1.12	2	1.31	2	1.05	49	1.11	51	1.26	0 ^b	1.58	1	1.09	1	1.23	2
Tree nut farming	1.11	0 ^b	1.28	0 ^b	1.10	3	1.20	3	1.27	0 ^b	1.58	0 ^b	1.08	0 ^b	1.20	0 ^b
Greenhouse, nursery, & floriculture production	1.13	52	1.29	60	1.08	760	1.16	821	1.25	10	1.56	13	1.10	35	1.24	40
Tobacco farming	1.21	6	1.49	7	1.16	70	1.34	81	1.24	2	1.55	2	1.19	3	1.45	4
Cotton farming	1.23	228	1.42	265	1.24	2,101	1.42	2,403	1.43	51	1.79	64	1.21	139	1.39	160
Sugarcane & sugar beet farming	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other crop farming	1.24	65	1.41	74	1.05	2,802	1.07	2,878	1.56	13	1.95	16	1.22	38	1.39	44
Dairy cattle & milk production	1.26	13	1.36	14	1.48	63	1.69	72	2.24	1	2.81	2	1.30	6	1.43	7
Beef cattle ranching & farming	1.25	89	1.34	95	1.11	1,592	1.14	1,642	2.57	8	3.22	10	1.30	37	1.42	41
Poultry & egg production	1.19	52	1.28	55	1.39	170	1.64	201	1.84	5	2.30	7	1.28	18	1.43	20

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Animal production, except cattle/poultry/eggs	1.06	57	1.16	62	1.02	1,179	1.06	1,224	1.15	7	1.44	9	1.03	48	1.10	51
Commercial fishing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Commercial hunting & trapping	1.25	13	1.72	18	1.15	156	1.46	198	1.17	7	1.48	9	1.21	8	1.65	11
Support activities for agriculture & forestry	1.08	127	1.62	191	1.02	2,820	1.21	3,344	1.04	88	1.30	111	1.06	96	1.47	132
Primary Agriculture Total --		2,436		2,727		24,812		27,216		404		506		883		996
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	1.30	347	1.40	375	3.05	511	4.41	741	2.07	39	2.59	49	1.33	129	1.50	145
Other animal food	1.38	17	1.56	19	3.50	24	6.25	42	1.54	3	1.92	4	1.53	5	1.90	7
Total --		363		393		535		783		43		53		134		152
<u>Grain & Oilseed Milling</u>																
Flour milling	1.46	151	1.60	164	4.33	292	6.01	405	4.09	19	5.10	24	2.67	37	3.25	45
Rice milling	1.28	66	1.38	72	2.50	130	3.35	174	3.03	8	3.78	9	2.35	15	2.85	18
Malt	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Wet corn milling	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Soybean & other oilseed processing	1.37	4,432	1.46	4,723	9.23	5,693	13.14	8,098	5.87	412	7.33	514	3.32	804	4.01	973
Fats & oils refining & blending	1.64	499	1.75	532	4.44	646	6.33	922	3.52	47	4.39	59	2.89	91	3.50	110
Breakfast cereal	1.36	699	1.49	765	2.29	1,247	3.30	1,794	1.94	94	2.42	117	1.37	273	1.56	311
Total --		5,846		6,257		8,008		11,394		580		723		1,220		1,457
<u>Sugar & Confectionary Products</u>																
Beet sugar	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Sugar cane mills & refining	1.25	41	1.36	44	2.47	76	3.38	104	2.39	5	2.98	6	1.65	11	1.95	13
Nonchocolate confectionery	1.38	435	1.56	491	1.73	1,283	2.36	1,747	1.78	80	2.22	99	1.63	145	2.00	178
Chocolate & confectionery from cacao beans	1.38	4	1.48	4	2.21	10	2.71	13	8.06	0 ^b	10.05	1	2.88	1	3.43	1
Confectionery from purchased chocolate	1.32	60	1.52	69	1.54	189	2.14	264	1.52	13	1.90	16	1.48	22	1.82	28
Total --		539		608		1,559		2,127		98		122		179		219
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Frozen fruits, juices & vegetables	1.52	164	1.73	188	2.14	503	2.97	697	2.12	33	2.64	41	2.02	57	2.50	70
Canned fruits & vegetables	1.26	56	1.48	65	1.77	129	2.86	208	1.36	14	1.69	17	1.44	19	1.86	24
Canned specialties	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Dehydrated food products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		673		773		2,111		2,937		142		177		208		266
<u>Dairy Products</u>																
Fluid milk	1.34	132	1.48	146	2.28	292	3.18	406	2.08	20	2.60	24	1.97	32	2.46	40
Creamery butter	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Cheese	1.32	107	1.43	116	2.53	218	3.39	292	2.91	13	3.63	16	2.73	21	3.41	26
Dry, condensed, & evaporated dairy products	1.40	627	1.53	684	3.46	1,078	4.95	1,542	2.65	80	3.30	99	2.25	143	2.76	176
Ice cream & frozen desserts	1.37	188	1.52	208	1.59	598	2.03	761	2.00	28	2.50	35	1.69	55	2.04	66
Total --		1,054		1,153		2,185		3,002		140		175		251		309
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering	1.15	1,455	1.25	1,573	1.55	3,257	2.01	4,228	1.71	167	2.14	208	1.48	286	1.83	354
Meat processed from carcasses	1.29	242	1.40	263	1.52	622	1.94	794	1.74	30	2.17	37	1.81	44	2.30	56
Rendering & meat byproduct processing	1.62	135	1.83	153	3.12	425	4.19	571	3.39	25	4.23	31	3.10	34	4.04	44
Poultry processing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		1,832		1,989		4,304		5,594		221		276		364		455
<u>Seafood Product Preparation & Packaging</u>																
	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Bakeries & Tortillas</u>																
Bread & bakery product, except frozen	1.36	124	1.66	150	1.19	961	1.46	1,179	1.37	37	1.71	46	1.43	51	1.85	66
Frozen cakes & other pastries	1.42	38	1.69	45	1.31	206	1.69	265	1.49	10	1.85	13	1.53	15	1.95	19
Cookie & cracker	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Dry pasta, mixes, & dough	1.46	9	1.65	11	2.04	22	2.99	32	1.71	2	2.13	2	1.56	3	1.89	4

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Tortilla	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		172		206		1,189		1,475		49		61		69		89
<u>Other Foods</u>																
Roasted nuts & peanut butter	1.35	0 ^b	1.45	1	2.12	1	2.63	2	5.45	0 ^b	6.80	0 ^b	1.83	0 ^b	2.11	0 ^b
Other snack food	1.28	1,146	1.40	1,255	2.02	2,054	2.91	2,949	1.83	154	2.28	192	1.35	448	1.54	511
Coffee & tea	1.34	37	1.48	40	2.52	91	3.38	122	2.64	5	3.29	7	1.98	10	2.39	13
Flavoring syrup & concentrate	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Mayonnaise, dressing, & sauce	1.33	52	1.44	56	1.82	106	2.41	141	2.04	6	2.54	7	1.65	13	1.97	15
Spice & extract	1.33	1	1.48	2	1.87	4	2.49	5	2.07	0 ^b	2.58	0 ^b	2.09	0 ^b	2.66	0 ^b
All other food	1.35	137	1.55	157	1.64	462	2.22	626	1.68	28	2.10	35	1.76	41	2.25	53
Total --		1,374		1,510		2,718		3,844		193		241		513		592
<u>Beverages</u>																
Bottled & canned soft drinks & water	1.30	1,086	1.43	1,193	2.40	2,492	3.25	3,370	2.25	151	2.80	188	1.83	300	2.21	361
Breweries	1.39	56	1.51	60	2.39	117	3.16	155	3.50	6	4.36	8	1.78	16	2.06	19
Wineries	1.33	10	1.55	11	1.62	36	2.22	49	1.65	2	2.06	3	1.71	3	2.20	4
Distilleries	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		1,152		1,265		2,645		3,574		160		199		319		384
<u>Tobacco Products</u>																
	1.31	889	1.39	944	4.08	1,047	5.87	1,506	3.18	79	3.97	98	1.31	467	1.40	499
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.15	112	1.31	127	1.27	370	1.70	496	1.29	22	1.61	27	1.40	26	1.87	35
Broadwoven fabric mills	1.19	3	1.47	3	1.33	10	2.03	16	1.20	1	1.50	1	1.27	1	1.71	1
Narrow fabric mills & schiffli machine embroidery	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Nonwoven fabric mills	1.25	8	1.42	9	1.56	24	2.16	33	1.52	2	1.89	2	1.58	2	2.03	3
Knit fabric mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Textile & fabric finishing mills	1.34	29	1.55	33	1.42	139	1.80	176	1.65	6	2.05	8	1.83	8	2.40	11
Fabric coating mills	1.23	9	1.44	11	1.42	32	1.99	44	1.37	2	1.71	3	1.45	3	1.90	4

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Total --		160		183		575		765		33		41		41		54
<u>Textile Product Mills</u>																
Carpet & rug mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Curtain & linen mills	1.22	8	1.44	10	1.19	55	1.46	68	1.33	2	1.65	3	1.42	3	1.85	4
Textile bag & canvas mills	1.14	10	1.45	12	1.13	70	1.48	92	1.14	4	1.42	5	1.19	4	1.63	6
Rope, cordage, twine, tire cord & tire fabric mills	1.23	69	1.45	82	1.35	289	1.83	391	1.32	17	1.65	22	1.40	24	1.81	31
Other textile product mills	1.25	17	1.54	21	1.20	131	1.50	163	1.27	6	1.58	7	1.39	7	1.86	9
Hosiery & sock mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other apparel knitting mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		105		125		545		714		29		36		38		50
<u>Apparel</u>																
Cut & sew apparel contractors	1.41	35	1.85	46	1.15	497	1.36	589	1.33	16	1.66	20	1.61	15	2.30	22
Men's & boy's cut & sew apparel	1.20	10	1.70	14	1.27	54	2.05	87	1.13	5	1.42	7	1.20	6	1.68	8
Women's & girl's cut & sew apparel	1.46	14	1.67	16	1.61	87	1.92	104	2.68	3	3.34	4	3.10	4	4.03	5
Other cut & sew apparel	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Apparel accessories & other apparel	1.24	2	1.71	2	1.29	9	2.08	15	1.15	1	1.46	1	1.24	1	1.73	1
Total --		61		79		647		794		25		31		26		36
<u>Leather & Allied Products</u>																
Leather & hide tanning & finishing	1.53	18	1.73	21	1.91	67	2.45	87	2.24	3	2.79	4	2.99	4	3.90	6
Footwear	1.37	38	1.58	44	1.32	249	1.58	299	1.72	9	2.14	11	2.18	11	2.90	14
Other leather & allied products	1.45	3	1.71	4	1.24	31	1.43	35	1.71	1	2.13	1	3.48	1	5.04	1
Total --		60		69		347		421		13		16		16		21
Secondary Agriculture Total --		14,279		15,555		28,415		38,931		1,803		2,249		3,846		4,582
Agriculture Total --		17,764		19,435		55,406		69,180		2,355		2,938		5,079		5,989
<u>Forestry Inputs</u>																
Sawmill, woodworking, & paper machinery	1.22	5	1.54	6	1.38	20	2.08	31	1.24	2	1.55	2	1.30	2	1.75	3

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Timber</u>																
Forestry, forest products, & timber tract production	1.24	6	1.62	7	2.23	33	3.21	47	1.33	2	1.67	3	1.25	4	1.60	5
Commercial logging	1.16	122	1.64	173	1.22	1,097	1.69	1,518	1.09	69	1.38	86	1.14	77	1.57	106
Total --		128		180		1,130		1,565		71		89		81		111
Forestry Inputs Total --		133		186		1,150		1,596		73		92		83		114
Primary Forestry																
Sawmills	1.50	283	1.73	326	1.67	1,320	2.12	1,675	2.05	61	2.56	76	2.27	85	2.93	110
Wood preservation	1.57	6	1.76	6	2.22	19	2.86	25	2.84	1	3.55	1	2.33	2	2.86	2
Pulp mills	1.37	225	1.66	271	3.22	480	5.78	862	1.42	65	1.77	81	1.46	92	1.89	119
Paper mills	1.36	4,382	1.57	5,079	2.61	9,178	4.25	14,922	1.58	977	1.98	1,220	1.50	1,677	1.86	2,079
Paperboard Mills	1.44	1,069	1.65	1,225	3.05	2,481	4.63	3,769	1.88	216	2.36	271	1.71	380	2.12	470
Primary Forestry Total --		5,965		6,907		13,479		21,253		1,320		1,649		2,236		2,780
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	1.40	11	1.57	12	1.47	55	1.78	66	2.18	2	2.72	2	2.27	3	2.89	4
Engineered wood member & truss	1.36	13	1.65	15	1.36	76	1.76	98	1.47	4	1.84	5	1.69	4	2.28	6
Reconstituted wood products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		24		28		131		164		6		7		7		10
<u>Wood Windows & Doors & Millwork</u>																
Wood windows & door	1.34	163	1.61	195	1.38	906	1.79	1,176	1.47	46	1.83	58	1.55	63	2.02	82
Cut stock, resawing lumber, & planing	1.21	14	1.42	16	1.28	66	1.65	85	1.36	3	1.69	4	1.30	6	1.61	7
Other millworks, including floors	1.32	132	1.56	156	1.32	788	1.66	986	1.52	34	1.89	42	1.56	49	2.00	63
Total --		308		367		1,759		2,246		84		104		118		152
<u>Wood Containers & Pallets</u>	1.32	141	1.59	170	1.23	1,029	1.52	1,271	1.39	41	1.73	52	1.48	55	1.93	72
<u>Manufactured Homes (Mobile Homes)</u>																

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Manufactured homes (mobile homes)	1.26	72	1.52	88	1.30	438	1.67	565	1.30	22	1.62	27	1.34	30	1.73	39
Prefabricated wood buildings	1.30	3	1.54	4	1.36	19	1.72	24	1.49	1	1.86	1	1.44	1	1.81	2
Total --		76		92		457		589		23		28		32		41
<u>All Other Miscellaneous Wood Products</u>	1.35	11	1.56	13	1.38	67	1.68	81	1.72	2	2.14	3	1.58	4	1.94	5
<u>Paperboard Containers</u>	1.28	562	1.46	641	1.72	1,821	2.34	2,473	1.65	112	2.05	139	1.74	157	2.25	202
<u>Paper Bags & Coated & Treated Paper</u>	1.23	376	1.40	430	1.58	1,051	2.25	1,497	1.45	76	1.81	95	1.45	117	1.84	149
<u>Stationery Products</u>	1.28	35	1.44	40	1.55	124	2.02	162	1.70	7	2.12	8	1.65	10	2.08	13
<u>Other Converted Paper Products</u>																
Sanitary paper products	1.22	577	1.34	635	2.04	1,122	2.91	1,603	1.75	82	2.18	103	1.38	202	1.60	235
All other converted paper products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		577		635		1,122		1,603		82		103		202		235
<u>Wood Kitchen Cabinets & Countertops</u>	1.31	51	1.64	64	1.28	386	1.63	493	1.31	18	1.64	23	1.47	20	2.01	28
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Nonupholstered wood household furniture	1.32	15	1.63	18	1.25	117	1.55	146	1.35	5	1.68	6	1.54	6	2.09	8
Other household nonupholstered furniture	1.30	8	1.58	10	1.48	38	2.05	53	1.38	3	1.73	3	1.59	3	2.16	4
Institutional furniture	1.32	60	1.59	72	1.31	397	1.65	499	1.42	18	1.77	22	1.62	20	2.20	27
Total --		83		101		552		698		25		31		29		39
<u>Office Furniture</u>																
Wood office furniture	1.38	0 ^b	1.65	0 ^b	1.41	1	1.79	1	1.55	0 ^b	1.94	0 ^b	1.85	0 ^b	2.50	0 ^b
Custom architectural woodwork & millwork	1.21	8	1.62	11	1.26	45	1.88	67	1.16	4	1.45	5	1.23	4	1.72	5

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Showcase, partition, shelving, & locker	1.27	17	1.58	21	1.33	91	1.84	125	1.26	6	1.58	7	1.40	7	1.92	9
Total --		25		32		137		194		10		12		11		15
<u>Other Furniture Related Products</u>																
Mattresses	1.31	6	1.57	8	1.72	21	2.56	32	1.41	2	1.77	2	1.64	2	2.23	3
Blind & shades	1.23	2	1.54	2	1.22	12	1.64	16	1.22	1	1.53	1	1.35	1	1.85	1
Total --		8		10		33		48		2		3		3		4
Secondary Forestry Total --		2,277		2,623		8,670		11,520		488		609		765		964
Forestry Total --		8,375		9,717		23,299		34,369		1,880		2,349		3,084		3,858
Agriculture & Forestry Total --		26,139		29,151		78,706		103,549		4,235		5,287		8,163		9,847
Construction --		10,376		13,074		65,240		87,513		3,737		4,680		4,294		5,849
Finance --		6,671		8,778		45,474		62,847		2,974		3,709		3,369		4,584
Government --		20,178		26,982		158,957		215,035		9,642		12,017		12,281		16,200
Insurance --		4,159		5,057		24,199		31,599		1,265		1,579		1,869		2,386
Manufacturing --		30,988		35,114		84,518		118,539		5,812		7,253		10,500		12,880
Mining --		410		457		1,276		1,669		66		83		272		299
Miscellaneous --		1,448		2,088		20,496		25,773		906		1,130		965		1,334
Real Estate --		13,391		14,545		40,817		47,239		1,076		1,347		9,558		10,223
Retail Trade --		9,615		12,313		106,770		129,024		3,789		4,731		6,019		7,575
Services --		52,271		69,461		532,396		674,201		24,114		30,117		31,439		41,353
Transportation --		7,278		9,001		39,619		53,832		2,417		3,019		3,247		4,241
Utilities --		799		878		1,125		1,772		109		137		315		360
Wholesale Trade --		11,696		14,638		59,762		84,023		4,143		5,171		7,470		9,166

^aTotals may not add due to rounding.

^bZero values are nonzero values less than one.

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2013

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<i>Agricultural Inputs</i>																
<i>Agricultural Chemicals</i>																
Nitrogenous fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Phosphatic fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Fertilizer mixing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Pesticide & other agricultural chemicals	1.29	13	1.46	14	3.52	22	5.49	35	2.40	2	3.19	3	1.42	5	1.68	6
Lime	1.57	12	1.80	14	2.28	36	3.13	50	2.52	2	3.34	3	2.42	4	3.06	5
Total --		25		28		59		85		4		5		9		12
<i>Agricultural Machinery</i>																
Farm machinery & equipment	1.28	30	1.45	34	2.09	75	2.95	106	1.95	5	2.59	6	1.55	10	1.92	13
Lawn & garden equipment	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		30		34		75		106		5		6		10		13
<i>Agricultural Inputs Total --</i>		55		63		134		191		9		11		20		24
<i>Primary Agriculture</i>																
Oilseed farming	1.22	308	1.34	338	1.42	2,362	1.56	2,588	2.35	35	3.11	46	1.21	189	1.32	207
Grain farming	1.62	334	1.82	375	1.60	4,286	1.72	4,600	13.98	48	18.51	63	0.00	0 ^c	0.00	0 ^c
Vegetable & melon farming	1.12	18	1.28	20	1.12	230	1.22	249	1.32	3	1.75	4	1.08	14	1.20	15
Fruit farming	1.15	5	1.40	6	1.07	156	1.12	164	1.29	1	1.70	2	1.11	4	1.30	4
Tree nut farming	1.13	0 ^b	1.37	0 ^b	1.15	4	1.27	5	1.24	0 ^b	1.64	0 ^b	1.09	0 ^b	1.28	0 ^b
Greenhouse, nursery, & floriculture production	1.16	228	1.42	280	1.12	3,751	1.24	4,139	1.23	59	1.63	78	1.14	155	1.37	186
Tobacco farming	1.22	105	1.48	127	1.15	1,976	1.25	2,144	1.41	25	1.87	34	1.22	64	1.47	78
Cotton farming	1.25	12	1.54	14	1.27	148	1.44	168	1.42	3	1.88	4	1.24	7	1.51	9
Sugarcane & sugar beet farming	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other crop farming	1.27	298	1.50	352	1.06	14,905	1.09	15,312	1.62	62	2.15	82	1.26	178	1.49	210
Dairy cattle & milk production	1.30	89	1.43	98	1.62	707	1.77	774	2.48	10	3.28	13	1.35	42	1.52	47
Beef cattle ranching & farming	1.47	517	1.59	560	1.35	11,401	1.39	11,724	3.07	49	4.05	65	1.56	222	1.74	247
Poultry & egg production	1.24	325	1.34	352	1.35	1,385	1.55	1,587	2.05	31	2.71	41	1.33	113	1.52	129

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Animal production, except cattle/poultry/eggs	1.07	47	1.19	53	1.03	1,602	1.05	1,641	1.18	6	1.56	8	1.04	40	1.12	43
Commercial fishing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Commercial hunting & trapping	1.37	17	1.73	22	1.16	282	1.30	316	1.54	5	2.03	7	1.50	8	2.03	10
Support activities for agriculture & forestry	1.13	101	1.71	153	1.03	2,913	1.17	3,309	1.07	60	1.42	80	1.11	68	1.62	99
Primary Agriculture Total --		2,405		2,750		46,107		48,718		397		525		1,104		1,286
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	1.25	519	1.37	569	3.05	802	4.50	1,183	2.16	58	2.87	77	1.33	198	1.53	228
Other animal food	1.30	87	1.43	96	3.38	143	4.95	210	2.56	10	3.40	13	1.78	23	2.19	29
Total --		606		665		945		1,393		68		90		221		257
<u>Grain & Oilseed Milling</u>																
Flour milling	1.45	239	1.63	269	4.58	485	6.67	707	3.25	34	4.30	45	2.50	62	3.21	79
Rice milling	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Malt	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Wet corn milling	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Soybean & other oilseed processing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Fats & oils refining & blending	1.21	42	1.31	45	3.37	56	4.98	82	2.38	4	3.15	5	2.06	8	2.62	10
Breakfast cereal	1.29	21	1.42	23	2.29	41	3.21	58	2.41	3	3.20	3	1.38	8	1.60	10
Total --		302		337		582		846		40		53		78		99
<u>Sugar & Confectionary Products</u>																
Beet sugar	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Sugar cane mills & refining	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Nonchocolate confectionery	1.29	6	1.61	8	1.78	18	3.00	30	1.37	2	1.80	2	1.40	3	1.90	4
Chocolate & confectionery from cacao beans	1.39	34	1.55	38	2.33	89	3.07	118	3.59	4	4.75	6	2.53	8	3.22	11
Confectionery from purchased chocolate	1.36	270	1.59	316	1.60	896	2.23	1,246	1.71	53	2.27	70	1.58	97	2.04	125
Total --		311		362		1,004		1,393		59		79		108		140

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen fruits, juices & vegetables	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Frozen specialties	1.38	314	1.59	364	1.58	1,104	2.12	1,480	1.79	57	2.38	76	1.96	84	2.66	114
Canned fruits & vegetables	1.27	322	1.49	377	1.81	822	2.72	1,236	1.57	63	2.08	83	1.62	96	2.17	129
Canned specialties	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Dehydrated food products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		637		741		1,926		2,715		120		159		180		243
<u>Dairy Products</u>																
Fluid milk	1.38	550	1.55	617	2.46	1,290	3.42	1,795	2.40	77	3.18	102	2.17	131	2.84	171
Creamery butter	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Cheese	1.32	52	1.47	57	2.66	109	3.70	152	2.61	7	3.46	9	2.59	11	3.43	14
Dry, condensed, & evaporated dairy products	1.34	50	1.46	55	3.45	94	4.68	127	4.65	5	6.16	7	2.60	10	3.26	13
Ice cream & frozen desserts	1.38	11	1.60	12	1.67	34	2.30	46	1.75	2	2.31	3	1.62	3	2.10	4
Total --		662		741		1,527		2,120		90		120		155		203
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering	1.16	536	1.26	582	1.61	1,263	2.05	1,611	1.99	53	2.63	70	1.58	99	2.02	126
Meat processed from carcasses	1.28	273	1.42	304	1.57	727	2.07	962	1.76	36	2.33	47	1.82	53	2.47	72
Rendering & meat byproduct processing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Poultry processing	1.28	1,316	1.48	1,525	1.40	5,535	1.79	7,112	1.58	240	2.09	318	1.66	313	2.33	439
Total --		2,125		2,412		7,526		9,685		329		436		465		637
<u>Seafood Product Preparation & Packaging</u>																
Seafood Product Preparation & Packaging	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Bakeries & Tortillas</u>																
Bread & bakery product, except frozen	1.38	356	1.77	457	1.22	2,694	1.57	3,458	1.39	116	1.84	154	1.46	157	2.02	218
Frozen cakes & other pastries	1.46	48	1.72	57	1.34	294	1.64	359	2.04	10	2.70	13	1.86	17	2.44	22
Cookie & cracker	1.37	631	1.60	740	1.72	1,994	2.43	2,819	1.73	126	2.30	166	1.52	242	1.93	308

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Dry pasta, mixes, & dough	1.46	254	1.66	288	2.11	660	2.92	912	2.34	38	3.10	51	1.73	85	2.14	106
Tortilla	1.46	46	1.75	55	1.39	197	1.87	265	1.54	10	2.04	14	1.53	17	2.01	23
Total --		1,335		1,596		5,839		7,812		301		398		519		676
<u>Other Foods</u>																
Roasted nuts & peanut butter	1.34	4	1.49	5	2.24	11	2.95	15	3.09	1	4.10	1	1.74	1	2.13	2
Other snack food	1.24	881	1.37	971	2.03	1,682	2.84	2,359	2.17	103	2.88	137	1.37	343	1.59	397
Coffee & tea	1.35	45	1.57	52	2.69	111	4.02	166	2.00	8	2.66	11	1.83	14	2.39	19
Flavoring syrup & concentrate	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Mayonnaise, dressing, & sauce	1.27	330	1.41	365	1.84	715	2.52	979	2.01	40	2.67	53	1.63	84	2.04	105
Spice & extract	1.34	30	1.50	34	1.95	89	2.57	118	2.61	4	3.46	6	2.43	7	3.24	9
All other food	1.37	14	1.60	17	1.70	50	2.34	69	1.81	3	2.40	4	1.87	4	2.53	6
Total --		1,305		1,444		2,659		3,705		159		211		454		538
<u>Beverages</u>																
Bottled & canned soft drinks & water	1.34	714	1.51	807	2.57	1,698	3.63	2,394	2.35	106	3.11	140	1.93	206	2.45	262
Breweries	1.38	29	1.53	32	2.51	63	3.45	87	3.50	4	4.64	5	1.82	9	2.22	11
Wineries	1.45	57	1.66	65	1.73	228	2.21	292	2.87	10	3.81	13	2.41	17	3.15	22
Distilleries	1.22	938	1.35	1,037	2.54	1,524	3.78	2,269	2.11	113	2.80	150	1.24	485	1.39	545
Total --		1,738		1,940		3,514		5,042		233		308		717		839
<u>Tobacco Products</u>																
	1.35	2,334	1.46	2,527	4.54	2,968	6.77	4,424	3.90	222	5.17	294	1.37	1,230	1.50	1,346
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.19	15	1.36	17	1.30	52	1.71	69	1.43	3	1.90	3	1.58	3	2.23	5
Broadwoven fabric mills	1.26	0 ^b	1.53	0 ^b	1.38	1	1.88	2	1.45	0 ^b	1.93	0 ^b	1.57	0 ^b	2.21	0 ^b
Narrow fabric mills & schiffli machine embroidery	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Nonwoven fabric mills	1.25	272	1.50	326	1.61	781	2.44	1,184	1.45	61	1.92	81	1.53	83	2.12	115
Knit fabric mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Textile & fabric finishing mills	1.37	66	1.67	81	1.46	307	2.00	420	1.55	17	2.05	23	1.76	22	2.48	31
Fabric coating mills	1.27	3	1.50	4	1.47	12	2.00	17	1.60	1	2.13	1	1.69	1	2.32	1

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Total --		357		428		1,154		1,691		82		108		109		152
<u>Textile Product Mills</u>																
Carpet & rug mills	1.16	67	1.33	77	1.27	246	1.66	322	1.35	11	1.79	15	1.51	14	2.15	20
Curtain & linen mills	1.27	10	1.50	12	1.21	71	1.44	84	1.57	2	2.08	3	1.66	3	2.25	4
Textile bag & canvas mills	1.17	22	1.57	29	1.15	154	1.57	210	1.17	9	1.54	11	1.23	9	1.81	14
Rope, cordage, twine, tire cord & tire fabric mills	1.25	126	1.49	149	1.38	556	1.82	732	1.45	27	1.92	36	1.52	40	2.06	54
Other textile product mills	1.27	46	1.64	60	1.21	343	1.58	447	1.27	16	1.69	21	1.40	19	2.01	27
Hosiery & sock mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other apparel knitting mills	1.45	14	1.80	17	1.40	79	1.82	103	1.65	4	2.19	5	1.97	5	2.82	6
Total --		285		344		1,449		1,897		68		90		90		126
<u>Apparel</u>																
Cut & sew apparel contractors	1.47	27	2.05	37	1.17	360	1.43	439	1.37	12	1.81	16	1.69	12	2.59	18
Men's & boy's cut & sew apparel	1.29	168	1.80	234	1.30	1,146	1.86	1,646	1.23	76	1.63	101	1.35	85	1.98	125
Women's & girl's cut & sew apparel	1.44	1	1.79	1	1.69	3	2.25	4	1.70	0 ^b	2.24	0 ^b	1.99	0 ^b	2.81	0 ^b
Other cut & sew apparel	1.40	24	1.83	31	1.27	211	1.60	267	1.42	8	1.89	11	1.64	10	2.36	14
Apparel accessories & other apparel	1.52	14	1.84	17	1.34	109	1.62	131	1.97	3	2.62	4	2.49	4	3.48	6
Total --		233		320		1,829		2,487		100		133		111		164
<u>Leather & Allied Products</u>																
Leather & hide tanning & finishing	1.54	22	1.77	26	1.97	86	2.56	111	2.51	4	3.33	5	3.45	5	4.76	7
Footwear	1.29	101	1.78	140	1.37	477	2.22	770	1.21	45	1.61	59	1.34	49	1.99	73
Other leather & allied products	1.38	10	1.89	13	1.28	73	1.76	100	1.30	4	1.73	5	1.57	4	2.41	6
Total --		133		179		635		981		53		70		58		86
Secondary Agriculture Total --		12,361		14,037		33,555		46,193		1,924		2,550		4,495		5,505
Agriculture Total --		14,822		16,849		79,796		95,102		2,329		3,087		5,619		6,816
<u>Forestry Inputs</u>																
Sawmill, woodworking, & paper machinery	1.30	5	1.59	6	1.41	26	1.88	35	1.53	1	2.03	2	1.61	2	2.24	2
<u>Timber</u>																

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Timber</u>																
Forestry, forest products, & timber tract production	1.59	4	2.01	5	3.05	54	3.53	62	2.49	1	3.28	2	2.75	2	3.94	2
Total --		165		231		1,999		2,501		77		102		91		131
Forestry Inputs Total --		170		237		2,026		2,536		78		103		93		134
Primary Forestry																
Sawmills	1.59	570	1.89	678	1.79	2,697	2.34	3,521	2.22	124	2.95	165	2.46	176	3.37	241
Wood preservation	1.67	3	1.93	4	2.48	11	3.30	15	3.00	1	3.97	1	2.47	1	3.22	1
Pulp mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Paper mills	1.39	214	1.60	246	2.71	497	4.05	742	2.09	37	2.78	49	1.70	74	2.15	94
Paperboard Mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Primary Forestry Total --		787		928		3,205		4,277		162		214		251		336
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Engineered wood member & truss	1.40	72	1.76	91	1.41	440	1.85	580	1.57	21	2.09	28	1.83	25	2.64	37
Reconstituted wood products	1.29	48	1.47	55	1.68	146	2.26	196	1.86	8	2.46	10	1.58	15	1.99	19
Total --		120		146		586		776		29		38		41		56
<u>Wood Windows & Doors & Millwork</u>																
Wood windows & door	1.40	47	1.79	60	1.49	251	2.07	350	1.45	15	1.91	20	1.55	20	2.17	27
Cut stock, resawing lumber, & planing	1.26	41	1.52	49	1.34	202	1.77	266	1.45	10	1.92	13	1.36	17	1.78	22
Other millworks, including floors	1.37	100	1.70	124	1.39	599	1.81	777	1.57	27	2.08	36	1.62	39	2.22	53
Total --		188		233		1,052		1,393		52		68		75		103
<u>Wood Containers & Pallets</u>	1.35	113	1.68	140	1.26	865	1.56	1,069	1.54	31	2.05	41	1.63	42	2.25	59
<u>Manufactured Homes (Mobile Homes)</u>																

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Manufactured homes (mobile homes)	1.32	49	1.68	63	1.36	291	1.83	393	1.33	15	1.77	20	1.39	21	1.92	30
Prefabricated wood buildings	1.32	42	1.67	53	1.41	239	1.90	321	1.44	13	1.91	17	1.43	19	1.93	25
Total --		92		116		529		714		28		37		40		55
<u>All Other Miscellaneous Wood Products</u>	1.43	147	1.72	178	1.48	860	1.88	1,091	1.82	35	2.41	46	1.68	58	2.20	77
<u>Paperboard Containers</u>	1.30	985	1.56	1,185	1.82	3,169	2.69	4,684	1.57	229	2.08	304	1.69	308	2.35	428
<u>Paper Bags & Coated & Treated Paper</u>	1.26	149	1.48	176	1.65	428	2.44	632	1.51	31	2.01	41	1.52	47	2.03	64
<u>Stationery Products</u>	1.30	158	1.55	189	1.62	542	2.33	778	1.58	35	2.09	47	1.60	52	2.18	71
<u>Other Converted Paper Products</u>																
Sanitary paper products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other converted paper products	1.37	99	1.63	118	1.67	392	2.28	536	1.77	21	2.35	29	1.86	30	2.56	42
Total --		99		118		392		536		21		29		30		42
<u>Wood Kitchen Cabinets & Countertops</u>	1.39	113	1.79	145	1.32	878	1.69	1,120	1.44	36	1.91	48	1.67	43	2.43	62
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.37	8	1.69	10	1.36	48	1.78	63	1.50	2	1.99	3	1.82	3	2.60	4
Nonupholstered wood household furniture	1.40	54	1.78	69	1.28	432	1.61	544	1.46	17	1.94	22	1.71	20	2.48	29
Other household nonupholstered furniture	1.38	36	1.68	44	1.54	175	2.06	234	1.64	9	2.17	12	1.99	11	2.86	16
Institutional furniture	1.40	6	1.72	7	1.35	38	1.70	47	1.60	1	2.12	2	1.92	2	2.75	3
Total --		104		130		693		889		30		39		35		51
<u>Office Furniture</u>																
Wood office furniture	1.41	5	1.79	7	1.47	30	1.98	41	1.50	2	1.98	2	1.77	2	2.56	3
Custom architectural woodwork & millwork	1.30	35	1.75	47	1.30	227	1.82	317	1.27	14	1.68	18	1.40	15	2.07	22

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Showcase, partition, shelving, & locker	1.34	254	1.68	320	1.37	1,467	1.83	1,968	1.41	76	1.87	100	1.63	87	2.38	127
Total --		294		374		1,725		2,326		91		120		104		152
<u>Other Furniture Related Products</u>																
Mattresses	1.46	241	1.69	280	1.89	960	2.46	1,253	2.31	44	3.06	59	3.08	58	4.31	81
Blind & shades	1.36	8	1.63	10	1.27	57	1.54	69	1.61	2	2.14	2	1.96	2	2.78	3
Total --		249		290		1,017		1,322		46		61		60		85
Secondary Forestry Total --		2,813		3,419		12,737		17,331		693		920		937		1,302
Forestry Total --		3,770		4,585		17,968		24,144		933		1,237		1,281		1,771
Agriculture & Forestry Total --		18,592		21,434		97,764		119,247		3,263		4,324		6,899		8,587
Construction --		19,837		26,046		128,690		175,821		7,185		9,500		8,333		12,071
Finance --		12,187		16,185		80,590		110,899		4,587		6,078		5,647		8,055
Government --		19,534		29,421		202,423		277,313		11,281		14,969		14,155		20,110
Insurance --		12,115		15,735		63,085		90,512		4,135		5,486		5,939		8,119
Manufacturing --		65,491		75,489		179,179		254,929		11,397		15,126		20,601		26,623
Mining --		1,246		1,442		4,435		5,922		226		299		751		869
Miscellaneous --		2,639		3,856		38,071		47,287		1,390		1,844		1,568		2,301
Real Estate --		25,048		27,754		78,406		91,389		1,981		2,619		17,609		19,239
Retail Trade --		16,550		22,147		183,097		225,528		6,424		8,512		10,279		13,649
Services --		100,774		142,969		861,306		1,181,424		48,646		64,383		62,977		88,384
Transportation --		10,493		13,504		66,626		89,450		3,455		4,578		4,685		6,498
Utilities --		3,600		3,991		5,940		8,901		447		593		1,286		1,522
Wholesale Trade --		16,759		21,709		88,827		126,337		5,663		7,510		10,506		13,487

^aTotals may not add due to rounding.

^bValues of zero are nonzero values less than 1.

Table E.6. Total Impacts from Agriculture and Forestry^a, TriCities, 2013

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<i>Agricultural Inputs</i>																
<i>Agricultural Chemicals</i>																
Nitrogenous fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Phosphatic fertilizer	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Fertilizer mixing	1.16	10	1.23	11	1.62	24	1.96	29	1.88	1	2.28	1	1.64	2	1.91	2
Pesticide & other agricultural chemicals	1.19	122	1.27	129	2.74	184	3.76	252	1.82	11	2.22	14	1.24	47	1.35	51
Lime	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		132		140		208		281		12		15		49		54
<i>Agricultural Machinery</i>																
Farm machinery & equipment	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Lawn & garden equipment	1.14	234	1.23	253	1.45	592	1.87	760	1.44	27	1.76	33	1.36	56	1.62	67
Total --		234		253		592		760		27		33		56		67
<i>Agricultural Inputs Total --</i>		366		393		799		1,041		40		48		105		120
<i>Primary Agriculture</i>																
Oilseed farming	1.16	5	1.24	5	1.34	43	1.43	45	1.94	0 ^b	2.36	1	1.15	3	1.21	3
Grain farming	1.44	10	1.54	11	1.45	176	1.50	183	10.99	1	13.37	1	0.00	0 ^c	0.00	0 ^c
Vegetable & melon farming	1.09	8	1.22	9	1.10	123	1.18	132	1.22	1	1.48	2	1.06	6	1.15	7
Fruit farming	1.12	1	1.28	1	1.06	23	1.10	23	1.24	0 ^b	1.51	0 ^b	1.08	0 ^b	1.20	1
Tree nut farming	1.11	0 ^b	1.30	0 ^b	1.12	1	1.21	1	1.18	0 ^b	1.44	0 ^b	1.08	0 ^b	1.21	0 ^b
Greenhouse, nursery, & floriculture production	1.10	28	1.22	31	1.08	555	1.13	584	1.22	5	1.49	6	1.08	19	1.18	21
Tobacco farming	1.18	12	1.34	13	1.10	320	1.15	335	1.34	2	1.63	3	1.16	7	1.31	8
Cotton farming	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Sugarcane & sugar beet farming	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other crop farming	1.19	64	1.34	72	1.05	3,957	1.07	4,027	1.48	11	1.80	14	1.18	38	1.32	43
Dairy cattle & milk production	1.24	21	1.32	23	1.54	206	1.63	219	2.03	2	2.47	2	1.27	10	1.37	11
Beef cattle ranching & farming	1.39	95	1.47	100	1.32	2,547	1.34	2,592	2.48	7	3.02	9	1.45	40	1.55	43
Poultry & egg production	1.19	55	1.26	58	1.20	311	1.31	339	1.73	5	2.11	5	1.24	19	1.35	20
Animal production, except cattle/poultry/eggs	1.06	9	1.14	10	1.02	371	1.04	377	1.13	1	1.37	1	1.03	7	1.09	8
Commercial fishing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table E.6. Total Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Commercial hunting & trapping	1.32	2	1.51	2	1.14	36	1.22	38	1.56	0 ^b	1.90	0 ^b	1.49	1	1.84	1
Support activities for agriculture & forestry	1.08	12	1.50	16	1.03	377	1.13	417	1.04	7	1.27	8	1.07	7	1.43	10
Primary Agriculture Total --		321		350		9,046		9,312		43		53		158		174
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other animal food	1.16	22	1.26	24	2.48	28	3.96	45	1.44	3	1.76	3	1.34	6	1.59	7
Total --		22		24		28		45		3		3		6		7
<u>Grain & Oilseed Milling</u>																
Flour milling	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Rice milling	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Malt	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Wet corn milling	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Soybean & other oilseed processing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Fats & oils refining & blending	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Breakfast cereal	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		0		0		0		0		0		0		0		0
<u>Sugar & Confectionary Products</u>																
Beet sugar	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Sugar cane mills & refining	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Nonchocolate confectionery	1.19	4	1.34	5	1.51	12	2.11	17	1.30	1	1.59	1	1.30	1	1.58	2
Chocolate & confectionery from cacao beans	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Confectionery from purchased chocolate	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		4		5		12		17		1		1		1		2
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen fruits, juices & vegetables	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Frozen specialties	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Canned fruits & vegetables	1.19	2	1.23	2	1.53	6	1.73	7	5.20	0 ^b	6.32	0 ^b	1.92	0 ^b	2.17	0 ^b

Table E.6. Total Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Canned specialties	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Dehydrated food products	1.24	179	1.41	205	1.58	467	2.35	697	1.31	38	1.59	46	1.34	56	1.69	71
Total --		181		207		473		704		38		46		57		71
<u>Dairy Products</u>																
Fluid milk	1.20	3	1.31	3	1.93	6	2.68	8	1.54	0 ^b	1.88	0 ^b	1.54	1	1.89	1
Creamery butter	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Cheese	1.20	109	1.27	115	2.09	205	2.64	258	2.49	9	3.03	11	2.22	16	2.68	19
Dry, condensed, & evaporated dairy products	1.22	231	1.32	249	2.67	344	3.92	506	1.68	27	2.04	32	1.62	48	1.96	58
Ice cream & frozen desserts	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		342		366		555		772		36		43		65		79
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering	1.10	59	1.16	62	1.43	130	1.75	159	1.70	5	2.07	6	1.38	10	1.64	11
Meat processed from carcasses	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Rendering & meat byproduct processing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Poultry processing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		59		62		130		159		5		6		10		11
<u>Seafood Product Preparation & Packaging</u>																
	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Bakeries & Tortillas</u>																
Bread & bakery product, except frozen	1.18	41	1.39	49	1.13	371	1.33	438	1.20	11	1.46	13	1.24	16	1.57	20
Frozen cakes & other pastries	1.21	3	1.35	4	1.19	22	1.40	26	1.38	1	1.68	1	1.36	1	1.66	1
Cookie & cracker	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Dry pasta, mixes, & dough	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Tortilla	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		45		53		393		463		12		14		17		21
<u>Other Foods</u>																
Roasted nuts & peanut butter	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table E.6. Total Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Other snack food	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Coffee & tea	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Flavoring syrup & concentrate	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Mayonnaise, dressing, & sauce	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Spice & extract	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other food	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		0		0		0		0		0		0		0		0
<u>Beverages</u>																
Bottled & canned soft drinks & water	1.18	312	1.27	336	2.05	670	2.70	884	1.64	35	2.00	43	1.47	76	1.73	90
Breweries	1.19	1	1.23	1	1.89	2	2.23	2	4.48	0 ^b	5.44	0 ^b	1.44	0 ^b	1.57	0 ^b
Wineries	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Distilleries	1.12	3	1.19	3	2.01	4	2.88	6	1.46	0 ^b	1.78	0 ^b	1.12	1	1.20	2
Total --		316		340		676		892		36		43		78		92
<u>Tobacco Products</u>																
	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.18	120	1.33	136	1.25	377	1.72	520	1.22	24	1.48	29	1.31	28	1.74	37
Broadwoven fabric mills	1.21	2	1.41	2	1.29	8	1.78	10	1.21	0 ^b	1.47	1	1.29	1	1.69	1
Narrow fabric mills & schiffli machine embroidery	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Nonwoven fabric mills	1.21	111	1.35	124	1.45	312	1.99	427	1.34	19	1.63	23	1.40	27	1.77	35
Knit fabric mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Textile & fabric finishing mills	1.23	39	1.37	44	1.31	204	1.56	242	1.51	6	1.83	8	1.68	9	2.13	11
Fabric coating mills	1.20	129	1.36	146	1.35	456	1.79	608	1.29	25	1.57	31	1.37	34	1.75	44
Total --		401		452		1,356		1,808		75		91		99		127
<u>Textile Product Mills</u>																
Carpet & rug mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Curtain & linen mills	1.21	0 ^b	1.35	0 ^b	1.15	2	1.31	2	1.37	0 ^b	1.67	0 ^b	1.44	0 ^b	1.80	0 ^b

Table E.6. Total Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Textile bag & canvas mills	1.13	6	1.38	8	1.11	49	1.38	62	1.11	2	1.35	2	1.17	2	1.57	3
Rope, cordage, twine, tire cord & tire fabric mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other textile product mills	1.24	9	1.48	10	1.17	68	1.42	83	1.23	2	1.50	3	1.34	3	1.77	4
Hosiery & sock mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other apparel knitting mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		15		18		119		146		4		5		5		7
<u>Apparel</u>																
Cut & sew apparel contractors	1.26	3	1.63	4	1.11	45	1.30	52	1.17	1	1.42	2	1.36	1	1.93	2
Men's & boy's cut & sew apparel	1.19	5	1.50	6	1.20	36	1.55	47	1.16	2	1.41	2	1.25	2	1.69	3
Women's & girl's cut & sew apparel	1.31	0 ^b	1.41	0 ^b	1.47	1	1.62	1	3.69	0 ^b	4.49	0 ^b	3.81	0 ^b	4.73	0 ^b
Other cut & sew apparel	1.26	1	1.47	1	1.17	7	1.33	7	1.37	0 ^b	1.66	0 ^b	1.58	0 ^b	2.07	0 ^b
Apparel accessories & other apparel	1.30	0 ^b	1.42	0 ^b	1.22	3	1.32	3	2.06	0 ^b	2.51	0 ^b	2.54	0 ^b	3.19	0 ^b
Total --		9		11		91		111		3		4		3		5
<u>Leather & Allied Products</u>																
Leather & hide tanning & finishing	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Footwear	1.11	3	1.55	4	1.24	11	2.42	21	1.05	2	1.28	2	1.10	2	1.50	2
Other leather & allied products	1.22	0 ^b	1.52	0 ^b	1.18	1	1.47	1	1.17	0 ^b	1.43	0 ^b	1.40	0 ^b	2.00	0 ^b
Total --		3		4		12		22		2		2		2		2
Secondary Agriculture Total --		1,396		1,541		3,845		5,140		213		259		343		424
Agriculture Total --		2,083		2,284		13,691		15,493		296		360		606		718
<u>Forestry Inputs</u>																
<u>Sawmill, woodworking, & paper machinery</u>	1.17	7	1.38	9	1.29	36	1.72	48	1.22	2	1.49	2	1.28	2	1.66	3
<u>Timber</u>																
Forestry, forest products, & timber tract production	1.25	1	1.32	1	3.24	9	3.43	9	0.00	0 ^c	0.00	0 ^c	1.23	1	1.29	1
Commercial logging	1.16	8	1.52	11	1.37	108	1.66	131	1.10	4	1.34	5	1.17	4	1.54	6
Total --		9		12		116		140		4		5		5		7
Forestry Inputs Total --		17		21		152		187		6		7		8		10

Table E.6. Total Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
Primary Forestry																
Sawmills	1.34	35	1.49	39	1.50	170	1.82	207	1.71	6	2.08	7	1.88	9	2.37	11
Wood preservation	1.39	53	1.52	58	1.90	178	2.36	222	2.05	7	2.49	9	1.83	14	2.18	17
Pulp mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Paper mills	1.25	362	1.38	398	2.18	751	3.12	1,073	1.57	52	1.91	63	1.41	116	1.65	136
Paperboard Mills	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Primary Forestry Total --		450		495		1,099		1,502		65		79		138		164
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	1.28	2	1.38	2	1.36	9	1.55	10	2.06	0 ^b	2.51	0 ^b	2.05	0 ^b	2.52	0 ^b
Engineered wood member & truss	1.30	14	1.50	16	1.30	92	1.58	112	1.39	3	1.69	4	1.63	4	2.14	5
Reconstituted wood products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		16		18		101		122		3		4		4		6
<u>Wood Windows & Doors & Millwork</u>																
Wood windows & door	1.24	5	1.46	6	1.30	28	1.67	36	1.27	1	1.55	2	1.35	2	1.73	2
Cut stock, resawing lumber, & planing	1.14	4	1.30	5	1.21	22	1.50	27	1.22	1	1.49	1	1.19	2	1.43	2
Other millworks, including floors	1.20	42	1.42	50	1.25	248	1.59	317	1.23	11	1.50	14	1.29	16	1.64	20
Total --		51		60		298		380		13		16		19		24
<u>Wood Containers & Pallets</u>																
	1.24	29	1.43	34	1.19	233	1.40	274	1.31	7	1.59	8	1.39	10	1.76	12
<u>Manufactured Homes (Mobile Homes)</u>																
Manufactured homes (mobile homes)	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Prefabricated wood buildings	1.21	6	1.42	7	1.29	35	1.62	44	1.26	1	1.54	2	1.26	2	1.57	3
Total --		6		7		35		44		1		2		2		3
<u>All Other Miscellaneous Wood Products</u>																
	1.27	1	1.43	1	1.32	5	1.56	6	1.49	0 ^b	1.82	0 ^b	1.41	0 ^b	1.69	0 ^b
<u>Paperboard Containers</u>																
	1.20	143	1.31	157	1.57	476	1.98	602	1.54	21	1.87	25	1.60	32	2.00	39

Table E.6. Total Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)				Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
<u>Paper Bags & Coated & Treated Paper</u>	1.15	321	1.28	355	1.43	901	1.93	1,212	1.32	51	1.60	62	1.32	86	1.61	106
<u>Stationery Products</u>	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<u>Other Converted Paper Products</u>																
Sanitary paper products	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
All other converted paper products	1.23	37	1.36	40	1.43	143	1.78	179	1.51	6	1.84	7	1.57	9	1.97	11
Total --		37		40		143		179		6		7		9		11
<u>Wood Kitchen Cabinets & Countertops</u>	1.23	23	1.49	28	1.23	189	1.52	234	1.21	7	1.47	9	1.35	8	1.81	11
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.21	16	1.46	19	1.24	85	1.66	114	1.18	5	1.43	6	1.34	5	1.78	7
Nonupholstered wood household furniture	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Other household nonupholstered furniture	1.20	21	1.41	25	1.37	99	1.83	133	1.24	6	1.51	7	1.40	6	1.87	8
Institutional furniture	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total --		37		44		184		247		10		13		12		16
<u>Office Furniture</u>																
Wood office furniture	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Custom architectural woodwork & millwork	1.19	5	1.46	6	1.21	34	1.54	43	1.17	2	1.42	2	1.28	2	1.73	2
Showcase, partition, shelving, & locker	1.15	7	1.48	9	1.26	35	1.90	54	1.11	3	1.34	4	1.18	3	1.60	4
Total --		12		15		69		97		4		5		5		7
<u>Other Furniture Related Products</u>																
Mattresses	1.25	13	1.38	14	1.55	50	1.91	62	1.64	2	1.99	2	2.10	2	2.74	3
Blind & shades	1.22	1	1.36	1	1.17	7	1.32	8	1.40	0 ^b	1.71	0 ^b	1.68	0 ^b	2.19	0 ^b
Total --		14		15		57		70		2		3		3		3
Secondary Forestry Total --		690		776		2,691		3,466		127		154		189		238
Forestry Total --		1,157		1,292		3,942		5,155		198		241		336		412

Table E.6. Total Impacts from Agriculture and Forestry^a, TriCities, 2013 (Cont.)

Sector	TIO (million \$)			Employment (number)				Labor Income (million \$)				TVA (million \$)			
	Type I	Indirect	Type Sam Total	Type I	Indirect	Type Sam Total	Type I	Indirect	Type Sam Total	Type I	Indirect	Type Sam Total			
<i>Agriculture & Forestry Total --</i>		3,240	3,576		17,633	20,648		494	601		941	1,130			
<i>Construction --</i>		3,090	3,718		22,428	28,061		920	1,120		1,063	1,416			
<i>Finance --</i>		1,618	1,926		12,835	15,596		452	549		607	769			
<i>Government --</i>		3,445	4,776		38,848	50,791		1,955	2,378		2,490	3,237			
<i>Insurance --</i>		547	631		3,724	4,480		124	150		204	251			
<i>Manufacturing --</i>		16,301	18,181		40,156	57,013		2,753	3,351		4,702	5,757			
<i>Mining --</i>		110	126		361	500		23	28		76	85			
<i>Miscellaneous --</i>		387	519		6,269	7,454		194	236		223	297			
<i>Real Estate --</i>		3,496	3,660		9,041	9,782		121	147		2,416	2,508			
<i>Retail Trade --</i>		2,605	3,223		32,188	37,734		907	1,103		1,559	1,906			
<i>Services --</i>		11,511	14,731		123,691	152,578		4,724	5,747		6,216	8,022			
<i>Transportation --</i>		927	1,144		5,907	7,849		318	386		421	543			
<i>Utilities --</i>		447	476		727	992		43	53		174	191			
<i>Wholesale Trade --</i>		1,719	2,051		9,680	12,657		487	592		1,035	1,221			

^aTotals may not add due to rounding.

^bValues of zero are nonzero values less than 1.