



**Institute of Agriculture
Department of Agricultural & Resource Economics**

**Economic Impacts of Agriculture and Forestry
in Tennessee, 2009**



**by
Jamey Menard, Burton English,
and Kim Jensen**

**Agri-Industry
Modeling & Analysis
Group (AIM-AG)**

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**Agricultural Experiment Station
The University of Tennessee
Knoxville**

Jamey Menard is a Research Associate. Burton English and Kim Jensen are Professors of Agricultural Economics.



Chopped Switchgrass

Please visit AIM-AG's web site at <http://aimag.ag.utk.edu/>.

Additional copies of this report may be obtained from:

**Department of Agricultural & Resource Economics
The University of Tennessee
2621 Morgan Circle
Knoxville, TN 37996-4518
(865) 974-7231**

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Executive Summary

In 2009, the agro-forestry industrial complex contributed \$71.4 billion to the Tennessee economy, accounting for 14.7 percent of the economic activity conducted within the state, and employed over 363,500 individuals, or 10.3 percent of the total number of workers. In this study the agro-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 supply industries and value-added sub-sectors, which included food and beverage manufacturing, apparel and textiles, and forestry products manufacturing.

Agriculture, a subset of the agro-forestry industrial complex, includes farming and related industries, as well as value-added food and fiber production, processing and manufacturing. Agriculture accounted for 10.4 percent of the state's economy and generated \$50.4 billion in output. Agriculture employed close to 262,000 Tennesseans, with over 101,000 (both full- and part-time) in agricultural production. In addition,

- Agriculture input supplying industries – agricultural machinery and chemical products – generated nearly \$2.5 billion in cash receipts annually.
- Tennessee farmers earned more than 74.6 percent of their cash receipts from soybeans, broilers, cattle and calves, greenhouse/nursery, corn and cotton.
- Exports for Tennessee's forest products outside the United States for 2009 totaled \$744.6 million. Paper products had the highest export value at \$504.3 million, followed by wood products (\$86.5 million), furniture and related products (\$81.6 million), and forestry and logging (\$72.2 million).
- The manufacturing of processed food and beverages adds value in excess of \$34.8 billion to the state's economy.
- Major markets for Tennessee's exports of agricultural and livestock products included Mexico, China, Turkey, Viet Nam, and Indonesia.
- Tennessee, one of the top hardwood lumber producing states, produced 881.0 million board feet of hardwood lumber and 15.0 million board feet of softwood lumber in 2008.

This analysis was conducted using the Tennessee Agri-Industry model (TNAIM) and the Impact Analysis for Planning (IMPLAN) model and databases. 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.

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Economic Impacts of Agriculture and Forestry in Tennessee

Introduction

Similar to previous reports (English, Jensen, and Menard, 2001 and 2003; Menard, English, and Jensen, 2006 and 2009) where the economic importance and impacts of agricultural and forestry industrial complexes on Tennessee's economy were examined using 1997, 2000, 2003, and 2006 data, respectively, this study uses an input-output model reflecting the state's 2009 economy to determine direct impacts on related input industries, and impacts through resulting expenditures by households and institutions at both the state and five-region level. The impacts are provided for four major indicators: total industry output, employment, labor income, and value-added.

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. Results for the 2006 (Menard, English, and Jensen) and this study are based on the North American Industrial Classification System (NAICS) (Census NAICS, 2002). 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.

An additional change for this analysis is the use of IMPLAN Version 3.0. IMPLAN's sectoring scheme relies on the Bureau of Economic (BEA) Analysis's Benchmark input-output study (Minnesota IMPLAN Group, 2011; USDOC, 2011). 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. With the release of the 2002 Benchmark, which is what IMPLAN Version 3.0 uses and affects the IMPLAN 2007 data release year, a 440 industrial sectoring scheme is used.

For the purpose of this analysis, agriculture¹ 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, 2) compare livestock and crop statistics for 2006 and 2009, 3) provide an overview of Tennessee's dairy industry, and 4) evaluate the economic importance and impacts of the agricultural and forestry industrial complex, including the bioscience industry, for the state and for specific consumption regions within 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 2006 and 2009 is presented. Changes in livestock inventory, crop acreages, prices, including a brief discussion of rainfall by climate divisions in the state are discussed in the section. Finally, the remaining part of the document evaluates the economic impacts 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 impact results are summarized.

¹In this report, forestry and the production of forest products were incorporated in agriculture and agribusiness, respectively.

Overview of Agriculture and Forestry in Tennessee

In 2009, 78,700 Tennessee farms used 10.9 million acres, or 43.2 percent of the state’s land base. From 2005 to 2009, the number of farms in the state decreased an average of 1.3 percent annually. The average farm, in 2009, was 139 acres in size compared to 418 acres for the United States. Approximately 71.3 percent of the total number of farms had sales in the \$1,000-\$9,999 range, 23.4 percent in the \$10,000-\$99,999 range, and 5.3 percent had sales of \$100,000 or more (Tennessee Department of Agriculture, 2010).

Tennessee was ranked in the upper half of the nation in all of the major crops (rice and peanuts are not grown extensively in the state) (Table 1). Approximately 40.4 percent of Tennessee’s total harvested cropland acreage (roughly 4.7 million acres) was in hay (all types), followed by soybeans (32.3 percent), corn for grain (12.5 percent), wheat (7.2 percent), and cotton (5.9 percent). For crops, soybeans had the largest cash receipts, followed by corn, cotton, tobacco, wheat, hay, and vegetables. Tennessee’s top crop counties included Robertson County for all tobacco, Obion County for corn, Haywood County for cotton, Gibson County for wheat, Dyer County for Soybeans, and Green County for all other hay.

Table 1. Crops Harvested, Acreage, State Ranking, and Cash Receipts, 2009

Crops	Acreage (Thousand Acres)	State Ranking	Cash Receipts (Thousand \$)
Hay (all types)	1,915	--	\$82,741
Soybeans	1,530	14	\$564,593
Corn for Grain	590	19	\$251,209
Winter Wheat	340	21	\$105,346
Cotton, Lint	280	7	\$145,846
Corn for Silage	50	24	--
Tobacco (all types)	22	3	\$106,750
Vegetables*	12	--	\$53,964

*Snap beans, squash, and tomatoes

Source: Tennessee Department of Agriculture, 2010

In terms of the number of head, broilers, chickens, cattle and calves, hogs and pigs, equine, and milk cows were the predominant livestock in the state (Table 2). According to the Tennessee Department of Agriculture for 2009, cash receipts from farm marketing for these livestock products (except for beef cows and equine) totaled close to \$1.1 billion. Of that total, broilers contributed 40.6 percent, cattle and calves 38.9 percent, dairy products 11.7 percent, and hogs and pigs 3.6 percent. Tennessee is ranked sixth in the United States for the number of equine on farms, 9th for beef cows, 13th for broilers, 15th cattle and calves, 25th for hogs and pigs, and 30th for milk cows. Tennessee's top cattle county is Greene County for all cattle, beef cows, and milk cows.

Table 2. Livestock Numbers, State Rankings, and Cash Receipts, 2009

Livestock	Inventory (Number)	State Ranking	Cash Receipts (Thousand \$)
Broilers	189,700,000	13	\$442,148
All Chickens	2,808,000	33	\$57,198 ¹
Cattle & Calves	1,980,000	15	\$423,800 ²
Beef Cows	951,000	9	--
Hogs & Pigs	205,000	25	\$39,500
Equine	142,003 ³	6	--
Milk Cows	59,900	30	\$127,610 ⁴

¹Includes eggs and farm chickens; excludes commercial broilers

²Includes beef cows; milk cows; replacement heifers; steers and bulls 500 pounds or greater; and calves under 500 pounds

³2007 Census of Agriculture value

⁴Cash receipts from marketing milk and cream, plus value of milk used for home consumption and farm churned butter

Source: Tennessee Department of Agriculture, 2010; USDA, 2007

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); poultry and egg production; cattle ranching and farming; grain farming (barley, corn, oats, sorghum, and wheat); all other crop farming (primarily hay and seed); greenhouse, nursery, and floriculture production; cotton farming;

Table 3. State Value of Agricultural Commodities and U.S. Market Share, 2009

Commodity	Value (Million \$)	U.S. Market Share (Percent)
Oilseed Farming	\$564	1.82
Poultry & Egg Production	\$481	1.48
Cattle Ranching & Farming	\$422	0.96
Grain Farming	\$356	0.61
All Other Crop Farming*	\$331	1.24
Greenhouse, Nursery, & Floriculture Production	\$309	1.83
Cotton Farming	\$146	4.18
Dairy Cattle & Milk Production	\$128	0.52
Tobacco Farming	\$105	7.05
Animal Production, except Cattle & Poultry & Eggs**	\$102	0.53
Vegetable & Melon Farming	\$95	0.49
Commercial Hunting & Trapping	\$22	1.24
Fruit Farming	\$10	0.05
Commercial Fishing	\$9	0.21

*Primarily hay and seed farming

**Primarily hogs, sheep & goats, aquaculture, equine, and apiculture

Source: Minnesota IMPLAN Group, Inc., 2009

dairy cattle and milk production; tobacco farming; animal production, except cattle, poultry, and eggs; and vegetable and melon farming. Tobacco and cotton had the largest U.S. market share at 7.05 percent and 4.18 percent, respectively.

Tennessee's agricultural commodity exports in 2009 totaled \$1.2 billion. The value of the more predominant commodities exported included soybeans and soybean products at \$363.0 million, cotton and cottonseed products at \$152.3 million, wheat and wheat products at \$113.0 million, poultry and poultry products at \$73.8 million, feed grains and grain products at \$72.8 million, feeds and fodders at \$71.2 million, live animals and meat (excluding poultry) at \$62.1 million, unmanufactured tobacco at \$45.4 million, and seeds at \$20.4 million. Exports for the category "Other" totaled \$232.9 million, which included minor oilseeds, essential oils, beverages other than juice, nursery and greenhouse, wine and miscellaneous vegetable products (Tennessee Department of Agriculture, 2010). Major markets for Tennessee's exports

of agricultural and livestock products included Mexico, China, Turkey, Viet Nam, and Indonesia (USDOC, 2009).

In 2009, Tennessee's forest products (paper products, wood products, plus furniture and related products) exported outside the United States, including forestry and logging, totaled close to \$744.6 million. Paper products had the highest export value at \$504.3 million, followed by wood products (\$86.5 million), furniture and related products (\$81.6 million), and forestry and logging (\$72.2 million) (USDOC, 2009).

Tennessee is one of the top hardwood lumber producing states in the United States. In 2008 (2009 data was not available), approximately 881.0 million board feet of hardwood lumber and 15.0 million board feet of softwood lumber were produced (U.S. Census Bureau, 2008). The majority of the forest cover in the state was hardwoods. 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.

Agriculture and forestry manufacturing industries for the state (Figures 1 through 10) 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 2009, close to \$31.1 billion dollars of goods were shipped and over 81,500 Tennesseans were employed with a payroll of \$3.0 billion (Table 4). Food manufacturing shipped the largest value of goods, over \$16.3 billion, followed by paper manufacturing at close to \$4.7 billion, and beverage and tobacco products at \$4.6 billion. As a group, textile mills,

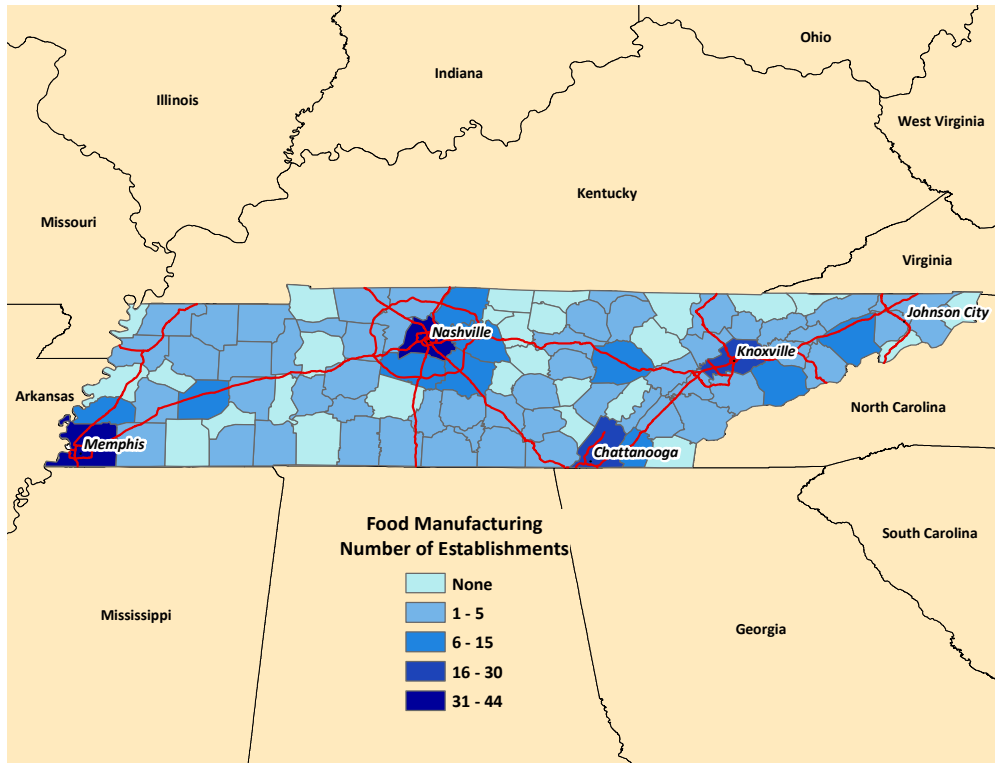


Figure 1. Number of Food Manufacturing Establishments in Tennessee, 2009.

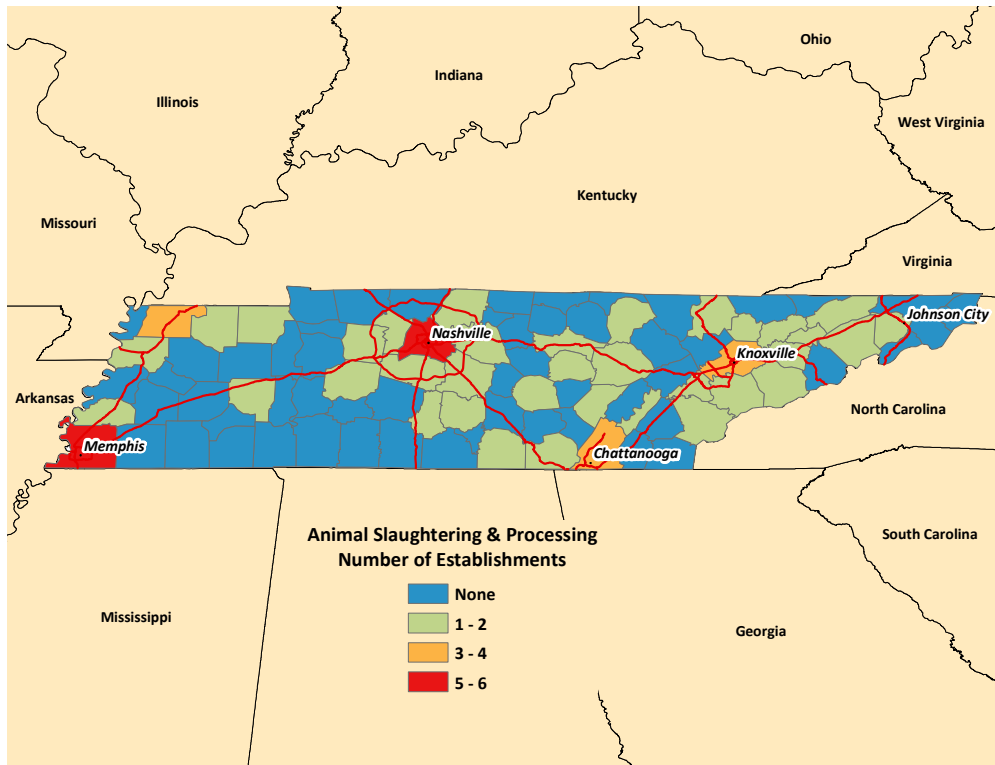


Figure 2. Number of Animal Slaughtering & Processing Establishments in Tennessee, 2009.

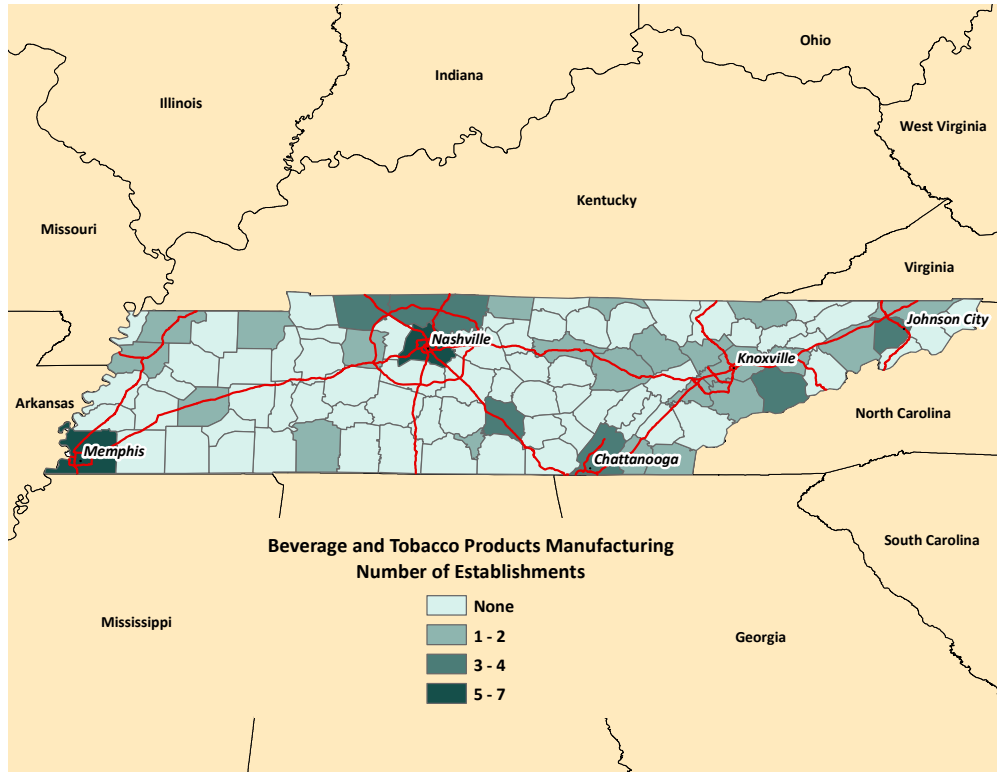


Figure 3. Number of Beverage and Tobacco Products Establishments in Tennessee, 2009.

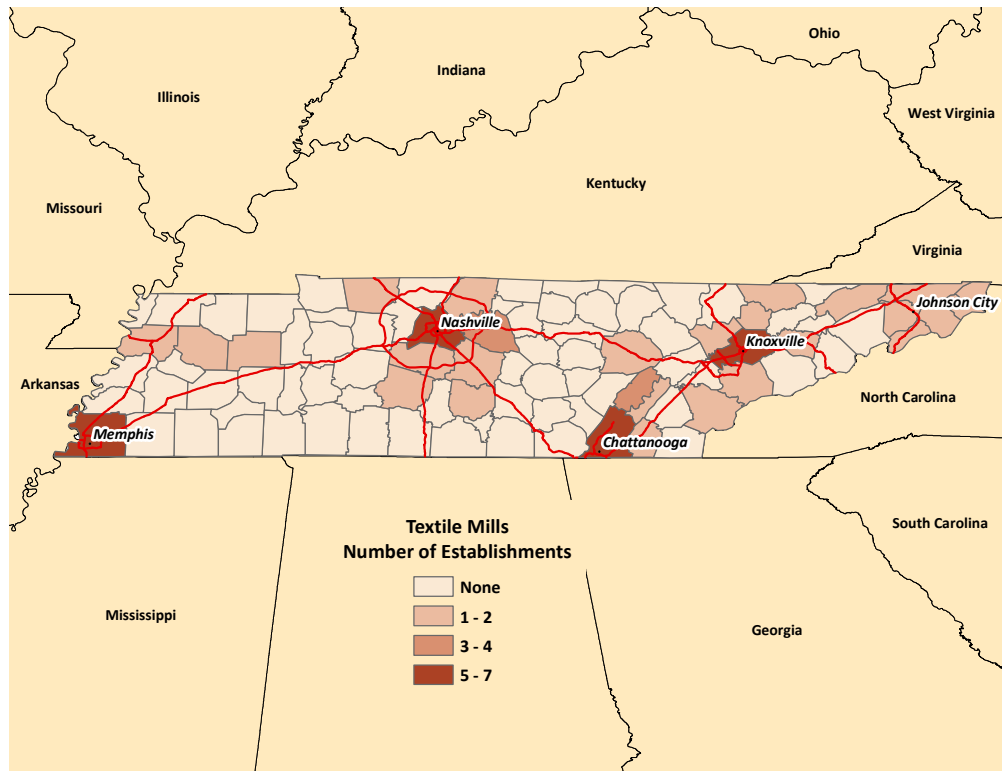


Figure 4. Number of Textile Mill Establishments in Tennessee, 2009.

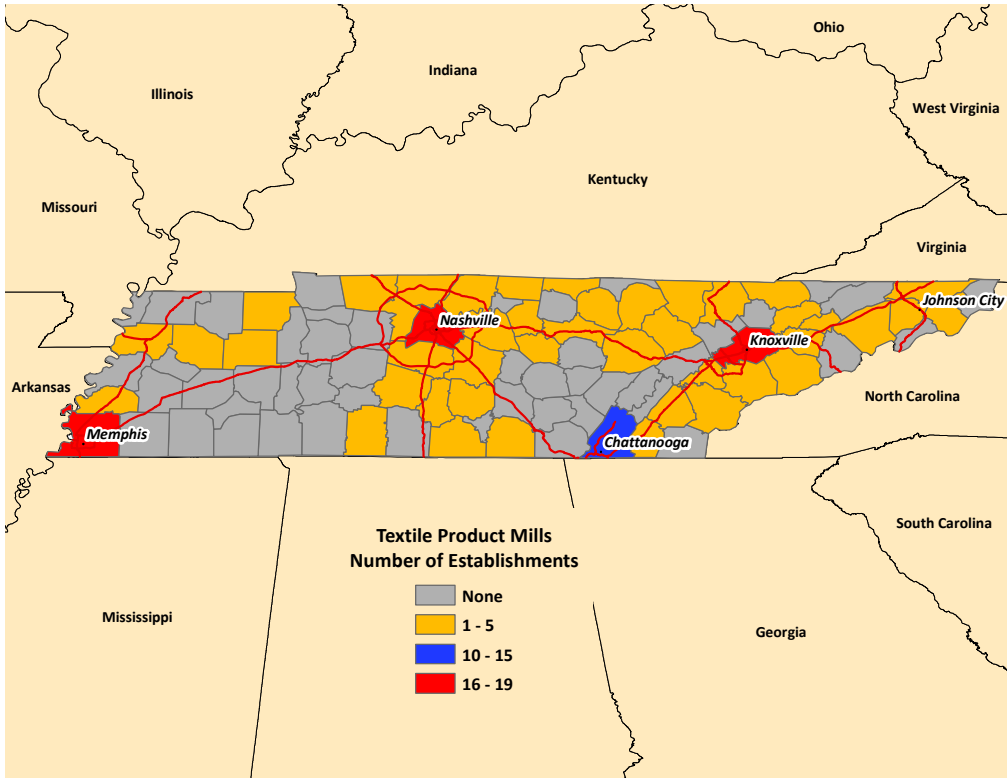


Figure 5. Number of Textile Product Mill Establishments in Tennessee, 2009.

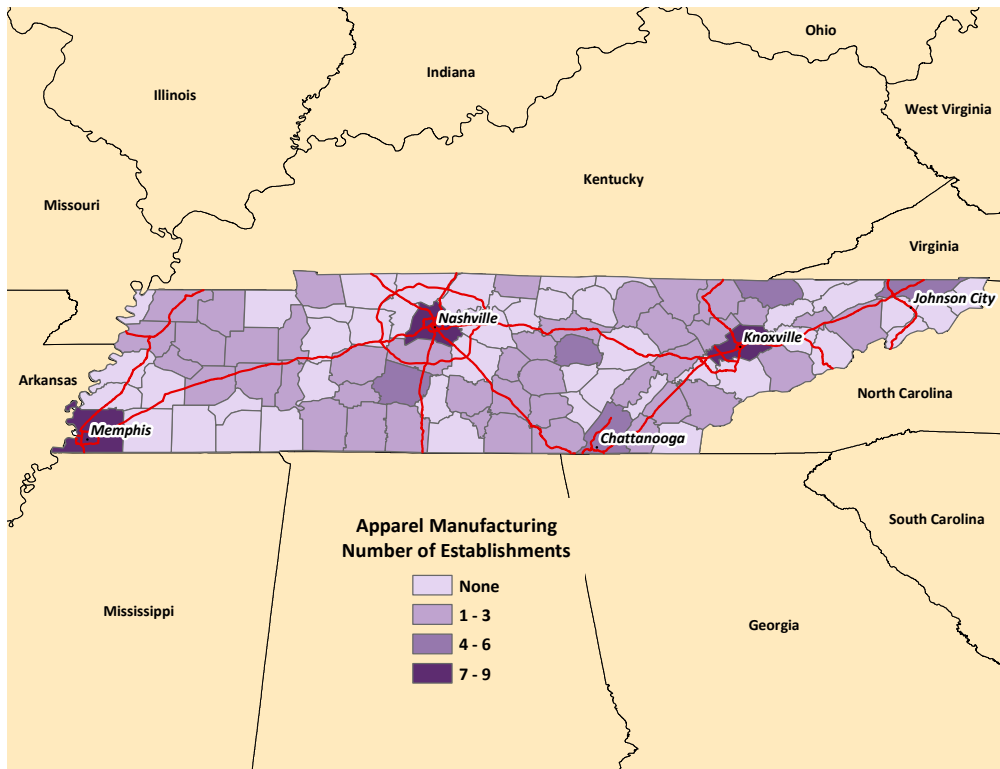


Figure 6. Number of Apparel Manufacturing Establishments in Tennessee, 2009.

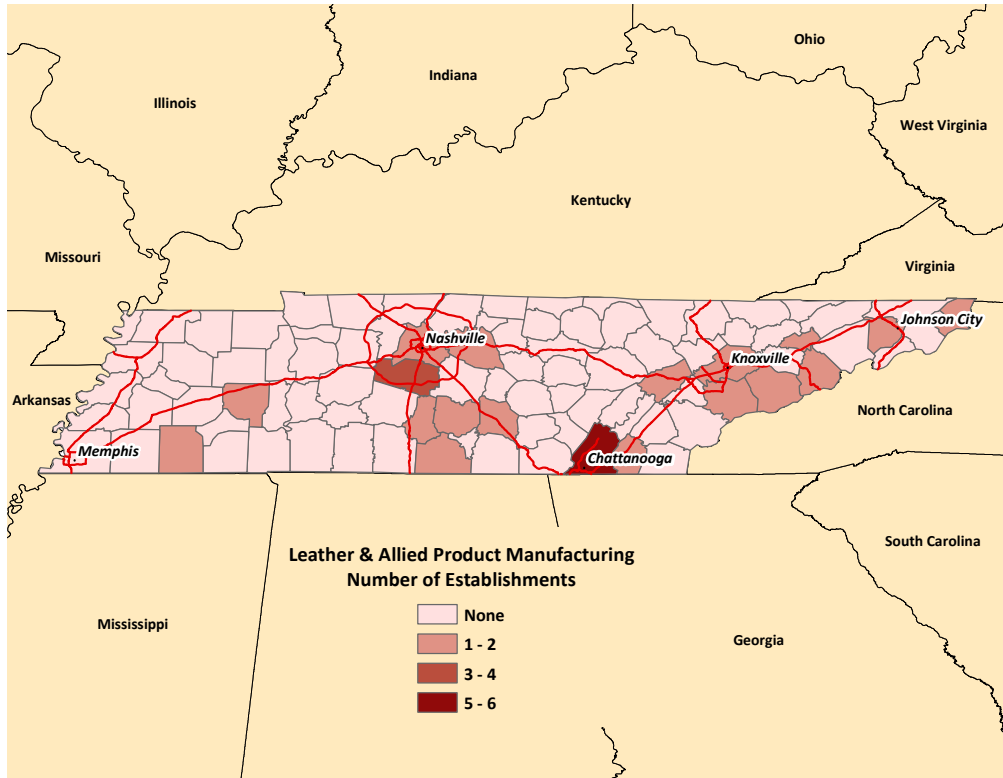


Figure 7. Number of Leather & Allied Product Establishments in Tennessee, 2009.

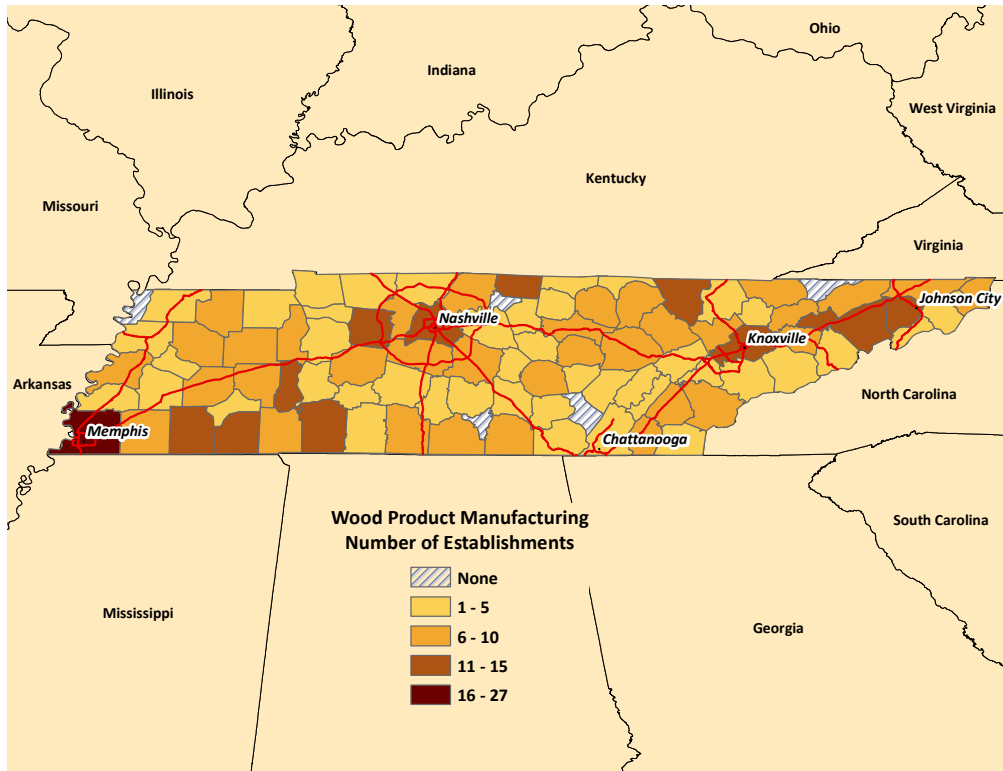


Figure 8. Number of Wood Product Manufacturing Establishments in Tennessee, 2009.

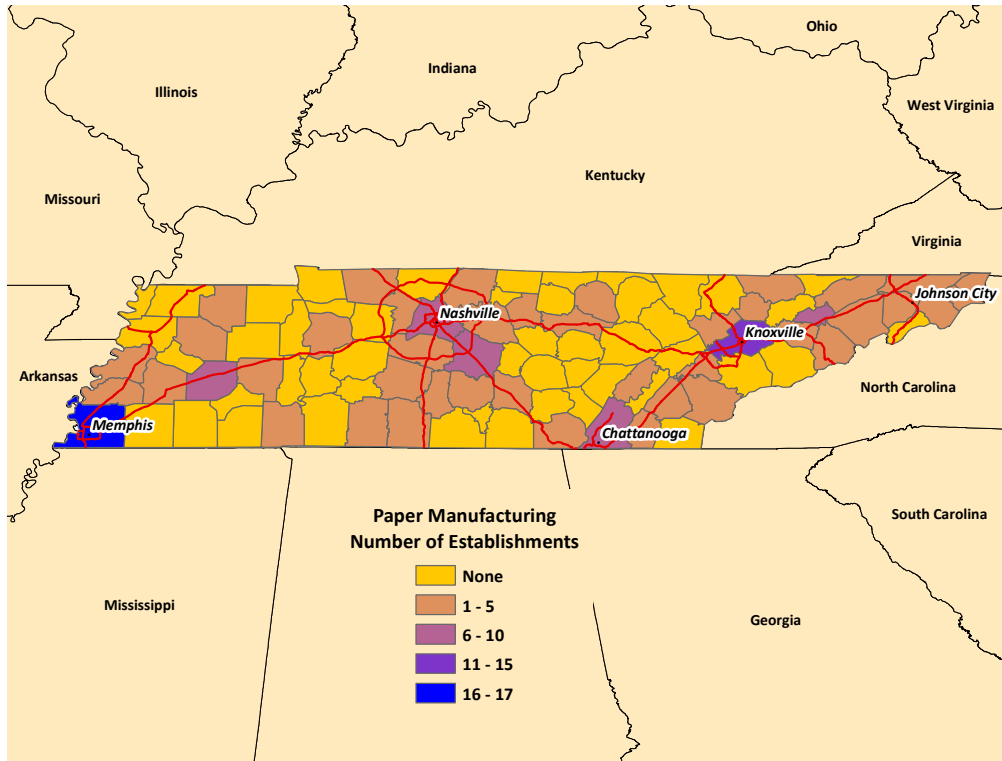


Figure 9. Number of Paper Manufacturing Establishments in Tennessee, 2009.

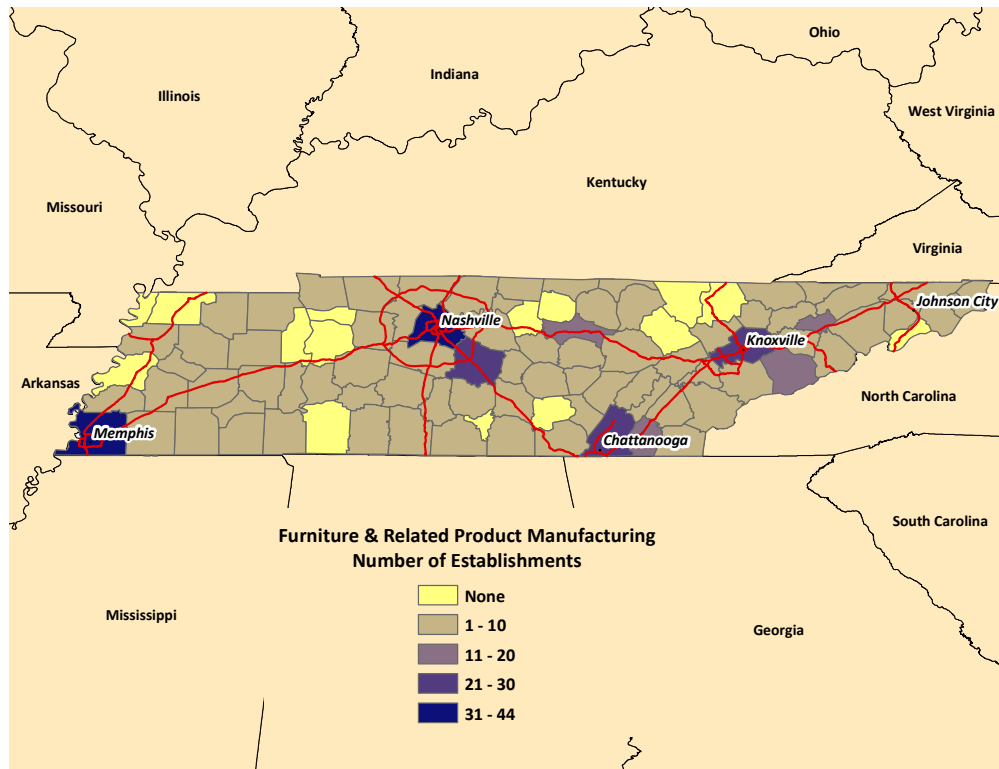


Figure 10. Number of Furniture & Related Products Establishments in Tennessee, 2009.

Table 4. Manufacturing Statistics for Tennessee, 2009

Manufacturing Industry/NAICS Code	Employees	Payroll	Establishments	Value of Shipments
	(Number)	(Thousand \$)	(Number)	(Thousand \$)
Food (311)	35,737	\$1,382,139	326	\$16,379,850
<i>Animal Slaughtering & Processing (3116)</i>	<i>11,382</i>	<i>\$314,092</i>	<i>66</i>	<i>\$3,361,883</i>
Beverage & Tobacco Products (312)	2,557	\$127,216	66	\$4,664,655
Textile Mills (313)	3,525	\$137,733	61	\$1,006,284
Textile Product Mills (314)	3,375	\$107,151	145	\$758,496
Apparel (315)	4,398	\$109,381	107	\$480,954
Leather & Allied Products (316)	N/A	N/A	29	N/A
Wood Products (321)	10,067	\$294,904	577	\$1,576,702
Paper (322)	11,653	\$565,059	142	\$4,696,702
Furniture & Related Products (337)	10,211	\$326,009	428	\$1,540,366
Total¹	81,523	\$3,049,592	1,881	\$31,103,937

N/A = Data Not available

¹Values for animal slaughtering and processing are imbedded in food manufacturing (311) values

Source: U.S. Census Bureau, Annual Survey of Manufacturers, Geographic Area Statistics, 2009; U.S. Census Bureau, Censtats Databases, 2008.

including textile product mills and apparel, shipped close to \$2.2 billion. For the forest products group, which included wood products manufacturing, paper manufacturing, and furniture and related products, \$7.8 billion of goods were shipped. Tennessee's national market share for value of shipments for food manufacturing was 2.6 percent, beverage and tobacco products at 3.9 percent, textile mills at 3.8 percent, textile product mills at 3.6 percent, apparel manufacturing at 3.3 percent, wood product manufacturing at 2.4 percent, paper manufacturing at 2.9 percent, and furniture and related products at 2.5 percent (U.S. Census Bureau, 2009).

In terms of employment, food manufacturing employed the largest share at 35,700. This was followed by the forest products group (wood product manufacturing, paper manufacturing, and furniture and related products), which employed close to 32,000. The textile mills and related products, including apparel, employed over 11,000 workers.

State Level Changes in Livestock and Crops: 2006 to 2009

Comparing 2006 and 2009 agricultural data for the state revealed an increase in the number of chickens (excluding broilers) and hogs. The number of cattle and calves, broilers, eggs, and milk cows decreased. Prices increased for broilers and eggs but decreased for the remaining livestock products. Most of the traditional row crops grown in the state experienced increased planted acreage except for cotton. Crop prices were higher for most major crops grown in the state except for the vegetable crops tomatoes and snap beans.

Precipitation for the state for the timeframe reviewed can be characterized as below normal (see Figure 11). Below normal rainfall occurred in the state for the years 2006 through 2008 followed by above normal rainfall for the year 2009 (U.S. Department of Commerce, 2009).

Livestock Changes in Inventory and Prices

Compared to 2006 production levels, poultry had the largest increase in numbers (16.0 percent), followed by hogs (7.9 percent) (Table 5). The largest decrease in numbers was for eggs (17.8 percent), followed by milk cows (15.7 percent), cattle and calves (11.6 percent), and broilers (11.1 percent). Milk production declined 13.3 percent over the timeframe. Livestock prices were higher for broilers and eggs. Broilers had the greatest price increase (27.8 percent). The greatest price decreases were for poultry (16.5 percent) and cattle and calves (13.0 percent).

Table 5. Comparison of Tennessee Livestock Numbers and Prices, 2006 and 2009*

Commodity	Inventory		Change	Units	Price		Change	Units
	2006	2009			2006	2009		
			%	1,000	(dollars/unit)		%	
All Cattle & Calves	2,240	1,980	-11.6	head	\$78.50	\$68.30	-13.0	100 pounds
All Chickens	1,889	2,808	16.0	no.	\$7.60	\$6.60	-16.5	head
Broilers	213,500	189,700	-11.1	no.	\$0.38	\$0.46	27.8	pound
Eggs	289,000	323,000	-17.8	no.	\$1.40	\$1.44	1.4	dozen
Milk Cows	70	59	-15.7	head	--	--	--	head
All Hogs	190	205	7.9	head	\$42.90	\$39.60	-7.7	100 pounds

Source: Tennessee Department of Agriculture, 2010 and 2007.

*Data in nominal values.

Crop Changes in Acres Planted and Prices

With the exception of cotton, acres of traditional row crops harvested increased from 2006 to 2009 (Table 6). Wheat had the largest increase in acres harvested at 78.9 percent, followed by soybeans (35.4 percent), corn (18.0 percent), tobacco (9.1 percent), and hay (4.6 percent). Cotton harvested acres decreased from 695 to 280 thousand acres, a 59.7 percent decrease. Practically all the crop commodities experienced higher prices for the timeframe

Table 6. Comparison of Tennessee Crop Acreages and Prices, 2006 and 2009*

Commodity	Harvested Acres		Change	Price		Change	Units
	2006	2009		2006	2009		
	1,000 acres		%	\$/unit		%	
Hay, All	1,830	1,915	4.6	\$56.80	\$77.49	36.4	ton
Corn	500	590	18.0	\$2.85	\$3.65	28.1	bushel
Soybeans	1,130	1,530	35.4	\$6.30	\$9.65	53.2	bushel
Cotton	695	280	-59.7	\$0.47	\$0.63	35.0	pound
Tobacco	19.8	21.6	9.1	\$1.89	\$2.10	10.7	pound
Wheat	190	340	78.9	\$3.50	\$4.64	32.6	bushel
Tomatoes	3.9	4.0	2.6	\$42.02	\$33.00	-21.5	cwt
Snap Beans	9.0	6.8	-24.4	\$38.00	\$31.05	-18.3	cwt

Source: Tennessee Department of Agriculture, 2010 and 2007

*Data in Nominal Values.

examined except for tomatoes and snap beans. The largest price increase was for soybeans, followed by hay, cotton, wheat, and corn.

Nursery producers increased for all nursery categories from 2006 to 2009 (Table 7). For numbers sold, all categories increased except for deciduous shade trees and flowering trees. Major nursery categories include broadleaf and coniferous evergreens, deciduous shade and flowering trees, deciduous shrubs, and fruit and nut plants. Ornamental grasses and other woody ornamentals are also grown in the state. For 2009, the largest numbers of nursery producers are for the deciduous flowering (223 producers), broadleaf evergreens (200 producers), and shade trees (199 producers) categories. The largest increases in gross sales for this timeframe were for coniferous evergreens (92.1 percent), deciduous shrubs (55.0 percent), fruit and nut plants (47.2 percent), and broadleaf evergreens (43.3 percent). For numbers sold in 2009, fruit and nut plants had the largest numbers sold (2.6 million), followed by broadleaf evergreens (2.5 million), deciduous shrubs (close to 2.4 million), deciduous flowering trees (close to 2.4 million), deciduous shade trees (1.8 million), and coniferous evergreens (close to 1.6 million). Comparing gross sales for 2006 and 2009, coniferous evergreens had the largest increase at 92.1 percent, followed by deciduous shrubs (55.0 percent), fruit and nut plants (47.2

Table 7. Comparison of Tennessee Nursery Statistics, 2006 and 2009

Category	Producers		Sold		Gross Sales		Change
	2006	2009	2006	2009	2006	2009	
	Number		Number (1,000)		\$1,000		%
Broadleaf Evergreens	114	200	2,060	2,575	\$14,737	\$21,125	43.3
Coniferous Evergreens	111	188	1,452	1,584	\$11,376	\$21,855	92.1
Deciduous Shade Trees	131	199	2,175	1,813	\$42,769	\$38,882	-9.1
Deciduous Flowering Trees	132	223	3,075	2,375	\$35,554	\$34,679	-2.5
Deciduous Shrubs	116	189	2,295	2,386	\$12,284	\$19,041	55.0
Fruits & Nut Plants	33	69	1,565	2,648	\$7,725	\$11,368	47.2

Source: Tennessee Department of Agriculture, 2010; USDA, 2007

percent, and broadleaf evergreens (43.3 percent). Gross sales for deciduous shade and flowering trees decreased 9.1 percent and 2.5 percent, respectively (Tennessee Department of Agriculture, 2010; USDA, 2007).

Changes in yields for Tennessee’s crops can be attributed to better crop varieties and producers’ management practices. In addition, weather also plays an important role. Precipitation values from 2006 to 2009 are shown in Figure 11. The values shown were departure from normal precipitation. For example, for the western climate division in 2007, rainfall was 12.68 inches below normal precipitation values. Likewise, for that same climate division for 2009, rainfall was 6.54 inches above normal. Rainfall for years 2006 through 2008 was below normal for much of the state. On the other hand, rainfall was above normal for all climate divisions for 2009.

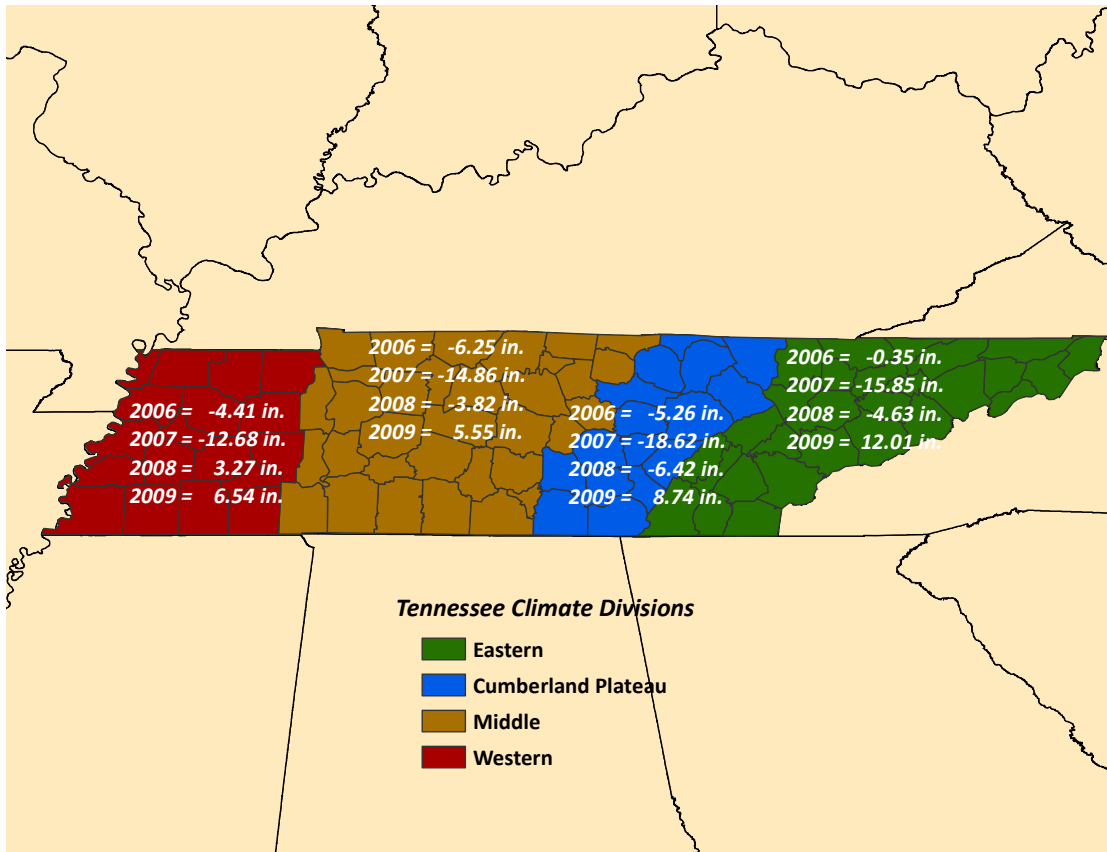


Figure 11. Departure from Normal Precipitation for Tennessee’s Climate Divisions.

Changes in acres, yields, and prices impacted the total industry output (value of production) contributed to the state's economy from crops. Of the five major crops, corn, soybeans, tobacco, and wheat had an increase in gross receipts from comparing 2006 to 2009. Cotton gross receipts declined from 2006 to 2009 (Tennessee Department of Agriculture, 2010 and 2007).

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 12 (for county listings, see

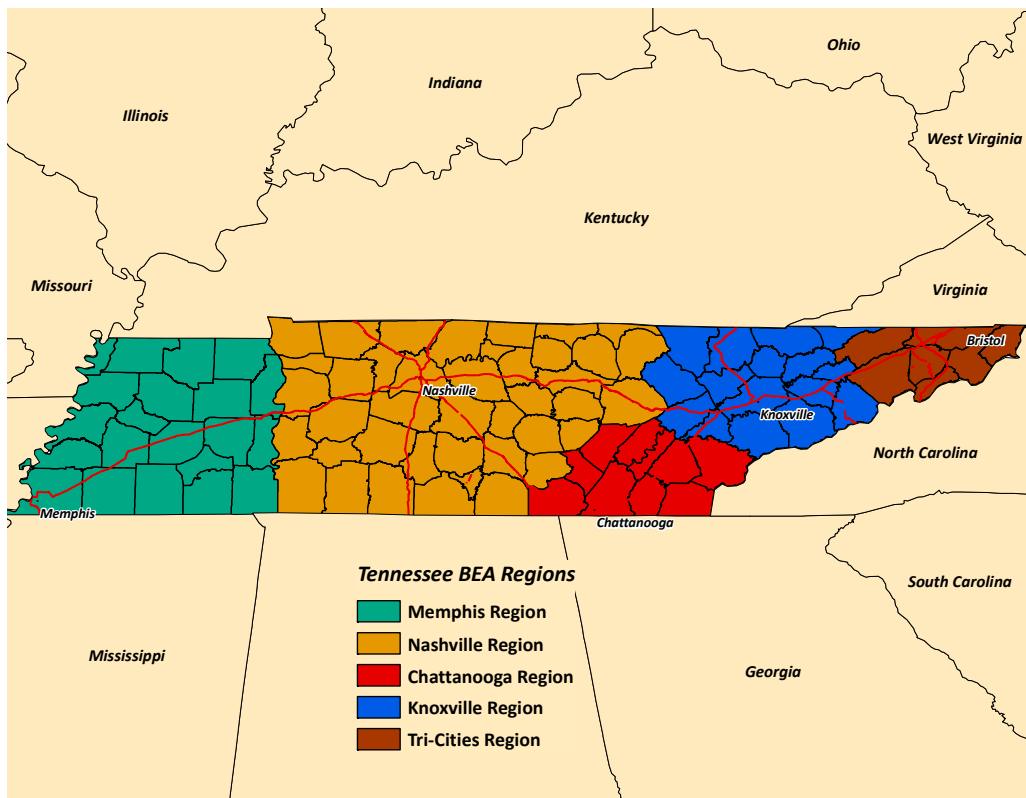


Figure 12. Tennessee Agri-Industry Model Analysis Regions.

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 includes descriptive measures of the economy including total industry output, employment, and value-added for 440 industries in the Tennessee economy (Appendix B). Total industry output is defined as the value of production by industry per year. Employment represents total wage and salary employees, as well as self-employed jobs in a region, for both full-time and part-time workers. 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 can the model describe a regional economy, but the model also can be used for predictive purposes by providing estimates of multipliers.

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 notion 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.

Results

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 2009, agriculture and forestry related industries contributed a total of \$43.8 billion in direct economic activity to the state of Tennessee, or 9.0 percent of the state's economy. Employment in agriculture and forestry related industries were over 181 thousand persons, or 5.2 percent of the workforce. Total value added was close to \$12.5 billion, with close to \$6.0 billion in labor income. Much of the industry output generated from agriculture and forestry was through secondary or manufactured products. For agriculture, approximately 38.8 percent of the workforce was employed in secondary industries

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	485,506		3,523,366		158,472		253,043	
Chattanooga	52,400	10.8%	358,680	10.2%	15,738	9.9%	25,604	10.1%
Knoxville	73,959	15.2%	592,268	16.8%	25,617	16.2%	39,599	15.6%
Memphis	132,982	27.4%	954,418	27.1%	44,101	27.8%	71,594	28.3%
Nashville	193,215	39.8%	1,389,664	39.4%	63,259	39.9%	101,303	40.0%
Tri-Cities	32,951	6.8%	228,336	6.5%	9,757	6.2%	14,942	5.9%
Agriculture & Forestry:								
State ^c	43,807		181,478		5,778		12,444	
Chattanooga	4,862	11.1%	21,187	11.7%	824	14.3%	1,316	10.6%
Knoxville	4,989	11.4%	24,084	13.3%	768	13.3%	1,182	9.5%
Memphis	17,348	39.6%	54,163	29.8%	2,011	34.8%	4,689	37.7%
Nashville	13,523	30.9%	69,969	38.6%	1,724	29.8%	4,421	35.5%
Tri-Cities	3,085	7.0%	12,075	6.7%	451	7.8%	836	6.7%
Primary & Secondary Agriculture								
State ^c	30,975		139,355		3,293		8,270	
Chattanooga	3,567	11.5%	15,917	11.4%	567	17.2%	904	10.9%
Knoxville	3,316	10.7%	15,809	11.3%	392	11.9%	634	7.7%
Memphis	11,799	38.1%	40,720	29.2%	1,000	30.4%	2,811	34.0%
Nashville	11,025	35.6%	58,805	42.2%	1,185	36.0%	3,668	44.4%
Tri-Cities	1,269	4.1%	8,103	5.8%	148	4.5%	253	3.1%
Primary Agriculture								
State ^c	3,244		85,298		261		1,306	
Chattanooga	182	5.6%	4,904	5.7%	17	6.4%	54	4.1%
Knoxville	247	7.6%	8,467	9.9%	25	9.6%	90	6.9%
Memphis	1,140	35.1%	27,779	32.6%	114	43.8%	510	39.0%
Nashville	1,544	47.6%	38,753	45.4%	94	36.1%	614	47.0%
Tri-Cities	133	4.1%	5,394	6.3%	11	4.1%	38	2.9%
Secondary Agriculture								
State ^c	27,731		54,057		3,032		6,964	
Chattanooga	3,385	12.2%	11,013	20.4%	550	18.1%	850	12.2%
Knoxville	3,069	11.1%	7,342	13.6%	367	12.1%	544	7.8%
Memphis	10,659	38.4%	12,941	23.9%	886	29.2%	2,301	33.0%
Nashville	9,481	34.2%	20,053	37.1%	1,091	36.0%	3,054	43.9%
Tri-Cities	1,137	4.1%	2,709	5.0%	138	4.5%	214	3.1%
Primary & Secondary Forestry								
State ^c	12,832		42,123		2,485		4,174	
Chattanooga	1,296	10.1%	5,270	12.5%	257	10.3%	412	9.9%
Knoxville	1,673	13.0%	8,275	19.6%	376	15.1%	547	13.1%
Memphis	5,549	43.2%	13,443	31.9%	1,011	40.7%	1,878	45.0%
Nashville	2,498	19.5%	11,164	26.5%	539	21.7%	753	18.1%

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

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Tri-Cities	1,815	14.1%	3,972	9.4%	303	12.2%	584	14.0%
Primary Forestry								
State ^c	6,101		11,963		1,044		2,068	
Chattanooga	376	6.2%	673	5.6%	57	5.4%	112	5.4%
Knoxville	271	4.4%	681	5.7%	38	3.6%	76	3.7%
Memphis	3,546	58.1%	6,115	51.1%	624	59.7%	1,253	60.6%
Nashville	634	10.4%	2,703	22.6%	125	12.0%	182	8.8%
Tri-Cities	1,273	20.9%	1,792	15.0%	201	19.2%	444	21.5%
Secondary Forestry								
State ^c	6,731		30,160		1,441		2,106	
Chattanooga	919	13.7%	4,597	15.2%	200	13.9%	300	14.2%
Knoxville	1,402	20.8%	7,594	25.2%	338	23.5%	471	22.4%
Memphis	2,003	29.8%	7,329	24.3%	387	26.9%	624	29.6%
Nashville	1,864	27.7%	8,461	28.1%	413	28.7%	572	27.1%
Tri-Cities	542	8.1%	2,180	7.2%	102	7.1%	140	6.6%

^a Total Industry Output – annual value of production by industry.

^b Total 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.

^c State totals may not add due to rounding.

(agriculture input supplying industries plus manufacturing) and the rest (61.2 percent) in primary industries (crop and livestock commodities). For forestry, however, 71.6 percent of the forestry workforce was employed in secondary industries (wood products manufacturing) and 28.4 percent in primary (commercial logging; pulp, paper, and paperboard mills; sawmills; and nursery/timber tracts).

The largest value of output from primary agriculture, 47.6 percent, originated in the Nashville Region (Figure 12 on page 17), followed by the Memphis Region at 35.1 percent. For secondary agriculture, however, the largest value of output was from the Memphis Region (38.4 percent) followed by the Nashville Region (34.2 percent). The Tri-Cities Region contributed roughly the same value of output (4.1 percent) for both primary and secondary agriculture. For both primary and secondary forestry, the Memphis Region had the largest

value of total industry output followed by the Nashville Region. The Tri-Cities Region followed the Memphis Region in economic activity for primary forestry followed by the Nashville, Chattanooga, and Knoxville Regions. For secondary forestry, the Nashville Region had more jobs followed by the Knoxville and Memphis Regions. Yet, total industry output was larger for the Memphis Region followed by the Nashville and Knoxville Regions.

Primary Agricultural Products:

The largest output value (18.7 percent) for the state from farm production was from oilseed farming (primary soybeans) (Table 9), followed by poultry and egg production; cattle ranching and farming; grain farming; all other crop farming (primarily hay and seed farming); greenhouse, nursery, and floriculture production; agriculture and forestry support activities; cotton farming; dairy and milk production; and tobacco. Agriculture and forestry support activities includes support activities for crop production [i.e., cotton ginning; soil preparation,

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	3,006	76,033	242	1,190
1	Oilseed farming	564	18,832	3	278
2	Poultry & egg production	481	2,570	25	95
3	Cattle ranching & farming	422	9,061	15	64
4	Grain farming	356	18,108	7	123
5	All other crop farming	331	4,551	12	119
6	Greenhouse, nursery, & floriculture production	309	6,786	23	275
7	Agriculture & forestry support activities	163	6,512	138	120
8	Cotton farming	146	1,998	11	61
9	Dairy cattle & milk production	128	2,407	3	28
10	Tobacco farming	105	5,208	3	29

^a Total Industry Output – annual value of production by industry.

^b Total 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.

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 spraying, and sheep dipping and shearing], and forestry [i.e., estimating timber, forest fire fighting, forest pest control, and consulting on wood attributes and reforestation]). In terms of labor income, poultry and egg production had the largest value followed by greenhouse, nursery, and floriculture production; cattle ranching and farming; and all other crop farming (primarily hay and seed farming). The largest total value added contributors included oilseed farming (primarily soybeans) followed by greenhouse, nursery, and floriculture production; grain farming; and all other crop farming (primarily hay and seed farming).

The direct economic activity from farm production of the top ten sectors for each trading region within the state is summarized in Table 10. Poultry and egg production, cattle ranching and farming, dairy cattle and milk production, vegetable and melon farming, and oilseed farming were primary contributors to total industry output from farm production in the Chattanooga Region. In the Knoxville Region, poultry and egg production; cattle ranching and farming; greenhouse, nursery, and floriculture production; vegetable and melon farming; and dairy cattle and milk production were important sectors. For the Memphis Region, oilseed farming, grain farming, cotton farming, agriculture and forestry support activities, and cattle ranching and farming had the largest total industry output, while in the Nashville Region the greatest total industry output values were from all other crop farming; poultry and egg production; greenhouse, nursery, and floriculture production; cattle ranching and farming; and oilseed farming. Cattle ranching and farming, poultry and egg production, dairy cattle and milk

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:					
1	Poultry & egg production	62	378	5	12
2	Cattle ranching & farming	41	981	2	6
3	Dairy cattle & milk production	26	510	1	6
4	Vegetable & melon farming	19	316	1	11
5	Oilseed farming	10	889	0 ^c	5
6	Greenhouse, nursery, & floriculture production	6	265	2	5
7	Agriculture & forestry support activities	6	255	5	4
8	Grain farming	5	665	0 ^c	2
9	Animal production, except cattle/poultry/eggs	4	432	1	2
10	Commercial hunting & trapping	2	35	0 ^c	1
Knoxville:					
1	Poultry & egg production	65	467	3	13
2	Cattle ranching & farming	62	1,734	3	9
3	Greenhouse, nursery, & floriculture production	30	1,353	4	27
4	Vegetable & melon farming	24	456	0 ^c	13
5	Dairy cattle & milk production	20	494	1	4
6	Agriculture & forestry support activities	15	652	12	11
7	Animal production, except cattle/poultry/eggs	9	1,033	1	4
8	Tobacco farming	7	712	0 ^c	2
9	Oilseed farming	6	696	0 ^c	3
10	Grain farming	4	763	0 ^c	2
Memphis:					
1	Oilseed farming	435	10,418	2	214
2	Grain farming	263	9,137	5	91
3	Cotton farming	141	1,826	11	59
4	Agriculture & forestry support activities	96	3,495	83	72
5	Cattle ranching & farming	50	490	1	7
6	Poultry & egg production	47	127	2	9
7	Animal production, except cattle/poultry/eggs	37	1,043	3	16
8	Greenhouse, nursery, & floriculture production	25	377	2	22
9	Vegetable & melon farming	16	110	1	9

**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 \$)
10	Commercial hunting & trapping	10	228	1	3
Nashville:					
1	All other crop farming	330	4,477	12	118
2	Poultry & egg production	281	1,379	13	55
3	Greenhouse, nursery, & floriculture production	239	4,360	14	213
4	Cattle ranching & farming	226	4,501	7	34
5	Oilseed farming	113	6,774	1	56
6	Tobacco farming	82	3,123	2	23
7	Grain farming	82	7,028	2	28
8	Dairy cattle & milk production	56	903	1	12
9	Animal production, except cattle/poultry/eggs	45	3,495	4	20
10	Agriculture & forestry support activities	43	1,924	36	31
Tri-Cities:					
1	Cattle ranching & farming	45	1,356	2	7
2	Poultry & egg production	27	218	2	5
3	Dairy cattle & milk production	19	456	0 ^c	4
4	Tobacco farming	10	1,155	0 ^c	3
5	Vegetable & melon farming	8	185	1	5
6	Greenhouse, nursery, & floriculture production	8	431	1	7
7	Animal production, except cattle/poultry/eggs	6	787	1	3
8	Agriculture & forestry support activities	3	185	3	2
9	Grain farming	3	517	0 ^c	1
10	Fruit farming	1	27	0 ^c	1

^a Total Industry Output – annual value of production by industry.

^b Total 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.

^c Values of 0 are nonzero values that are less than 1.

production, tobacco farming, and vegetable and melon farming were important contributors to total industry output for the Tri-Cities Region. For all regions except Memphis and Nashville, cattle ranching and farming employed the largest number of workers. For the Memphis Region,

oilseed farming employed the largest numbers, followed by grain and cotton farming. For Nashville, grain farming employed the largest numbers, followed by oilseed farming and cattle ranching and farming.

Secondary Agricultural Products:

Among secondary agricultural products, food manufacturing contributed the largest total industry output, tobacco products manufacturing, beverage manufacturing, textile mills, agricultural chemicals, apparel manufacturing, agricultural machinery, textile product mills, and leather and allied product manufacturing (Table 11). Approximately 63.5 percent of the value of total 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. A more detailed presentation of the total industry output from processing by sub-sector is shown in Appendixes D and E.

Table 11. Direct Economic Activity in Secondary Agricultural Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Food Manufacturing:								
State ^c	17,623		32,489		1,779		3,187	
Chattanooga	2,109	12.0%	6,278	19.3%	310	17.4%	515	16.2%
Knoxville	2,104	11.9%	4,185	12.9%	226	12.7%	345	10.8%
Memphis	7,493	42.5%	8,302	25.6%	587	33.0%	1,212	38.0%
Nashville	5,522	31.3%	13,147	40.5%	621	34.9%	1,056	33.1%
Tri-Cities	394	2.2%	576	1.8%	35	2.0%	58	1.8%
Tobacco Products Manufacturing:								
State ^c	3,056		1,008		151		1,860	
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	1,091	35.7%	402	39.9%	55	36.4%	664	35.7%
Nashville	1,965	64.3%	606	60.1%	96	63.6%	1,196	64.3%
Tri-Cities	0	0.0%	0	0.0%	0	0.0%	0	0.0%

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

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Beverage Manufacturing:								
State ^c	3,027		4,123		363		729	
Chattanooga	546	18.0%	784	19.0%	67	18.3%	86	11.8%
Knoxville	562	18.6%	858	20.8%	51	14.1%	66	9.1%
Memphis	775	25.6%	1,112	27.0%	97	26.6%	126	17.2%
Nashville	928	30.7%	1,047	25.4%	128	35.3%	425	58.3%
Tri-Cities	216	7.1%	321	7.8%	20	5.6%	27	3.6%
Textile Mills:								
State ^c	1,111		3,885		214		307	
Chattanooga	334	30.1%	1,216	31.3%	60	27.9%	84	27.2%
Knoxville	52	4.7%	262	6.7%	12	5.7%	15	5.0%
Memphis	92	8.3%	359	9.2%	18	8.7%	25	8.2%
Nashville	370	33.3%	1,116	28.7%	73	34.4%	115	37.4%
Tri-Cities	262	23.6%	932	24.0%	50	23.4%	68	22.1%
Agricultural Chemicals:								
State ^c	826		668		58		169	
Chattanooga	36	4.4%	21	3.2%	2	3.8%	7	3.9%
Knoxville	89	10.8%	143	21.4%	9	16.1%	22	13.1%
Memphis	601	72.8%	355	53.2%	31	53.6%	106	62.8%
Nashville	74	9.0%	136	20.3%	14	23.7%	28	16.6%
Tri-Cities	25	3.0%	13	2.0%	2	2.9%	6	3.6%
Apparel Manufacturing:								
State ^c	738		6,260		240		336	
Chattanooga	271	36.7%	2,201	35.2%	90	37.7%	126	37.6%
Knoxville	75	10.2%	735	11.7%	22	9.3%	31	9.1%
Memphis	103	14.0%	899	14.4%	37	15.3%	49	14.7%
Nashville	265	36.0%	2,215	35.4%	83	34.8%	121	36.0%
Tri-Cities	23	3.1%	209	3.3%	7	2.9%	9	2.7%
Agricultural Machinery:								
State ^c	728		1,907		76		158	
Chattanooga	18	2.4%	39	2.0%	2	2.5%	4	2.7%
Knoxville	9	1.2%	21	1.1%	1	0.9%	2	1.0%
Memphis	455	62.5%	1,209	63.4%	50	65.6%	102	64.7%
Nashville	51	7.0%	141	7.4%	4	5.2%	9	5.4%
Tri-Cities	195	26.8%	497	26.1%	20	25.7%	41	26.2%
Textile Product Mills:								
State ^c	496		2,911		125		179	
Chattanooga	65	13.1%	421	14.5%	19	15.3%	26	14.8%
Knoxville	174	35.2%	1,108	38.1%	45	36.5%	63	35.2%
Memphis	31	6.2%	199	6.8%	8	6.7%	12	6.7%
Nashville	207	41.8%	1,042	35.8%	49	39.0%	73	40.8%

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

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Tri-Cities	19	3.8%	142	4.9%	3	2.5%	5	2.5%
Leather & Allied Product Manufacturing:								
State ^c	126		806		28		40	
Chattanooga	5	4.4%	52	6.5%	1	4.2%	2	4.3%
Knoxville	3	2.4%	30	3.7%	1	2.3%	1	2.4%
Memphis	16	12.8%	103	12.7%	3	11.8%	5	11.7%
Nashville	98	78.4%	604	74.9%	22	79.6%	32	79.5%
Tri-Cities	3	2.0%	18	2.2%	1	2.1%	1	2.2%

^a Total Industry Output – annual value of production by industry.

^b Total 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.

^c State totals may not add due to rounding.

Primary Forest Products:

The largest output value for primary forest products was from paper mills, followed by sawmills and wood preservation; paperboard mills; commercial logging; pulp mills; and forestry, forest products, and timber tract production (i.e., growing trees for reforestation; gathering forest products, such as gums, barks, balsam needles, rhizomes, fibers, and ginseng; and timber tracts for selling timber) (Table 12). The Memphis Region had the largest output value for paper mills at \$2.3 billion or 59.3 percent of the output value for the state. Likewise, for employment, paper mills employed the largest number of individuals again with the Memphis Region employing the largest number. The Nashville Region had the largest output value for sawmills and wood preservation. For commercial logging, the Memphis and Nashville Regions had the largest output values. For pulp mills, 78.2 percent of the economic activity originates from the Memphis Region. For forestry, forest products, and timber tract production, the Memphis Region had the largest output value.

Table 12. Direct Economic Activity in Primary Forest Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Paper Mills:								
State ^c	3,893		4,521		620		1,415	
Chattanooga	132	3.4%	155	3.4%	21	3.4%	48	3.4%
Knoxville	129	3.3%	178	3.9%	16	2.6%	37	2.6%
Memphis	2,309	59.3%	2,595	57.4%	381	61.5%	871	61.6%
Nashville	130	3.3%	172	3.8%	17	2.8%	40	2.8%
Tri-Cities	1,192	30.6%	1,421	31.4%	184	29.7%	420	29.7%
Sawmills & Wood Preservation:								
State ^c	640		3,069		102		131	
Chattanooga	18	2.8%	89	2.9%	2	2.3%	3	2.3%
Knoxville	53	8.4%	260	8.5%	8	7.9%	10	7.9%
Memphis	168	26.2%	807	26.3%	26	25.9%	34	25.9%
Nashville	348	54.4%	1,662	54.1%	56	55.3%	72	55.3%
Tri-Cities	53	8.3%	251	8.2%	9	8.6%	11	8.6%
Paperboard Mills:								
State ^c	627		809		81		171	
Chattanooga	118	18.8%	147	18.2%	16	19.9%	34	20.1%
Knoxville	41	6.5%	59	7.4%	4	4.8%	8	4.8%
Memphis	468	74.7%	602	74.4%	61	75.3%	128	75.1%
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%
Commercial Logging:								
State ^c	421		2,734		170		190	
Chattanooga	21	5.1%	150	5.5%	8	5.0%	9	5.0%
Knoxville	13	3.1%	106	3.9%	5	2.8%	5	2.8%
Memphis	257	61.1%	1,608	58.8%	105	61.8%	117	61.9%
Nashville	116	27.5%	785	28.7%	46	27.1%	51	27.0%
Tri-Cities	14	3.3%	86	3.1%	6	3.3%	6	3.3%
Pulp Mills:								
State ^c	369		491		50		93	
Chattanooga	80	21.8%	118	24.0%	8	16.1%	15	16.1%
Knoxville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Memphis	289	78.2%	373	76.0%	42	83.9%	78	83.9%
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%
Forestry, Forest Products, & Timber Tract Production:								
State ^c	151		339		21		69	
Chattanooga	7	4.4%	13	4.0%	1	4.4%	3	4.5%
Knoxville	35	22.9%	77	22.8%	5	22.9%	16	23.0%
Memphis	55	36.8%	130	38.4%	8	36.8%	25	36.4%
Nashville	40	26.4%	85	25.0%	6	26.6%	18	26.8%

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

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Tri-Cities	14	9.5%	33	9.8%	2	9.3%	6	9.4%

^a Total Industry Output – annual value of production by industry.

^b Total 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.

^c State totals may not add due to rounding.

Secondary Forest Products:

The largest output value for secondary forest products was produced by the paper manufacturing sector, followed by furniture and related products manufacturing; wood windows and doors and millwork; other wood products manufacturing; manufactured home manufacturing; and veneer, plywood, and engineered wood product manufacturing (Table 13). Paper manufacturing for this analysis 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. The Memphis Region had the largest values for output, employment, labor income, and value added for paper manufacturing. The Knoxville Region had the largest output values for furniture and manufactured home manufacturing, with the latter category being an important industry for the state. Economic activity was the largest for the Memphis and Knoxville Regions for millwork, and the Nashville Region for other wood product manufacturing. For the veneer, plywood, and engineered wood products manufacturing category, the Chattanooga Region had the largest output value, followed by the Knoxville, Memphis, Nashville, and Tri-Cities Regions.

Table 13. Direct Economic Activity in Secondary Forest Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Paper Manufacturing:								
State ^c	3,660		9,923		632		927	
Chattanooga	379	10.3%	1,141	11.5%	65	10.3%	82	8.8%
Knoxville	459	12.5%	1,336	13.5%	85	13.4%	116	12.6%
Memphis	1,385	37.8%	3,199	32.2%	215	34.1%	381	41.1%
Nashville	1,035	28.3%	3,020	30.4%	200	31.7%	262	28.3%
Tri-Cities	402	11.0%	1,227	12.4%	66	10.5%	86	9.3%
Furniture & Related Products Manufacturing:								
State ^c	1,504		9,251		355		559	
Chattanooga	396	26.3%	2,567	27.7%	99	27.9%	151	27.1%
Knoxville	501	33.3%	3,291	35.6%	111	31.2%	176	31.5%
Memphis	180	11.9%	1,072	11.6%	47	13.3%	72	13.0%
Nashville	381	25.3%	2,044	22.1%	87	24.5%	141	25.2%
Tri-Cities	47	3.1%	277	3.0%	11	3.1%	18	3.2%
Wood Windows & Doors & Millwork:								
State ^c	525		3,299		141		184	
Chattanooga	17	3.3%	118	3.6%	4	2.9%	5	2.9%
Knoxville	136	26.0%	849	25.7%	37	26.4%	49	26.4%
Memphis	211	40.2%	1,347	40.8%	55	39.3%	72	39.2%
Nashville	119	22.7%	728	22.1%	33	23.5%	43	23.6%
Tri-Cities	41	7.9%	256	7.8%	11	8.0%	15	8.0%
Other Wood Products Manufacturing:								
State ^c	512		4,214		145		203	
Chattanooga	40	7.7%	340	8.1%	11	7.8%	14	7.1%
Knoxville	51	9.9%	414	9.8%	15	10.5%	18	8.9%
Memphis	135	26.4%	1,065	25.3%	40	27.4%	61	30.1%
Nashville	255	49.8%	2,122	50.4%	70	48.4%	96	47.2%
Tri-Cities	32	6.2%	274	6.5%	9	5.9%	14	6.7%
Manufactured Homes Manufacturing:								
State ^c	378		2,610		132		159	
Chattanooga	9	2.5%	68	2.6%	3	2.3%	3	2.2%
Knoxville	234	61.9%	1,560	59.8%	85	64.4%	102	64.5%
Memphis	76	20.0%	544	20.8%	25	19.0%	30	19.2%
Nashville	58	15.4%	432	16.5%	19	14.1%	22	13.9%
Tri-Cities	1	0.2%	7	0.3%	0	0.2%	0	0.2%
Veneer, Plywood, & Engineered Wood Products Manufacturing:								
State ^c	151		863		37		75	
Chattanooga	79	52.1%	363	42.0%	17	46.7%	43	58.1%
Knoxville	21	14.0%	144	16.7%	6	15.7%	9	12.3%
Memphis	16	10.8%	102	11.8%	5	13.1%	8	10.1%
Nashville	16	10.7%	115	13.3%	4	11.6%	7	9.1%

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

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Tri-Cities	19	12.4%	139	16.1%	5	13.0%	8	10.3%

^a Total Industry Output – annual value of production by industry.

^b Total 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.

^c State totals may not add due to rounding.

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. Values for total industry output, employment, labor income, and value added resulting from agriculture and forestry, including each of these impacts, are shown in Table 14. Agriculture and forestry contributed an estimated value of over \$71.4 billion to Tennessee’s \$485.5 billion economy in 2009. An estimated 70.6 percent of the total economic impacts came from primary and secondary agriculture, while forest operations and forest products contributed about 29.4 percent. Employment in both agriculture and forestry totaled over 360 thousand workers. Of that value, 72.0 percent were related with primary and secondary agriculture production, with 28.0 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.

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	71,455		363,571		14,053		26,486	
Chattanooga	7,197	10.1%	37,865	10.4%	1,513	10.8%	2,515	9.5%
Knoxville	7,846	11.0%	45,621	12.5%	1,714	12.2%	2,754	10.4%
Memphis	28,329	39.6%	120,571	33.2%	5,135	36.5%	10,023	37.8%
Nashville	21,481	30.1%	126,419	34.8%	4,245	30.2%	8,778	33.1%
Tri-Cities	4,217	5.9%	20,920	5.8%	803	5.7%	1,413	5.3%
Intrastate Trade	2,384	3.3%	12,175	3.3%	643	4.6%	1,004	3.8%
Primary & Secondary Agriculture								
State	50,443		261,803		8,889		17,831	
Chattanooga	5,298	10.5%	27,999	10.7%	1,065	12.0%	1,773	9.9%
Knoxville	5,221	10.3%	29,731	11.4%	1,014	11.4%	1,663	9.3%
Memphis	19,545	38.7%	83,875	32.0%	3,064	34.5%	6,376	35.8%
Nashville	17,274	34.2%	102,254	39.1%	3,124	35.1%	7,043	39.5%
Tri-Cities	1,715	3.4%	11,623	4.4%	279	3.1%	469	2.6%
Intrastate Trade	1,390	2.8%	6,322	2.4%	343	3.9%	508	2.8%
Primary Agriculture								
State	4,954		101,365		726		2,198	
Chattanooga	255	5.2%	5,837	5.8%	36	5.0%	91	4.1%
Knoxville	347	7.0%	9,596	9.5%	54	7.4%	143	6.5%
Memphis	1,753	35.4%	33,310	32.9%	290	40.0%	858	39.1%
Nashville	2,287	46.2%	46,177	45.6%	297	40.9%	1,010	45.9%
Tri-Cities	190	3.8%	6,106	6.0%	23	3.2%	62	2.8%
Intrastate Trade	121	2.4%	340	0.3%	25	3.5%	35	1.6%
Secondary Agriculture								
State	45,489		160,438		8,164		15,633	
Chattanooga	5,043	11.1%	22,162	13.8%	1,029	12.6%	1,029	6.6%
Knoxville	4,874	10.7%	20,136	12.6%	960	11.8%	960	6.1%
Memphis	17,792	39.1%	50,564	31.5%	2,774	34.0%	2,774	17.7%
Nashville	14,987	32.9%	56,077	35.0%	2,827	34.6%	2,827	18.1%
Tri-Cities	1,525	3.4%	5,517	3.4%	256	3.1%	256	1.6%
Intrastate Trade	1,269	2.8%	5,982	3.7%	318	3.9%	7,788	49.8%
Primary & Secondary Forestry								
State	21,012		101,768		5,164		8,655	
Chattanooga	1,899	9.0%	9,866	9.7%	448	8.7%	743	8.6%
Knoxville	2,625	12.5%	15,890	15.6%	700	13.5%	1,091	12.6%
Memphis	8,784	41.8%	36,696	36.1%	2,072	40.1%	3,647	42.1%
Nashville	4,207	20.0%	24,166	23.7%	1,122	21.7%	1,735	20.0%
Tri-Cities	2,502	11.9%	9,297	9.1%	524	10.1%	944	10.9%
Intrastate Trade	994	4.7%	5,853	5.8%	299	5.8%	496	5.7%

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

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Primary Forestry								
State	10,296		41,752		2,379		4,270	
Chattanooga	581	5.6%	2,136	5.1%	118	5.0%	216	5.1%
Knoxville	436	4.2%	2,061	4.9%	93	3.9%	165	3.9%
Memphis	5,760	55.9%	21,826	52.3%	1,339	56.3%	2,436	57.0%
Nashville	1,096	10.6%	6,282	15.0%	277	11.6%	433	10.2%
Tri-Cities	1,762	17.1%	5,500	13.2%	356	15.0%	695	16.3%
Intrastate Trade	659	6.4%	3,947	9.5%	195	8.2%	326	7.6%
Secondary Forestry								
State	10,716		60,016		2,785		4,385	
Chattanooga	1,318	12.3%	7,730	12.9%	330	11.8%	527	12.0%
Knoxville	2,189	20.4%	13,829	23.0%	606	21.8%	926	21.1%
Memphis	3,024	28.2%	14,870	24.8%	732	26.3%	1,211	27.6%
Nashville	3,111	29.0%	17,884	29.8%	845	30.3%	1,302	29.7%
Tri-Cities	739	6.9%	3,797	6.3%	168	6.0%	249	5.7%
Intrastate Trade	335	3.1%	1,906	3.2%	104	3.7%	170	3.9%

^a Total Industry Output – annual value of production by industry.

^b Total 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.

Primary Agriculture Products Total Impacts:

Figures 13 through 18 show the estimated direct, indirect, and induced impacts for oilseed farming; greenhouse, nursery, and floriculture production; grain farming; all other crop farming; poultry and egg production; cattle ranching and farming; cotton farming; tobacco farming; dairy cattle and milk production; animal production, except for cattle, poultry, and eggs; vegetable and melon farming; and commercial logging agricultural sectors. The top ten indirect and induced sectors based on output value are also listed. Using oilseed farming as an example, as a result of sales of \$564.3 million, the indirect economic impacts caused by input supplying industries are \$216.4 million (25.9 percent) and the induced impacts (expenditures by households are \$54.3 million (6.5 percent). The sectors most impacted from the indirect impact in descending order included real estate establishments, pesticides and other

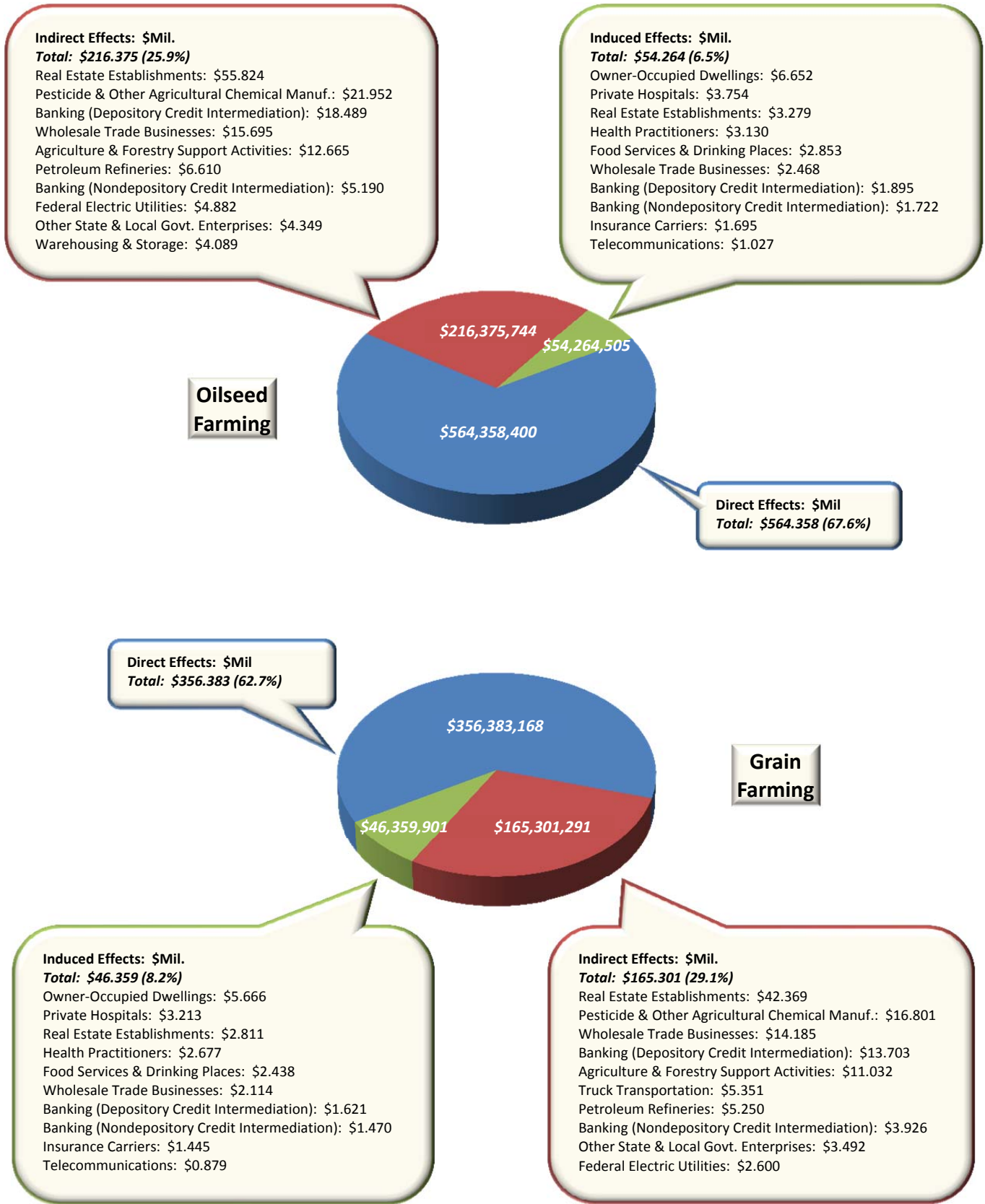


Figure 13. Estimated Direct, Indirect, and Induced Impacts for Oilseed Farming and Grain Farming.

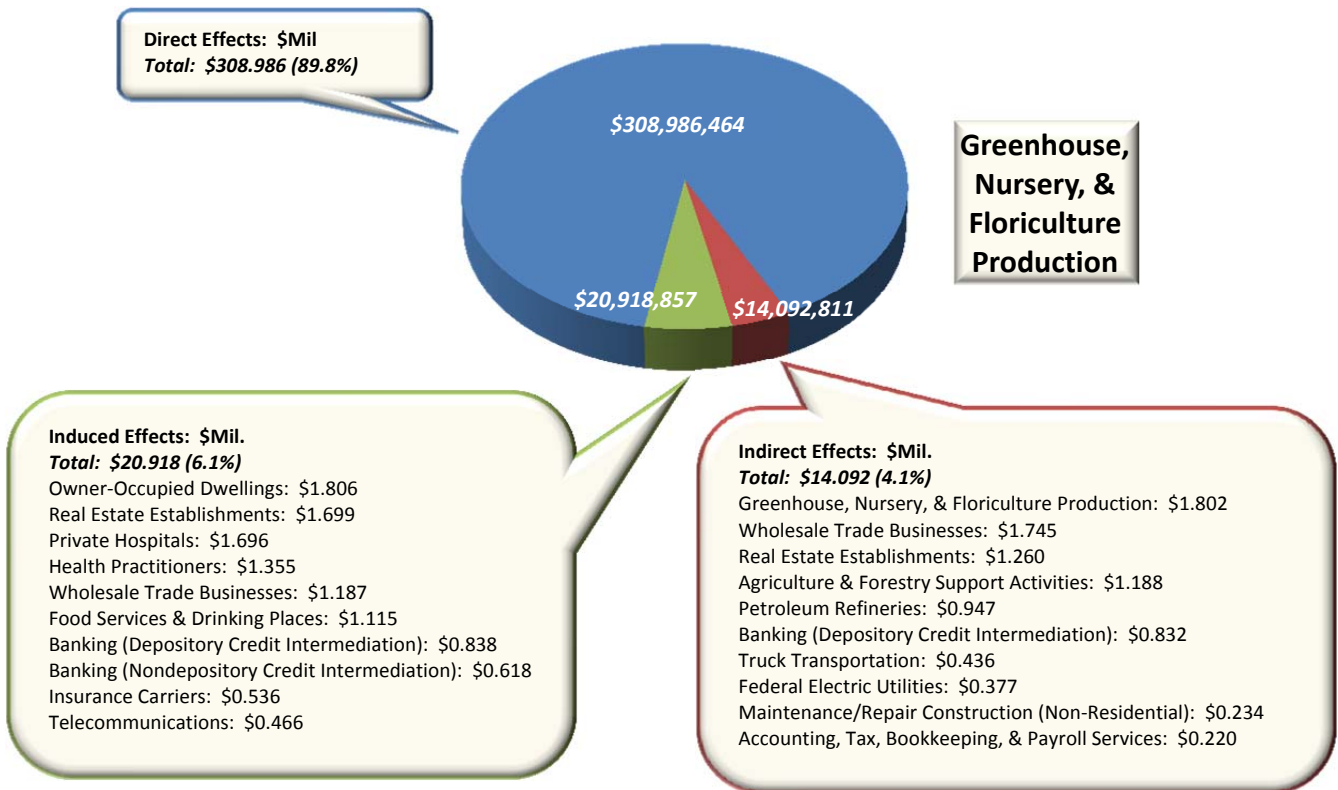
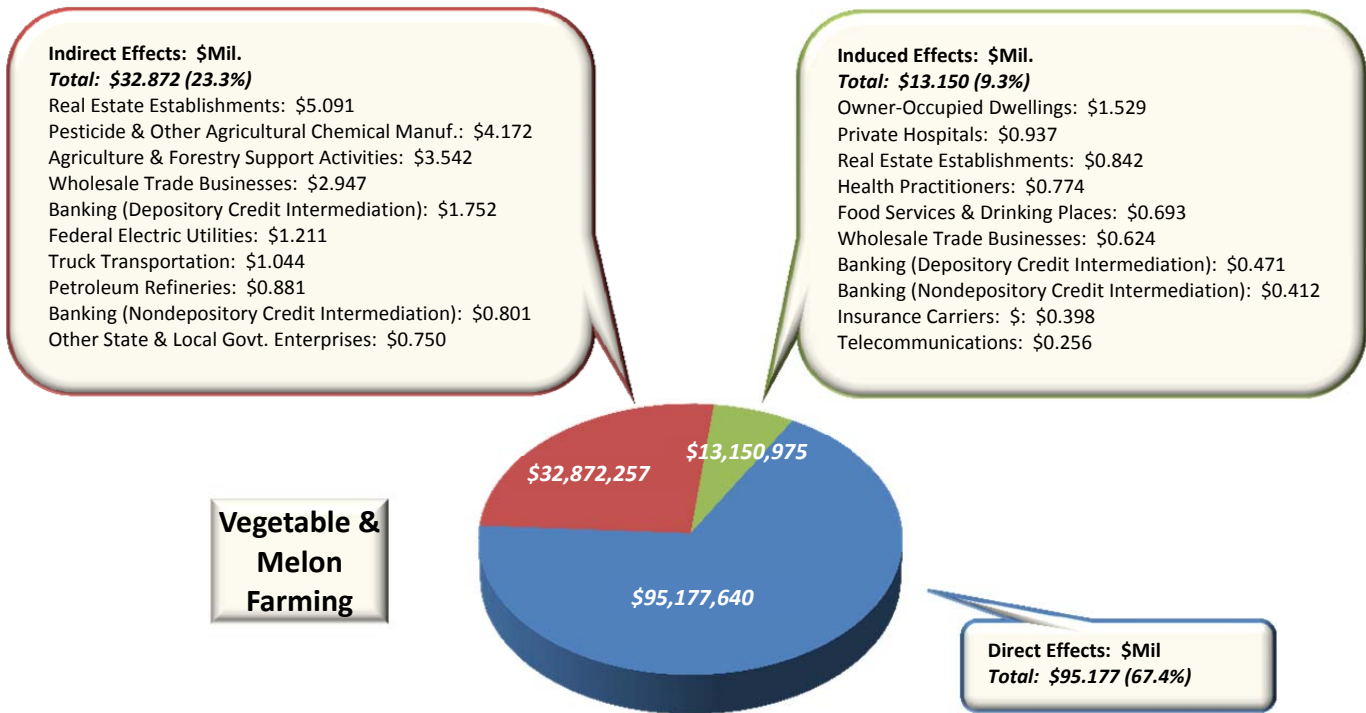


Figure 14. Estimated Direct, Indirect, and Induced Impacts for Vegetable & Melon Farming and Greenhouse, Nursery, & Floriculture Production.

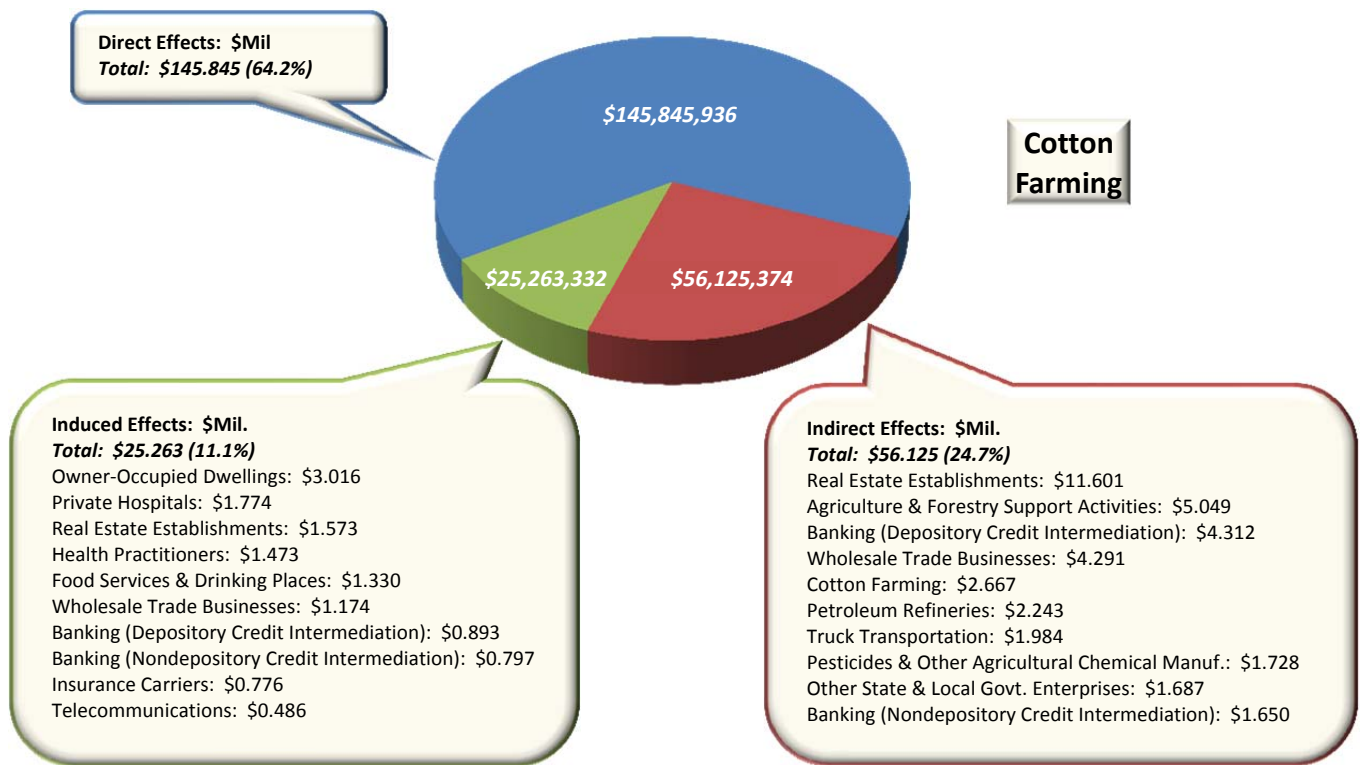
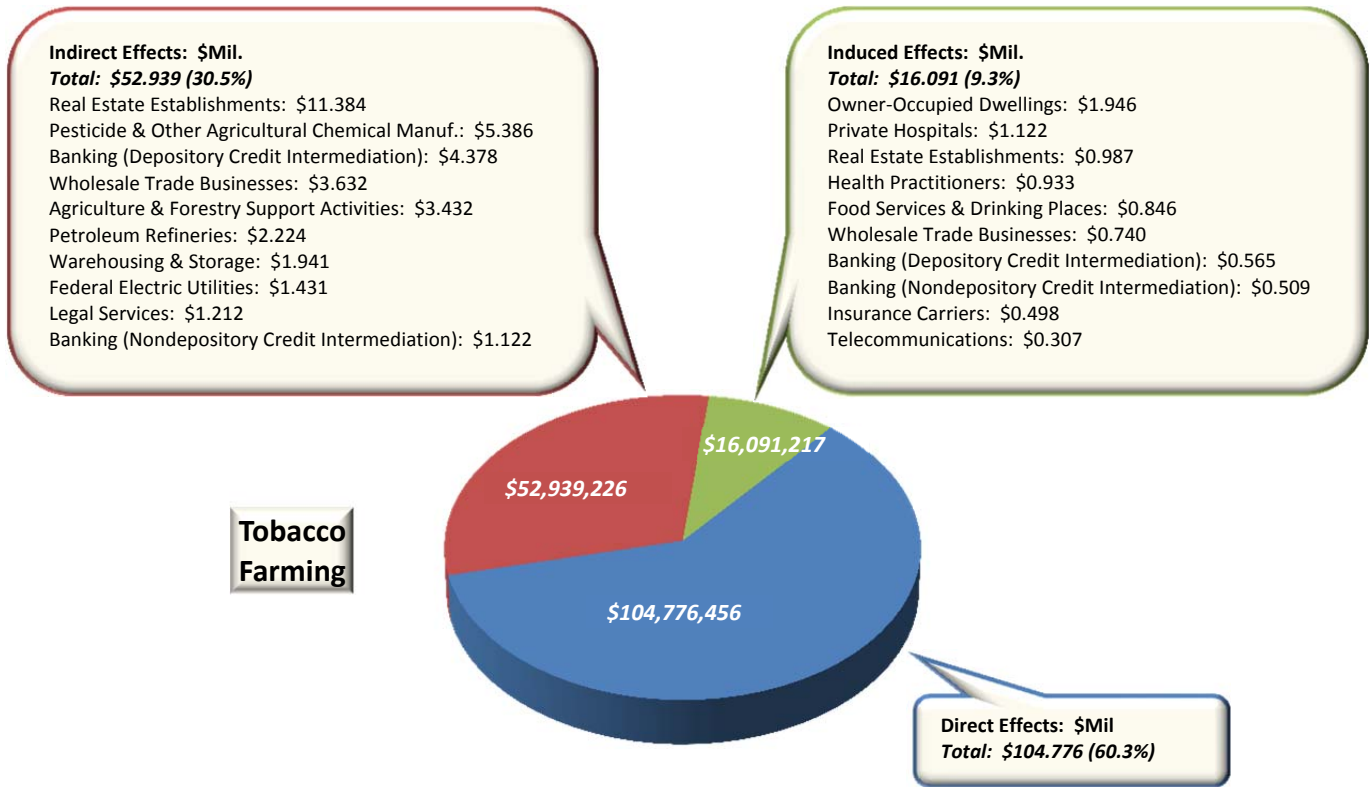


Figure 15. Estimated Direct, Indirect, and Induced Impacts for Tobacco Farming and Cotton Farming.

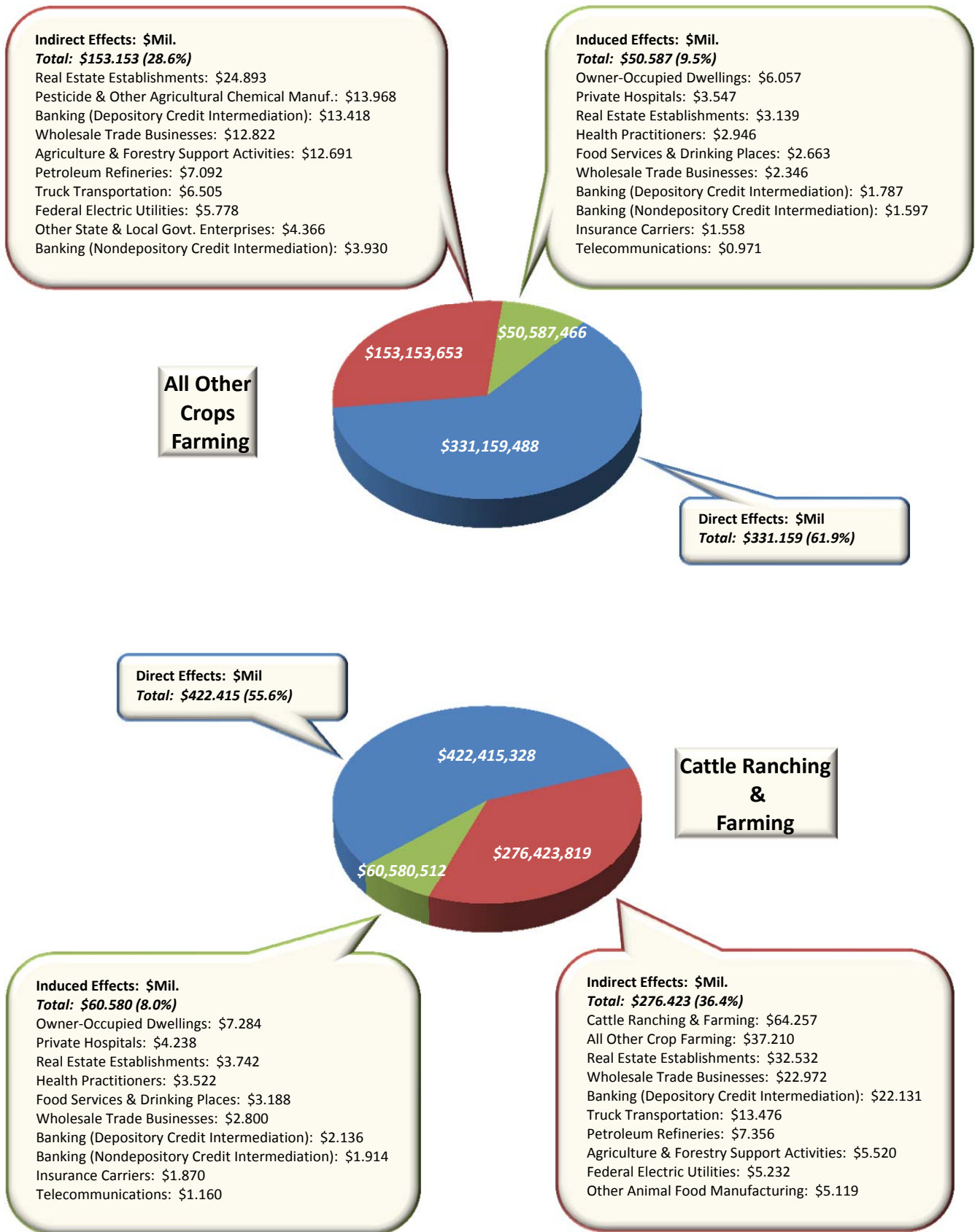
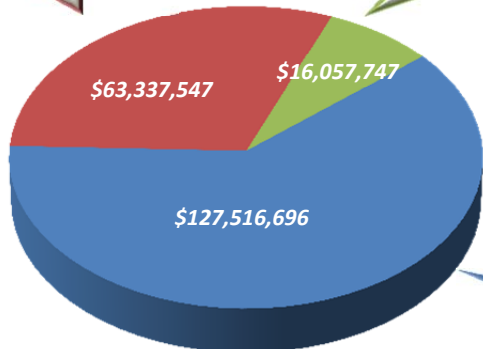


Figure 16. Estimated Direct, Indirect, and Induced Impacts for All Other Crops Farming and Cattle Ranching & Farming.

Indirect Effects: \$Mil.
Total: \$63.337 (30.6%)
 Wholesale Trade Businesses: \$8.849
 Other Animal Food Manufacturing: \$7.086
 Real Estate Establishments: \$5.916
 All Other Crop Farming: \$5.524
 Soybean & Other Oilseed Processing: \$3.685
 Banking (Depository Credit Intermediation): \$2.848
 Truck Transportation: \$2.700
 Federal Electric Utilities: \$2.264
 Agriculture & Forestry Support Activities: \$1.935
 Pesticide & Other Agricultural Chemical Manuf.: \$1.872

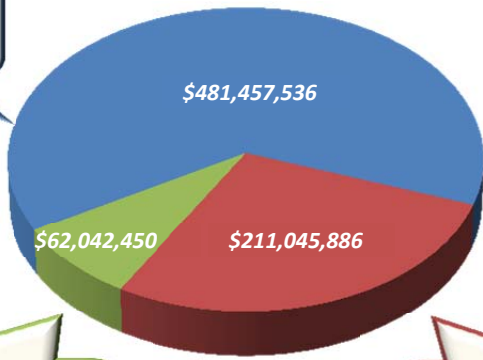
Induced Effects: \$Mil.
Total: \$16.056 (7.8%)
 Owner-Occupied Dwellings: \$1.932
 Private Hospitals: \$1.122
 Real Estate Establishments: \$0.991
 Health Practitioners: \$0.933
 Food Services & Drinking Places: \$0.845
 Wholesale Trade Businesses: \$0.741
 Banking (Depository Credit Intermediation): \$0.566
 Banking (Nondepository Credit Intermediation): \$0.507
 Insurance Carriers: \$0.496
 Telecommunications: \$0.307



**Dairy
Cattle
&
Milk
Production**

Direct Effects: \$Mil
Total: \$127.516 (61.6%)

Direct Effects: \$Mil
Total: \$481.457 (63.8%)



**Poultry & Egg
Production**

Induced Effects: \$Mil.
Total: \$62.042 (8.2%)
 Owner-Occupied Dwellings: \$7.440
 Private Hospitals: \$4.347
 Real Estate Establishments: \$3.843
 Health Practitioners: \$3.611
 Food Services & Drinking Places: \$3.265
 Wholesale Trade Businesses: \$2.873
 Banking (Depository Credit Intermediation): \$2.190
 Banking (Nondepository Credit Intermediation): \$1.959
 Insurance Carriers: \$1.912
 Telecommunications: \$1.190

Indirect Effects: \$Mil.
Total: \$211.045 (28.0%)
 Soybean & Other Oilseed Processing: \$50.963
 Other Animal Food Manufacturing: \$34.086
 Wholesale Trade Businesses: \$27.211
 Truck Transportation: \$17.093
 Rail Transportation: \$6.136
 Real Estate Establishments: \$4.965
 Poultry & Egg Production: \$4.962
 Grain Farming: \$4.367
 Federal Electric Utilities: \$4.294
 Petroleum Refineries: \$3.296

Figure 17. Estimated Direct, Indirect, and Induced Impacts for Dairy Cattle & Milk Production and Poultry & Egg Production.

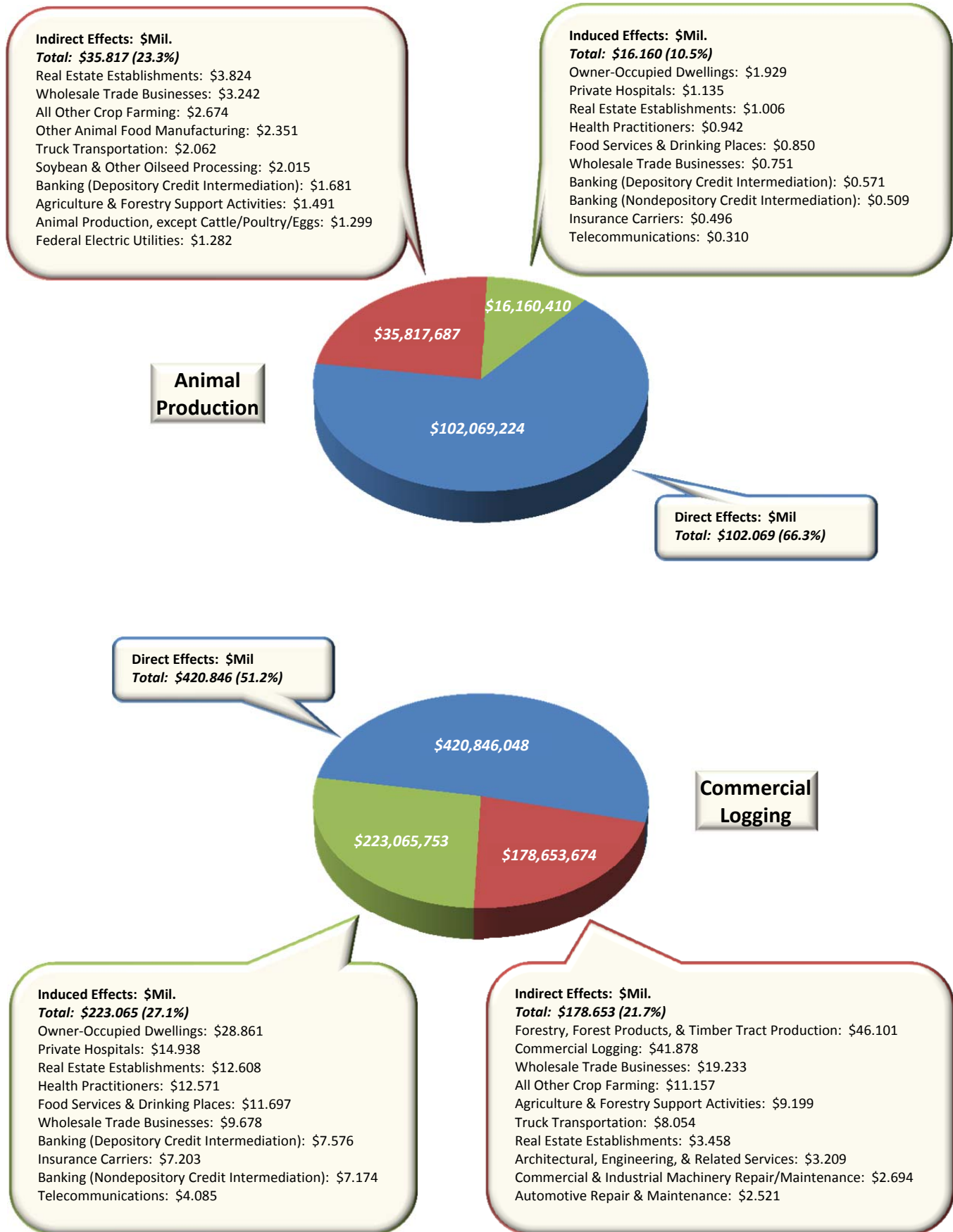


Figure 18. Estimated Direct, Indirect, and Induced Impacts for Animal Production, except Cattle, Poultry, & Eggs and Commercial Logging

agricultural chemical manufacturing, banking (depository credit intermediation), wholesale trade businesses, agriculture and forestry support activities, petroleum refineries, banking (nondepository credit intermediation), federal electric utilities, other state and local government enterprises, and warehousing and storage. Likewise, from household and institution expenditures (induced impacts) the sectors most impacted in descending order based on output value included owner-occupied dwellings; private hospitals, real estate establishments, health practitioners, food services and drinking places, wholesale trade businesses, banking (depository credit intermediation), banking (nondepository credit intermediation), insurance carriers, and telecommunications.

Secondary Agriculture Products Total Impacts:

Table 15 shows the estimated total economic impacts from secondary agricultural products. For all categories (output, employment, labor income, and value added), food manufacturing contributed the greatest total economic impact values for secondary agricultural products. The Memphis Region (primarily from grain and oilseed milling; animal slaughtering and processing; other foods (*snack foods and seasoning and dressing*); and fruit and vegetable preserving and specialty foods), followed by the Nashville Region (primarily from animal slaughtering and processing; pet foods; other foods (*snack foods and seasoning and dressing*); fruit and vegetable preserving and specialty foods; and dairy products (*fluid milk and butter*)) had the largest output values for each of the categories analyzed for this sector. The Nashville Region also had the largest output values for beverage manufacturing (*primarily from soft drinks and ice and distilleries*), tobacco products, textile mills (*nonwoven fabric mills*), apparel manufacturing (*men's and boy's cut and sew apparel*), textile product mills (*carpet and rug mills*

Table 15. Estimated Total Economic Impacts from Secondary Agricultural Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Food Manufacturing:								
State	30,235		106,432		5,368		9,124	
Chattanooga	3,189	10.5%	13,433	12.6%	620	11.6%	1,048	11.5%
Knoxville	3,388	11.2%	13,332	12.5%	653	12.2%	1,045	11.5%
Memphis	13,180	43.6%	37,196	34.9%	2,047	38.1%	3,649	40.0%
Nashville	9,211	30.5%	37,719	35.4%	1,806	33.6%	2,994	32.8%
Tri-Cities	558	1.8%	1,645	1.5%	82	1.5%	134	1.5%
Intrastate Trade	709	2.3%	3,106	2.9%	159	3.0%	254	2.8%
Beverage Manufacturing:								
State	4,651		14,305		847		1,565	
Chattanooga	794	17.1%	2,272	15.9%	132	15.5%	209	13.4%
Knoxville	857	18.4%	2,737	19.1%	139	16.4%	213	13.6%
Memphis	1,172	25.2%	3,604	25.2%	215	25.4%	331	21.2%
Nashville	1,346	28.9%	3,991	27.9%	269	31.7%	665	42.5%
Tri-Cities	274	5.9%	762	5.3%	39	4.6%	56	3.6%
Intrastate Trade	207	4.4%	939	6.6%	54	6.3%	90	5.8%
Tobacco Products:								
State	4,133		6,162		416		2,440	
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	1,459	35.3%	2,070	33.6%	141	34.0%	869	35.6%
Nashville	2,696	65.2%	4,106	66.6%	279	67.1%	1,615	66.2%
Tri-Cities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Intrastate Trade	-23	-0.6%	-15	-0.2%	-4	-1.1%	-43	-1.8%
Textile Mills:								
State	1,727		7,857		399		615	
Chattanooga	453	26.2%	2,019	25.7%	93	23.4%	142	23.0%
Knoxville	78	4.5%	465	5.9%	21	5.2%	30	4.9%
Memphis	128	7.4%	625	8.0%	30	7.6%	45	7.4%
Nashville	563	32.6%	2,477	31.5%	137	34.2%	222	36.0%
Tri-Cities	347	20.1%	1,570	20.0%	76	19.1%	111	18.1%
Intrastate Trade	157	9.1%	701	8.9%	42	10.5%	66	10.6%
Agricultural Chemicals:								
State	1,350		4,062		227		443	
Chattanooga	55	4.1%	130	3.2%	7	3.2%	15	3.4%
Knoxville	149	11.0%	555	13.7%	29	12.8%	53	12.0%
Memphis	936	69.3%	2,431	59.9%	137	60.4%	280	63.1%
Nashville	128	9.5%	514	12.7%	31	13.8%	57	12.9%
Tri-Cities	32	2.4%	66	1.6%	4	1.7%	10	2.2%
Intrastate Trade	51	3.8%	366	9.0%	18	8.1%	28	6.3%

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

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Apparel Manufacturing:								
State	1,293		10,749		436		662	
Chattanooga	426	32.9%	3,496	32.5%	142	32.5%	214	32.3%
Knoxville	128	9.9%	1,176	10.9%	41	9.5%	62	9.4%
Memphis	174	13.5%	1,487	13.8%	62	14.2%	92	13.9%
Nashville	482	37.3%	3,975	37.0%	162	37.1%	251	37.9%
Tri-Cities	34	2.6%	313	2.9%	11	2.5%	15	2.3%
Intrastate Trade	48	3.7%	302	2.8%	18	4.1%	27	4.1%
Agricultural Machinery:								
State	1,107		4,485		198		363	
Chattanooga	24	2.2%	88	2.0%	4	2.0%	8	2.2%
Knoxville	13	1.2%	53	1.2%	2	1.1%	4	1.1%
Memphis	670	60.5%	2,657	59.2%	120	60.5%	220	60.7%
Nashville	77	7.0%	326	7.3%	13	6.5%	24	6.5%
Tri-Cities	252	22.7%	943	21.0%	38	19.2%	72	19.8%
Intrastate Trade	71	6.4%	418	9.3%	21	10.6%	36	9.8%
Textile Product Mills:								
State	786		4,974		217		334	
Chattanooga	94	11.9%	651	13.1%	28	13.0%	43	12.8%
Knoxville	256	32.5%	1,772	35.6%	73	33.7%	110	33.0%
Memphis	47	5.9%	321	6.5%	14	6.3%	21	6.3%
Nashville	313	39.8%	1,844	37.1%	84	39.0%	134	40.1%
Tri-Cities	25	3.2%	193	3.9%	5	2.4%	8	2.4%
Intrastate Trade	52	6.6%	193	3.9%	12	5.6%	18	5.4%
Leather & Allied Product Manufacturing:								
State	208		1,413		55		85	
Chattanooga	8	3.9%	74	5.2%	2	3.7%	3	3.8%
Knoxville	5	2.4%	45	3.2%	1	2.4%	2	2.4%
Memphis	26	12.3%	173	12.2%	6	11.7%	10	11.6%
Nashville	169	81.6%	1,124	79.6%	46	83.5%	72	83.8%
Tri-Cities	3	1.7%	26	1.8%	1	1.6%	1	1.6%
Intrastate Trade	-4	-1.9%	-28	-2.0%	-2	-2.9%	-3	-3.3%

^a Total Industry Output – annual value of production by industry.

^b Total 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.

and all other textile product mills), and leather and allied product manufacturing (footwear).

The Memphis Region had the largest output values for agricultural chemicals (*pesticides and other agricultural chemicals*) and agricultural machinery (*lawn and garden equipment*). Food

manufacturing (primarily from grain and oilseed milling; fruit and vegetable preserving and specialty foods; and animal slaughtering and processing), beverage manufacturing (*soft drinks and ice*), and textile product mills (*textile bag and canvas mills and all other textile product mills*) are important industries for the Knoxville Region. The Chattanooga Region had significant economic activity for food manufacturing (primarily from bakeries and tortillas (*cookies, cracker, and pastas manufacturing*), animal slaughtering and processing (*poultry processing*), sugar and confectionary products (*confectionery from purchased chocolate*), textile mills (*fiber, yarn, and thread mills*), and apparel manufacturing (*apparel knitting mills and men's and boy's cut and sew apparel*)). Food manufacturing (primarily from dairy products (*fluid milk and butter and dry, condensed, and evaporated dairy products*), beverages (*soft drinks and ice*), textile mills (*fabric coating mills and fiber, yard, and thread mills coating mills*), and agricultural machinery (*lawn and garden equipment*) are important industries in the Tri-Cities Region.

Primary Forest Products Total Impacts:

Paper mills contributed the largest values for all the categories analyzed compared to the other four primary forest products sectors combined (Table 16). The Memphis Region dominated all value categories for this sector, with the Tri-Cities Region having the next largest values. The Memphis Region also had the largest values for paperboard mills; pulp mills; commercial logging; and forestry, forestry products, and timber tract production. The Nashville Region had the largest output values for sawmills and wood preservation. The largest output values for the Chattanooga and Knoxville Regions were from paper mills.

Table 16. Estimated Total Economic Impacts from Primary Forest Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Paper Mills:								
State	6,488		21,899		1,434		2,764	
Chattanooga	199	3.1%	606	2.8%	41	2.8%	81	2.9%
Knoxville	208	3.2%	729	3.3%	41	2.9%	78	2.8%
Memphis	3,681	56.7%	11,846	54.1%	817	57.0%	1,597	57.8%
Nashville	224	3.4%	803	3.7%	48	3.3%	90	3.3%
Tri-Cities	1,649	25.4%	4,873	22.3%	329	23.0%	654	23.6%
Intrastate Trade	527	8.1%	3,042	13.9%	158	11.0%	264	9.6%
Paperboard Mills:								
State	1,073		3,816		221		401	
Chattanooga	182	17.0%	579	15.2%	35	15.9%	66	16.5%
Knoxville	68	6.4%	249	6.5%	13	5.7%	22	5.6%
Memphis	761	70.9%	2,616	68.6%	155	70.3%	283	70.6%
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	62	5.7%	371	9.7%	18	8.1%	29	7.3%
Sawmills & Wood Preservation								
State	1,024		5,875		227		336	
Chattanooga	25	2.5%	146	2.5%	5	2.1%	7	2.1%
Knoxville	83	8.1%	481	8.2%	18	7.8%	26	7.8%
Memphis	258	25.2%	1,478	25.2%	56	24.8%	83	24.8%
Nashville	583	56.9%	3,363	57.2%	133	58.8%	198	59.1%
Tri-Cities	74	7.2%	415	7.1%	15	6.8%	22	6.5%
Intrastate Trade	1	0.1%	-8	-0.1%	-1	-0.2%	-1	-0.3%
Commercial Logging:								
State	823		6,092		301		414	
Chattanooga	37	4.5%	291	4.8%	14	4.5%	18	4.4%
Knoxville	24	2.9%	204	3.3%	8	2.8%	12	2.8%
Memphis	489	59.5%	3,514	57.7%	185	61.3%	249	60.2%
Nashville	230	28.0%	1,757	28.8%	82	27.3%	115	27.8%
Tri-Cities	22	2.6%	148	2.4%	8	2.7%	11	2.6%
Intrastate Trade	21	2.5%	178	2.9%	4	1.5%	9	2.3%
Pulp Mills:								
State	649		2,399		137		235	
Chattanooga	128	19.7%	433	18.1%	22	16.0%	38	16.2%
Knoxville	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Memphis	481	74.1%	1,717	71.6%	103	75.4%	178	75.8%
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	6.2%	248	10.3%	12	8.6%	19	8.1%

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

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Forestry, Forest Products, & Timber Tract Production:								
State	238		1,672		58		121	
Chattanooga	10	4.2%	80	4.8%	2	4.1%	5	4.2%
Knoxville	53	22.2%	399	23.8%	13	22.4%	27	22.2%
Memphis	89	37.5%	655	39.2%	23	39.2%	46	37.8%
Nashville	59	24.8%	359	21.5%	13	23.1%	30	24.8%
Tri-Cities	18	7.4%	64	3.8%	3	5.2%	8	6.8%
Intrastate Trade	9	3.9%	115	6.9%	3	5.9%	5	4.2%

^a Total Industry Output – annual value of production by industry.

^b Total 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.

Secondary Forest Products Total Impacts:

Secondary forest products estimated total impacts are shown in Table 17. Paper manufacturing and furniture and related product manufacturing were the largest contributors for all categories. The Memphis and Nashville Regions had the largest output value for the paper manufacturing sector (for Memphis, primarily from paper bags and coated and treated paper, paperboard containers manufacturing, and other converted paper products; for Nashville, from paperboard containers). For furniture, the Knoxville (primarily from household and institutional furniture (*upholstered household furniture and institutional furniture*), Nashville (primarily office furniture (*showcase, partition, shelving and locker*) and other furniture related products (*mattresses*)), and Chattanooga Regions (primarily from household and institutional furniture (*upholstered household furniture*)) were the leaders. The Knoxville Region also 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 Knoxville and Nashville Regions. The Nashville (primarily from wood kitchen cabinets and countertops) and Memphis Regions (wood containers and pallets) were the

Table 17. Estimated Total Economic Impacts from Secondary Forest Products

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Paper Manufacturing:								
State	5,645		24,444		1,301		2,061	
Chattanooga	539	9.6%	2,369	9.7%	118	9.0%	173	8.4%
Knoxville	700	12.4%	3,175	13.0%	167	12.8%	256	12.4%
Memphis	2,034	36.0%	7,861	32.2%	433	33.3%	750	36.4%
Nashville	1,673	29.6%	7,759	31.7%	422	32.4%	638	30.9%
Tri-Cities	542	9.6%	2,358	9.6%	113	8.7%	163	7.9%
Intrastate Trade	157	2.8%	923	3.8%	49	3.8%	81	3.9%
Furniture & Related Products Manufacturing:								
State	2,414		16,159		660		1,075	
Chattanooga	567	23.5%	3,947	24.4%	155	23.5%	249	23.2%
Knoxville	763	31.6%	5,378	33.3%	200	30.3%	327	30.4%
Memphis	281	11.6%	1,853	11.5%	81	12.4%	131	12.2%
Nashville	639	26.5%	3,996	24.7%	175	26.5%	289	26.9%
Tri-Cities	65	2.7%	432	2.7%	17	2.6%	28	2.6%
Intrastate Trade	99	4.1%	553	3.4%	31	4.8%	51	4.7%
Wood Windows & Doors & Millwork:								
State	885		6,031		264		392	
Chattanooga	26	2.9%	186	3.1%	7	2.6%	10	2.6%
Knoxville	220	24.8%	1,512	25.1%	66	25.0%	97	24.8%
Memphis	343	38.7%	2,355	39.0%	101	38.2%	150	38.1%
Nashville	207	23.4%	1,399	23.2%	64	24.1%	95	24.3%
Tri-Cities	60	6.7%	409	6.8%	17	6.6%	25	6.4%
Intrastate Trade	30	3.4%	171	2.8%	9	3.4%	15	3.9%
Other Wood Products Manufacturing:								
State	884		7,123		271		418	
Chattanooga	62	7.0%	525	7.4%	19	6.9%	27	6.6%
Knoxville	88	9.9%	719	10.1%	28	10.3%	40	9.5%
Memphis	217	24.6%	1,699	23.9%	67	24.8%	109	26.0%
Nashville	462	52.3%	3,748	52.6%	142	52.5%	218	52.2%
Tri-Cities	45	5.1%	386	5.4%	13	4.7%	21	5.0%
Intrastate Trade	10	1.1%	48	0.7%	2	0.8%	3	0.8%
Manufactured Homes Manufacturing:								
State	653		4,759		223		317	
Chattanooga	14	2.2%	109	2.3%	5	2.1%	6	2.0%
Knoxville	385	58.9%	2,804	58.9%	136	60.7%	190	60.0%
Memphis	124	18.9%	928	19.5%	41	18.5%	59	18.5%
Nashville	103	15.8%	782	16.4%	34	15.2%	48	15.3%
Tri-Cities	1	0.2%	10	0.2%	0	0.2%	0	0.2%
Intrastate Trade	26	4.0%	126	2.6%	7	3.3%	13	4.0%

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

Sector	TIO ^a		Employment		Labor Income		TVA ^b	
	(Million \$)	%	(Number)	%	(Million \$)	%	(Million \$)	%
Veneer, Plywood, & Engineered Wood Products Manufacturing:								
State	234		1,499		66		122	
Chattanooga	109	46.6%	594	39.6%	27	41.0%	60	49.1%
Knoxville	33	14.2%	242	16.2%	10	15.4%	16	13.4%
Memphis	26	11.0%	175	11.7%	8	12.4%	13	10.7%
Nashville	27	11.6%	200	13.3%	8	12.5%	13	10.9%
Tri-Cities	26	11.3%	204	13.6%	7	11.3%	12	9.8%
Intrastate Trade	13	5.4%	85	5.7%	5	7.4%	8	6.2%

^a Total Industry Output – annual value of production by industry.

^b Total 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.

leaders in all categories for other wood product manufacturing. Veneer, plywood, and engineered wood products manufacturing economic activity were the largest in the Chattanooga Region (primarily from *reconstituted wood products and engineered wood members and trusses*) followed by the Knoxville Region (primarily from *engineered wood members and trusses*).

The output and employment multipliers for 2009 for primary agricultural and forestry activities ranged from 1.04 to 1.99 for total industrial output and 1.02 to 4.93 for employment (Table 18). For instance, if commercial logging increased total industry output by \$1 million, the state's economy would increase by an estimated \$.95 million overall and for each job created in this same industry an estimated 1.23 additional jobs would be added. Cattle farmers that produce \$1 million of total industry output generated an additional \$.64 million indirectly through the purchase of inputs and \$.78 million in total economic activity within the state.

Figures 19 through 24 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

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	1.32	1.41	1.10	1.12
Grain farming	1.39	1.51	1.08	1.10
Vegetable & melon farming	1.28	1.41	1.22	1.29
Fruit farming	1.24	1.35	1.20	1.26
Tree nut farming	1.32	1.53	1.14	1.19
Greenhouse, nursery, and floriculture	1.04	1.11	1.02	1.05
Tobacco farming	1.42	1.57	1.09	1.11
Cotton farming	1.36	1.53	1.28	1.39
All other crop farming	1.39	1.54	1.30	1.39
Cattle ranching & farming	1.64	1.78	1.36	1.42
Dairy cattle & milk production	1.47	1.60	1.20	1.26
Poultry & egg production	1.44	1.56	1.45	1.65
Animal production, except cattle/poultry/eggs	1.33	1.49	1.06	1.08
Commercial fishing	1.25	1.68	1.04	1.13
Commercial hunting & trapping	1.46	1.68	1.15	1.24
Agriculture & forestry support activities	1.14	1.99	1.02	1.20
Commercial logging	1.42	1.95	1.53	2.23
Sawmills & wood preservation	1.35	1.60	1.46	1.91
Pulp mills	1.49	1.76	3.20	4.89
Paper mills	1.40	1.67	2.92	4.84
Paperboard mills	1.46	1.71	3.06	4.72
Forestry, forest products, & timber tracts	1.30	1.58	3.85	4.93

^a Total Industry Output – annual value of production by industry.

level of economic activity for each county. 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 secondary agriculture, which included manufacturing. Likewise, total forestry included direct forestry, plus input supplying industries and secondary forestry. Lake County in the Memphis Region and Cheatham County in the Nashville Region had the highest level of economic activity for direct agriculture at 20.1 percent and 15.1 percent, respectively (Table 19); for total agriculture, Moore County in the Nashville Region had the highest level at 71.0 percent. For direct forestry, Lake County in the Memphis Region had the highest level of economic activity

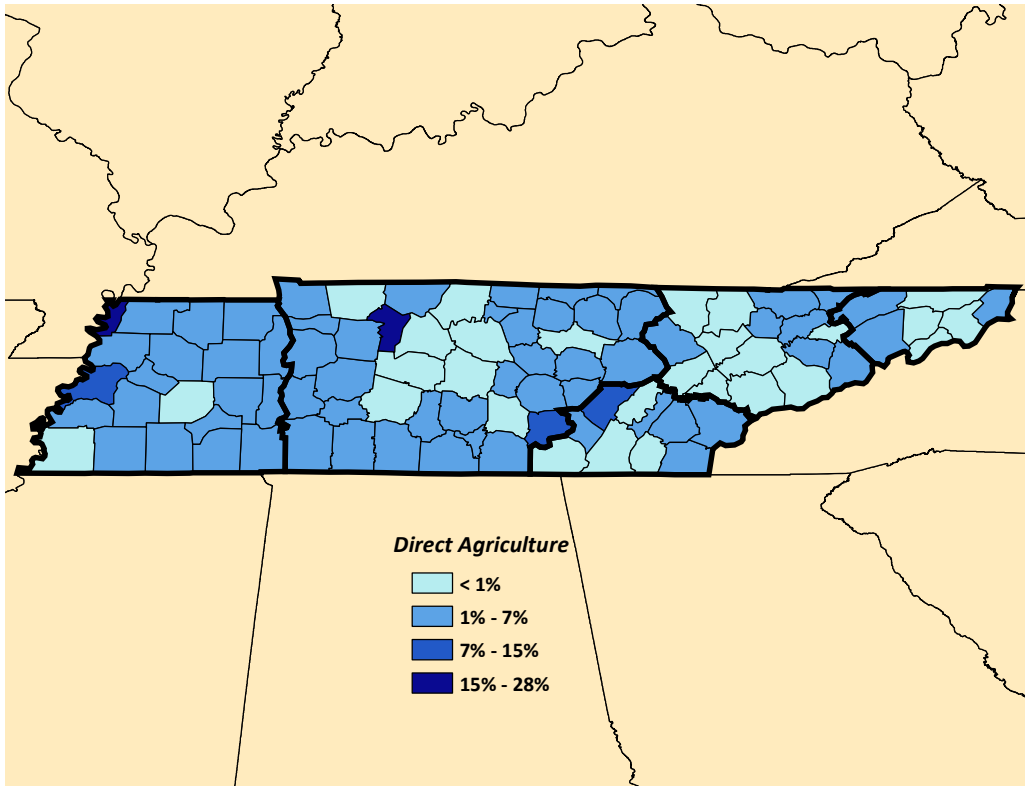


Figure 19. Percent of Economic Activity from Direct Agriculture, 2009.

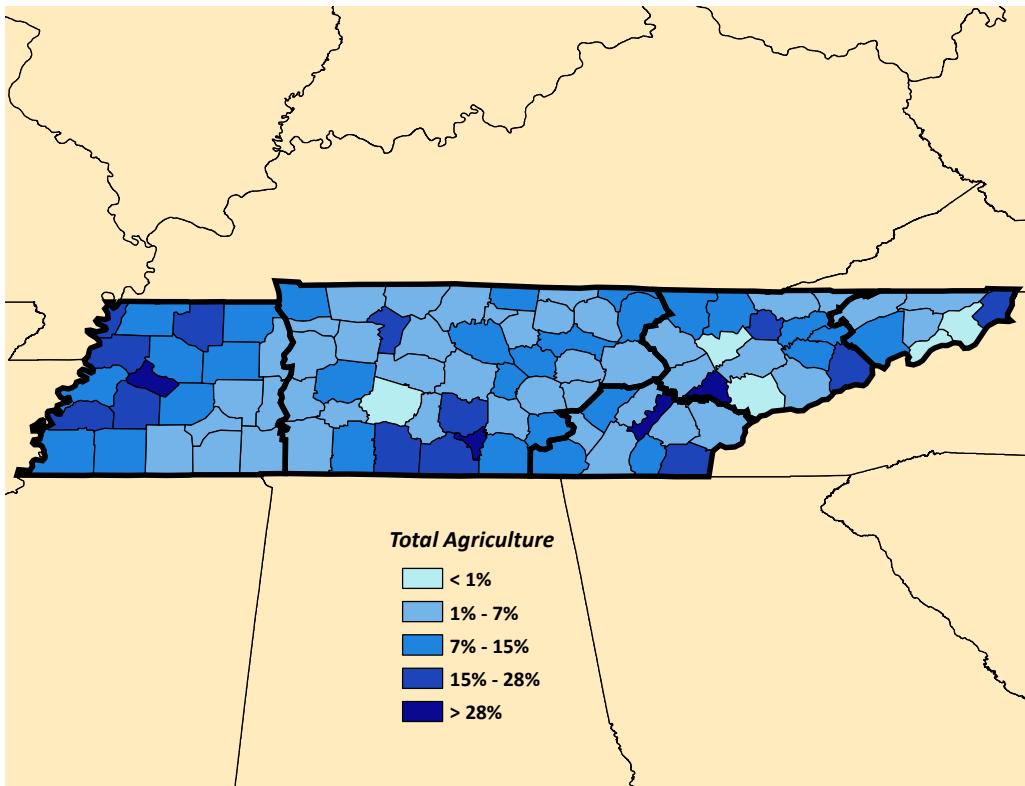


Figure 20. Percent of Economic Activity from Total Agriculture, 2009.

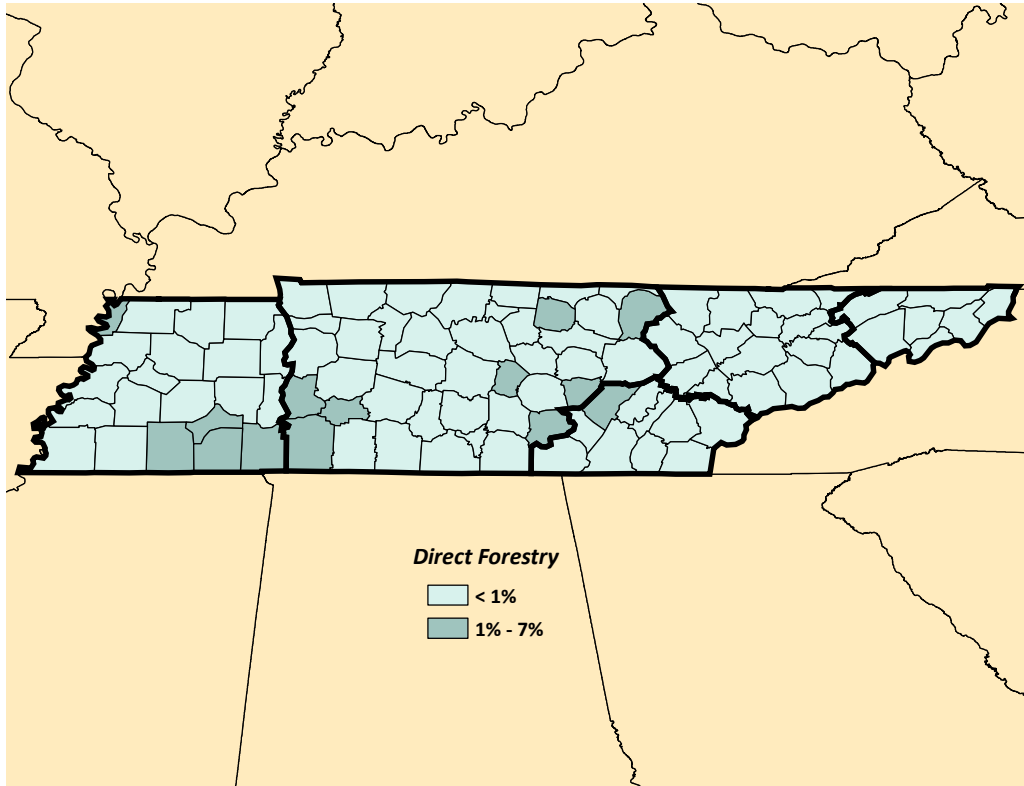


Figure 21. Percent of Economic Activity from Direct Forestry, 2009.

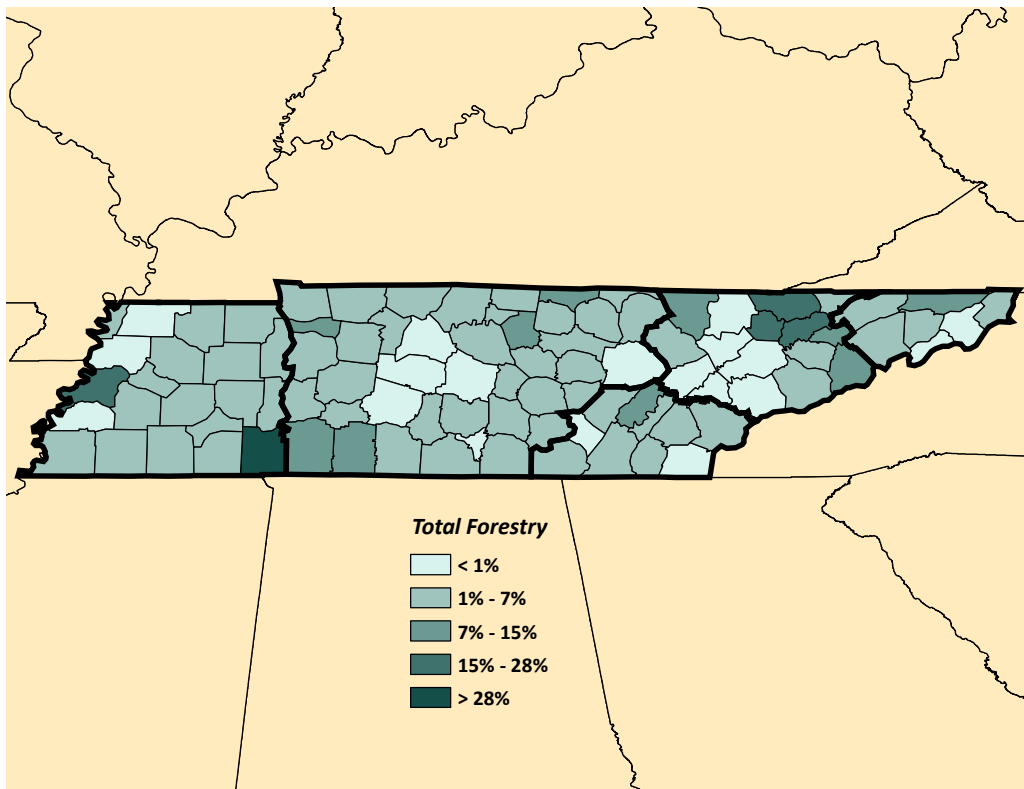


Figure 22. Percent of Economic Activity from Total Forestry, 2009.

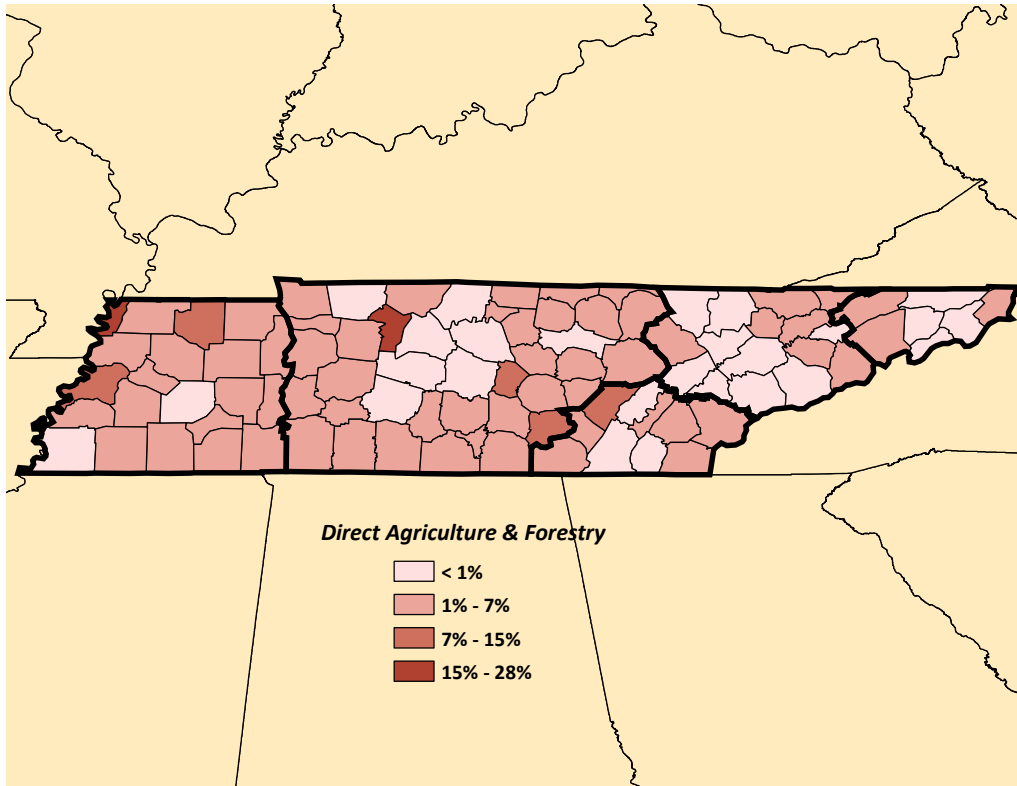


Figure 23. Percent of Economic Activity from Direct Agriculture and Forestry, 2009.

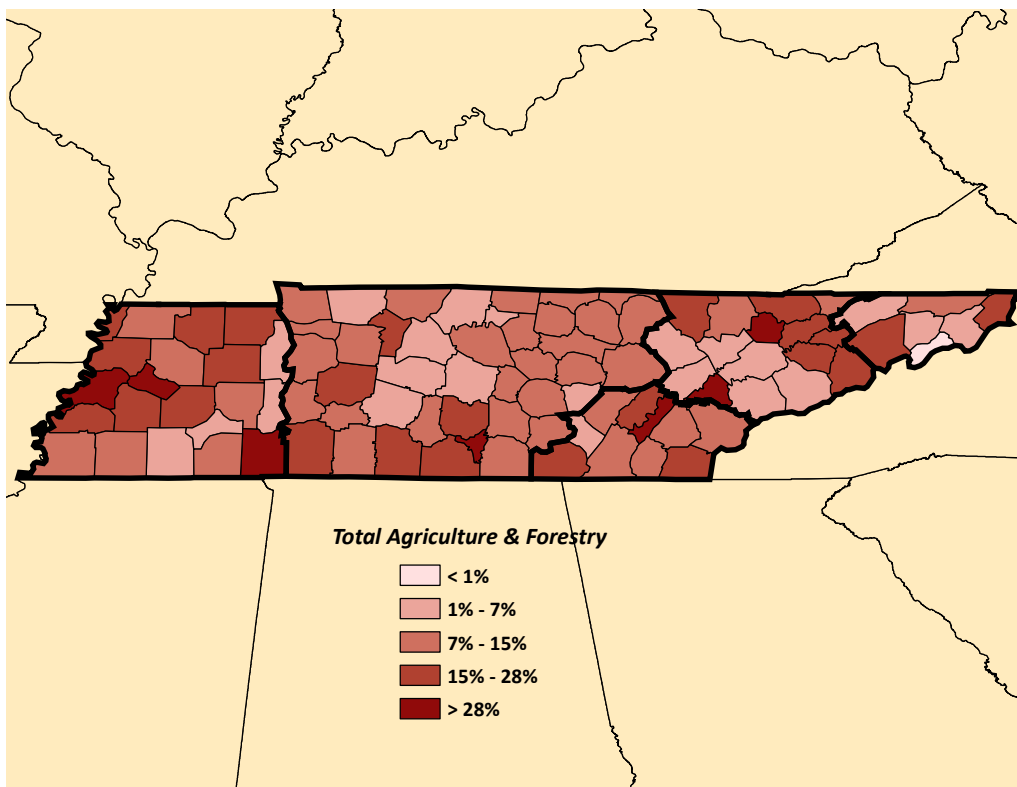


Figure 24. Percent of Economic Activity from Total Agriculture and Forestry, 2009.

Table 19. Counties with the Highest Proportion of Economic Activity for Agriculture and Forestry by Analysis Region, 2009

	Region and County									
	Chattanooga	%	Knoxville	%	Memphis	%	Nashville	%	Tri-Cities	%
Agriculture:										
Direct	Bledsoe	7.5	Hancock	5.2	Lake	20.1	Cheatham	15.1	Greene	1.1
Total	Meigs	34.6	Loudon	28.2	Crockett	31.6	Moore	71.0	Johnson	17.9
Forestry:										
Direct	Bledsoe	1.1	Hancock	0.6	Lake	5.4	Lewis	3.1	Unicoi	0.3
Total	Rhea	12.8	Union	18.5	Hardin	31.3	Wayne	13.9	Sullivan	9.2
Combined:										
Direct	Bledsoe	8.6	Hancock	5.7	Lake	22.9	Cheatham	15.3	Greene	1.3
Total	Meigs	36.3	Union	34.0	Hardin	34.5	Moore	71.5	Johnson	24.8

at 5.4 percent; for total forestry, Hardin County in the Memphis Region had the highest level at 31.3 percent. Likewise, for both agriculture and forestry combined, Lake County in the Memphis Region (22.9 percent direct) and Moore County (71.5 percent total) in the Nashville Region had the largest levels of economic activity.

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 2009 was developed using Tennessee Agricultural Statistics Service information, along with the Minnesota IMPLAN Group’s input-output model information. The state was divided into five trade regions. These five regions will be used in future analyses to gauge the performance of individual sectors and the impacts of new sectors to the state’s agro-forestry industrial complex.

Comparing agricultural data for 2006 and 2009 revealed that most of Tennessee’s traditional row crops acreage increased except for cotton. Crop prices also increased for all the

traditional row crops. Livestock numbers decreased for the traditional livestock commodities except for all chickens during that timeframe. Livestock prices decreased for all traditional livestock commodities except for broilers and eggs (Table 5). Precipitation for the state for the timeframe reviewed can be characterized as below normal. Below average rainfall occurred in the state for the years 2006 through 2008 followed by above normal rainfall for the year 2009.

In 2009, agriculture and forestry contributed to 14.7 percent of Tennessee's total economy. The agro-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 2009, the agro-forestry industrial complex contributed \$71.4 billion to the Tennessee economy and employed over 363,500 individuals.

Agriculture, a subset of Tennessee's agro-forestry industrial complex, included farming and related industries, as well as value-added food and fiber production, processing and manufacturing. Agriculture accounted for 10.4 percent of the state's economy and generated \$50.4 billion in output. Close to 262,000 Tennesseans, with over 101,000 in the production sector (both full- and part-time), were employed in agriculture.

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 4.3 percent of the state's economy, employed over 101,700 Tennesseans, and generated \$21.0 billion in output.

From a regional perspective, the agro-forestry industrial complex was more important to the Memphis and Chattanooga regions relative to other regions in the state followed by the Tri-Cities, Knoxville, and Nashville regions (Table 20). The Memphis Region contributed the largest amount of economic activity, \$28.3 billion, representing 21.3 percent of the total for the region.

Table 20. Regional Importance of Agriculture to that Region’s Economy, 2009

Location	Total Economic Activity (Million \$)	Estimated Agro-Forestry Industrial Complex Contributions to the State’s Economy (Million \$)	Proportion (Ratio)
State	485,506	71,455	0.15
Chattanooga	52,400	7,197	0.14
Knoxville	73,959	7,846	0.11
Memphis	132,982	28,329	0.21
Nashville	193,215	21,481	0.11
Tri-Cities	32,951	4,217	0.13

Source: Minnesota IMPLAN Group, Inc.

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 (71.0 percent) in the Nashville Region, Meigs (34.6 percent) in the Chattanooga Region, Crockett (31.6 percent) in the Memphis Region, Loudon (28.2 percent) in the Knoxville Region, and Johnson (17.9 percent) in the Tri-Cities Region. Likewise, for forestry, Hardin County (31.3 percent) had the highest level of forestry economic activity percentage in the Memphis Region, followed by Union County (18.5 percent) in the Knoxville Region, Wayne County (13.9 percent) in the Nashville Region, Rhea County (12.8 percent) in the Chattanooga Region, and Sullivan County (9.2 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 (71.5 percent) in the Nashville Region, Meigs (36.3 percent) in the Chattanooga Region,

Hardin (34.5 percent) in the Memphis Region, Union (34.0 percent) in the Knoxville Region, and Johnson (24.8 percent) in the Tri-Cities Region.

Comparing some 2009 major industry sectors to 2006, direct economic activity for agriculture increased 3.4 percent whereas economic activity for forestry decreased 22.6 percent. Other major industries that had a decrease in economic activity include construction (5.5 percent), manufacturing (24.1 percent), retail trade (28.2 percent), and wholesale trade (10.7 percent). Mining had a 4.3 percent increase in economic activity.

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Appendix A: IMPLAN Methodology

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.² 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 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.

² 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.

	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 Sectors with Descriptions

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS

Sector	Description	2007 NAICS
1	Oilseed farming	11111-2
2	Grain farming	11113-6, 11119
3	Vegetable & melon farming	1112
		11131-2,111331-4,
4	Fruit farming	111336, 111339
5	Tree nut farming	111335, 111336
6	Greenhouse, nursery, & floriculture production	1114
7	Tobacco farming	11191
8	Cotton farming	11192
9	Sugarcane & sugar beet farming	11193, 111991
10	All other crop farming	11194, 111992, 111998
11	Cattle ranching & farming	11211, 11213
12	Dairy cattle & milk production	11212
13	Poultry & egg production	1123
14	Animal production, except cattle & poultry & eggs	1122, 1124-5, 1129
15	Forest nurseries, forest products, & timber tracts	1131-2
16	Logging	1133
17	Fishing	1141
18	Hunting & trapping	1142
19	Support activities for agriculture & forestry	115
20	Oil & gas extraction	211
21	Coal mining	2121
22	Iron ore mining	21221
23	Copper, nickel, lead, & zinc mining	21223
24	Gold, silver, & other metal ore mining	21222, 21229
25	Stone mining & quarrying	21231
	Sand, gravel, clay, & ceramic & refractory minerals mining	
26	& quarrying	21232
27	Other nonmetallic mineral mining & quarrying	21239
28	Drilling oil & gas wells	213111
29	Support activities for oil & gas operations	213112
30	Support activities for other mining	213113-5
31	Electric power generation, transmission, & distribution	2211
32	Natural gas distribution	2212
33	Water, sewage & other systems	2213
	Construction of new nonresidential commercial & health	
34	care structures	23
35	Construction of new nonresidential manuf structures	23
36	Construction of other new nonresidential structures	23
	Construction of new residential permanent site single- &	
37	multi-family structures	23
38	Construction of other new residential structures	23

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
	Maintenance & repair construction of nonresidential	
39	maintenance & repair	23
40	Maintenance & repair construction of residential structures	23
41	Dog & cat food manuf	311111
42	Other animal food manuf	311119
43	Flour milling & malt manuf	31121
44	Wet corn milling	311221
45	Soybean & other oilseed processing	311222-3
46	Fats & oils refining & blending	311225
47	Breakfast cereal manuf	311230
48	Sugar cane mills & refining	311311-2
49	Beet sugar manuf	311313
50	Chocolate & confectionery manuf from cacao beans	31132
51	Confectionery manuf from purchased chocolate	31133
52	Nonchocolate confectionery manuf	31134
53	Frozen food manuf	31141
54	Fruit & vegetable canning, pickling, & drying	31142
55	Fluid milk & butter manuf	311511-2
56	Cheese manuf	311513
57	Dry, condensed, & evaporated dairy product manuf	311514
58	Ice cream & frozen dessert manuf	311520
	Animal (except poultry) slaughtering, rendering, &	
59	processing	311611-3
60	Poultry processing	311615
61	Seafood product preparation & packaging	3117
62	Bread & bakery product manuf	31181
63	Cookie, cracker, & pasta manuf	31182
64	Tortilla manuf	31183
65	Snack food manuf	31191
66	Coffee & tea manuf	31192
67	Flavoring syrup & concentrate manuf	31193
68	Seasoning & dressing manuf	31194
69	All other food manuf	31199
70	Soft drink & ice manuf	31211
71	Breweries	31212
72	Wineries	31213
73	Distilleries	31214
74	Tobacco product manuf	3122
75	Fiber, yarn, & thread mills	3131
76	Broadwoven fabric mills	31321
77	Narrow fabric mills & schiffli machine embroidery	31322
78	Nonwoven fabric mills	31323
79	Knit fabric mills	31324

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
80	Textile & fabric finishing mills	31331
81	Fabric coating mills	31332
82	Carpet & rug mills	31411
83	Curtain & linen mills	31412
84	Textile bag & canvas mills	31491
85	All other textile product mills	31499
86	Apparel knitting mills	31511, 31519
87	Cut & sew apparel contractors	31521
88	Men's & boys' cut & sew apparel manuf	31522
89	Women's & girls' cut & sew apparel manuf	31523
90	Other cut & sew apparel manuf	31529
91	Apparel accessories & other apparel manuf	3159
92	Leather & hide tanning & finishing	3161
93	Footwear manuf	3162
94	Other leather & allied product manuf	3169
95	Sawmills & wood preservation	3211
96	Veneer & plywood manuf	321211-2
97	Engineered wood member & truss manuf	321213-4
98	Reconstituted wood product manuf	321219
99	Wood windows & doors & millwork	32191
100	Wood container & pallet manuf	32192
101	Manufactured home (mobile home) manuf	321991
102	Prefabricated wood building manuf	321992
103	All other miscellaneous wood product manuf	321999
104	Pulp mills	32211
105	Paper mills	32212
106	Paperboard Mills	32213
107	Paperboard container manuf	32221
108	Coated & laminated paper, packaging paper & plastics film manuf	322221-2
109	All other paper bag & coated & treated paper manuf	322223-6
110	Stationery product manuf	32223
111	Sanitary paper product manuf	322291
112	All other converted paper product manuf	322299
113	Printing	32311
114	Support activities for printing	32312
115	Petroleum refineries	32411
116	Asphalt paving mixture & block manuf	324121
117	Asphalt shingle & coating materials manuf	324122
118	Petroleum lubricating oil & grease manuf	324191
119	All other petroleum & coal products manuf	324199
120	Petrochemical manuf	32511
121	Industrial gas manuf	32512

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
122	Synthetic dye & pigment manuf	32513
123	Alkalies & chlorine manuf	325181
124	Carbon black manuf	325182
125	All other basic inorganic chemical manuf	325188
126	Other basic organic chemical manuf	32519
127	Plastics material & resin manuf	325211
128	Synthetic rubber manuf	325212
129	Artificial & synthetic fibers & filaments manuf	32522
130	Fertilizer manuf	325311-4
131	Pesticide & other agricultural chemical manuf	325320
132	Medicinal & botanical manuf	325411
133	Pharmaceutical preparation manuf	325412
134	In-vitro diagnostic substance manuf	325413
135	Biological product (except diagnostic) manuf	325414
136	Paint & coating manuf	32551
137	Adhesive manuf	32552
138	Soap & cleaning compound manuf	32561
139	Toilet preparation manuf	32562
140	Printing ink manuf	32591
141	All other chemical product & preparation manuf	32592, 32599
142	Plastics packaging materials & unlaminated film & sheet manuf	32611
143	Unlaminated plastics profile shape manuf	326121
144	Plastics pipe & pipe fitting manuf	326122
145	Laminated plastics plate, sheet (except packaging), & shape manuf	32613
146	Polystyrene foam product manuf	32614
147	Urethane & other foam product (except polystyrene) manuf	32615
148	Plastics bottle manuf	32616
149	Other plastics product manuf	32619
150	Tire manuf	32621
151	Rubber & plastics hoses & belting manuf	32622
152	Other rubber product manuf	32629
153	Pottery, ceramics, & plumbing fixture manuf	32711
154	Brick, tile, & other structural clay product manuf	327121-3
155	Clay & nonclay refractory manuf	327124-5
156	Flat glass manuf	327211
157	Other pressed & blown glass & glassware manuf	327212
158	Glass container manuf	327213
159	Glass product manuf made of purchased glass	327215
160	Cement manuf	32731
161	Ready-mix concrete manuf	32732

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
162	Concrete pipe, brick, & block manuf	32733
163	Other concrete product manuf	32739
164	Lime & gypsum product manuf	3274
165	Abrasive product manuf	32791
166	Cut stone & stone product manuf	327991
167	Ground or treated mineral & earth manuf	327992
168	Mineral wool manuf	327993
169	Miscellaneous nonmetallic mineral products	327999
170	Iron & steel mills & ferroalloy manuf	3311
171	Steel product manuf from purchased steel	33121, 33122
172	Alumina refining & primary aluminum production	331311-2
173	Secondary smelting & alloying of aluminum	331314
174	Aluminum product manuf from purchased aluminum	331315, 331316, 331319
175	Primary smelting & refining of copper	331411
176	Primary smelting & refining of nonferrous metal (except copper & aluminum)	331419
177	Copper rolling, drawing, extruding & alloying	33142
178	Nonferrous metal (except copper & aluminum) rolling, drawing, extruding & alloying	33149
179	Ferrous metal foundries	33151
180	Nonferrous metal foundries	33152
181	All other forging, stamping, & sintering	332111-2, 332117
182	Custom roll forming	332114
183	Crown & closure manuf & metal stamping	332115-6
184	Cutlery, utensil, pot, & pan manuf	332211, 332214
185	Handtool manuf	332212-3
186	Plate work & fabricated structural product manuf	33231
187	Ornamental & architectural metal products manuf	33232
188	Power boiler & heat exchanger manuf	33241
189	Metal tank (heavy gauge) manuf	33242
190	Metal can, box, & other metal container (light gauge) manuf	33243
191	Ammunition manuf	332992-3
192	Arms, ordnance, & accessories manuf	332994-5
193	Hardware manuf	3325
194	Spring & wire product manuf	3326
195	Machine shops	33271
196	Turned product & screw, nut, & bolt manuf	33272
197	Coating, engraving, heat treating & allied activities	3328
198	Valve & fittings other than plumbing	332911-2, 332919
199	Plumbing fixture fitting & trim manuf	332913
200	Ball & roller bearing manuf	332991
201	Fabricated pipe & pipe fitting manuf	332996

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
202	Other fabricated metal manuf	332997-9
203	Farm machinery & equipment manuf	333111
204	Lawn & garden equipment manuf	333112
205	Construction machinery manuf	33312
206	Mining & oil & gas field machinery manuf	33313
207	Other industrial machinery manuf	33321, 333291-4, 333298
208	Plastics & rubber industry machinery manuf	33322
209	Semiconductor machinery manuf	333295
210	Vending, commercial, industrial, & office machinery manuf	333311-3
211	Optical instrument & lens manuf	333314
212	Photographic & photocopying equipment manuf	333315
213	Other commercial & service industry machinery manuf	333319
214	Air purification & ventilation equipment manuf	333411-2
215	Heating equipment (except warm air furnaces) manuf Air conditioning, refrigeration, & warm air heating	333414
216	equipment manuf	333415
217	Industrial mold manuf	333511
218	Metal cutting & forming machine tool manuf	333512-3
219	Special tool, die, jig, & fixture manuf	333514
220	Cutting tool & machine tool accessory manuf	333515
221	Rolling mill & other metalworking machinery manuf	333516, 333518
222	Turbine & turbine generator set units manuf	333611
223	Speed changer, industrial high-speed drive, & gear manuf	333612
224	Mechanical power transmission equipment manuf	333613
225	Other engine equipment manuf	333618
226	Pump & pumping equipment manuf	333911, 333913
227	Air & gas compressor manuf	333912
228	Material handling equipment manuf	333921-4
229	Power-driven handtool manuf	333991
230	Other general purpose machinery manuf	333992, 333997, 333999
231	Packaging machinery manuf	333993
232	Industrial process furnace & oven manuf	333994
233	Fluid power process machinery	333995-6
234	Electronic computer manuf	334111
235	Computer storage device manuf Computer terminals & other computer peripheral	334112
236	equipment manuf	334113, 334119
237	Telephone apparatus manuf	33421
238	Broadcast & wireless communications equipment	33422
239	Other communications equipment manuf	33429
240	Audio & video equipment manuf	3343
241	Electron tube manuf	334411
242	Bare printed circuit board manuf	334412

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
243	Semiconductor & related device manuf	334413
244	Electronic capacitor, resistor, coil, transformer, & other inductor manuf	334414-6
245	Electronic connector manuf	334417
246	Printed circuit assembly (electronic assembly) manuf	334418
247	Other electronic component manuf	334419
248	Electromedical & electrotherapeutic apparatus manuf	334510
249	Search, detection, & navigation instruments manuf	334511
250	Automatic environmental control manuf	334512
251	Industrial process variable instruments manuf	334513
252	Totalizing fluid meters & counting devices manuf	334514
253	Electricity & signal testing instruments manuf	334515
254	Analytical laboratory instrument manuf	334516
255	Irradiation apparatus manuf	334517
256	Watch, clock, & other measuring & controlling device manuf	334518-9
257	Software, audio, & video media reproducing	334611-2
258	Magnetic & optical recording media manuf	334613
259	Electric lamp bulb & part manuf	33511
260	Lighting fixture manuf	33512
261	Small electrical appliance manuf	33521
262	Household cooking appliance manuf	335221
263	Household refrigerator & home freezer manuf	335222
264	Household laundry equipment manuf	335224
265	Other major household appliance manuf	335228
266	Power, distribution, & specialty transformer manuf	335311
267	Motor & generator manuf	335312
268	Switchgear & switchboard apparatus manuf	335313
269	Relay & industrial control manuf	335314
270	Storage battery manuf	335911
271	Primary battery manuf	335912
272	Communication & energy wire & cable manuf	33592
273	Wiring device manuf	33593
274	Carbon & graphite product manuf	335991
275	All other miscellaneous electrical equipment & component manuf	335999
276	Automobile manuf	336111
277	Light truck & utility vehicle manuf	336112
278	Heavy duty truck manuf	336120
279	Motor vehicle body manuf	336211
280	Truck trailer manuf	336212
281	Motor home manuf	336213
282	Travel trailer & camper manuf	336214

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
283	Motor vehicle parts manuf	3363
284	Aircraft manuf	336411
285	Aircraft engine & engine parts manuf	336412
286	Other aircraft parts & auxiliary equipment manuf	336413
287	Guided missile & space vehicle manuf	336414
288	Propulsion units & parts for space vehicles & guided missiles	336415, 336419
289	Railroad rolling stock manuf	3365
290	Ship building & repairing	336611
291	Boat building	336612
292	Motorcycle, bicycle, & parts manuf	336991
293	Military armored vehicle, tank, & tank component manuf	336992
294	All other transportation equipment manuf	336999
295	Wood kitchen cabinet & countertop manuf	33711
296	Upholstered household furniture manuf	337121
297	Nonupholstered wood household furniture manuf	337122
298	Metal & other household furniture (except wood) manuf	337124-5
299	Institutional furniture manuf	337127
300	Wood television, radio, & sewing machine cabinet manuf	337129
301	Office furniture & custom architectural woodwork & millwork manuf	337211, 337212, 337214
302	Showcase, partition, shelving, & locker manuf	337215
303	Mattress manuf	33791
304	Blind & shade manuf	33792
305	Surgical & medical instrument manuf	339112
306	Surgical appliance & supplies manuf	339113
307	Dental equipment & supplies manuf	339114
308	Ophthalmic goods manuf	339115
309	Dental laboratories	339116
310	Jewelry & silverware manuf	33991
311	Sporting & athletic goods manuf	33992
312	Doll, toy, & game manuf	33993
313	Office supplies (except paper) manuf	33994
314	Sign manuf	33995
315	Gasket, packing, & sealing device manuf	339991
316	Musical instrument manuf	339992
317	All other miscellaneous manuf	339993, 339995, 339999
318	Broom, brush, & mop manuf	339994
319	Wholesale trade	42
320	Retail - Motor vehicle & parts	441
321	Retail - Furniture & home furnishings	442
322	Retail - Electronics & appliances	443
323	Retail - Building material & garden supply	444

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
324	Retail - Food & beverage	445
325	Retail - Health & personal care	446
326	Retail - Gasoline stations	447
327	Retail - Clothing & clothing accessories	448
328	Retail - Sporting goods, hobby, book & music	451
329	Retail - General merchandise	452
330	Retail - Miscellaneous	453
331	Retail - Nonstore	454
332	Air transportation	481
333	Rail transportation	482
334	Water transportation	483
335	Truck transportation	484
336	Transit & ground passenger transportation	485
337	Pipeline transportation	486
338	Scenic & sightseeing transportation & support activities for transportation	487, 488
339	Couriers & messengers	492
340	Warehousing & storage	493
341	Newspaper publishers	51111
342	Periodical publishers	51112
343	Book publishers	51113
344	Directory, mailing list, & other publishers	51114, 51119
345	Software publishers	51121
346	Motion picture & video industries	5121
347	Sound recording industries	5122
348	Radio & television broadcasting	5151
349	Cable & other subscription programming	5152
350	Internet publishing & broadcasting	51913
351	Telecommunications	517
352	Data processing, hosting, & related services	518
353	Other information services	51911-2
354	Monetary authorities & depository credit intermediation	521, 5221
355	Nondepository credit intermediation & related activities	5222-3
356	Securities, commodity contracts, investments, & related activities	523
357	Insurance carriers	5241
358	Insurance agencies, brokerages, & related activities	5242
359	Funds, trusts, & other financial vehicles	525
360	Real estate	531
361	Imputed rental value for owner-occupied dwellings	n.a.
362	Automotive equipment rental & leasing	5321
363	General & consumer goods rental except video tapes & discs	53221-2, 53229, 5323

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
364	Video tape & disc rental	53223
365	Commercial & industrial machinery & equipment rental & leasing	5324
366	Lessors of nonfinancial intangible assets	533
367	Legal services	5411
368	Accounting, tax preparation, bookkeeping, & payroll services	5412
369	Architectural, engineering, & related services	5413
370	Specialized design services	5414
371	Custom computer programming services	541511
372	Computer systems design services	541512
373	Other computer related services, including facilities management	541513, 541519
374	Management, scientific, & technical consulting services	54161, 5613
375	Environmental & other technical consulting services	54162, 54169
376	Scientific research & development services	5417
377	Advertising & related services	5418
378	Photographic services	54192
379	Veterinary services	54194
380	All other miscellaneous professional, scientific, & technical services	54191, 54193, 54199
381	Management of companies & enterprises	55
382	Employment services	5613
383	Travel arrangement & reservation services	5615
384	Office administrative services	5611
385	Facilities support services	5612
386	Business support services	5614
387	Investigation & security services	5616
388	Services to buildings & dwellings	5617
389	Other support services	5619
390	Waste management & remediation services	562
391	Elementary & secondary schools	6111
392	Junior colleges, colleges, universities, & professional schools	6112-3
393	Other educational services	6114-7
394	Offices of physicians, dentists, & other health practitioners	6211-3
395	Home health care services	6216
396	Medical & diagnostic labs & outpatient & other ambulatory care services	6214-5, 6219
397	Hospitals	622
398	Nursing & residential care facilities	623
399	Child day care services	6244
400	Individual & family services	6241

Table B.1. IMPLAN 440 Industry Sector Descriptions and NAICS (Cont.)

Sector	Description	2007 NAICS
401	Community food, housing, & other relief services, including rehabilitation services	6242-3
402	Performing arts companies	7111
403	Spectator sports	7112
404	Promoters of performing arts & sports & agents for public figures	7113-4
405	Independent artists, writers, & performers	7115
406	Museums, historical sites, zoos, & parks	712
407	Fitness & recreational sports centers	71394
408	Bowling centers	71395
409	Amusement parks, arcades, & gambling industries	7131-2
410	Other amusement & recreation industries	71391-3, 71399
411	Hotels & motels, including casino hotels	72111-2
412	Other accommodations	72119, 7212-3
413	Food services & drinking places	722
414	Automotive repair & maintenance, except car washes	81111-2, 811191, 811198
415	Car washes	811192
416	Electronic & precision equipment repair & maintenance	8112
417	Commercial & industrial machinery & equipment repair & maintenance	8113
418	Personal & household goods repair & maintenance	8114
419	Personal care services	8121
420	Death care services	8122
421	Dry-cleaning & laundry services	8123
422	Other personal services	8129
423	Religious organizations	8131
424	Grantmaking, giving, & social advocacy organizations	8132, 8133
425	Civic, social, professional, & similar organizations	8134, 8139
426	Private households	814
427	Postal service	491
428	Federal electric utilities	n.a.
429	Other Federal Government enterprises	n.a.
430	State & local government passenger transit	n.a.
431	State & local government electric utilities	n.a.
432	Other state & local government enterprises	n.a.
433	Not an industry (Used & secondhand goods)	n.a.
434	Not an industry (Scrap)	n.a.
435	Not an industry (Rest of the world adjustment)	n.a.
436	Not an industry (Noncomparable imports)	n.a.
437	Employment & payroll for SL Government Non-Education	n.a.
438	Employment & payroll for SL Government Education	n.a.
439	Employment & payroll for Federal Non-Military	n.a.
440	Employment & payroll for Federal Military	n.a.

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	Mauzy	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	Vanburen		Union	
Madison	Jackson	Warren			
Obion	Lawrence	Wayne			
Shelby	Lewis	White			
Tipton	Lincoln	Williamson			
Weakley		Wilson			

Appendix D: Total Industry Output, Employment, Labor Income, and Total Value-Added by Agriculture and Forestry Sectors for Tennessee, 2009

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2009

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Fertilizer	157	97	6	10
Pesticide & other agricultural chemical	562	327	32	118
Lime & gypsum product	108	245	20	40
Total --	826	668	58	169
<u>Agricultural Machinery</u>				
Farm machinery & equipment	173	385	17	38
Lawn & garden equipment	555	1,522	59	119
Total --	728	1,907	76	158
<i>Agricultural Inputs Total --</i>	1,554	2,575	134	327
<i>Primary Agriculture</i>				
Oilseed farming	564	18,832	3	278
Grain farming	356	18,108	7	123
Vegetable & melon farming	95	1,432	5	53
Fruit farming	10	172	0 ^b	6
Tree nut farming	1	25	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	309	6,786	23	275
Tobacco farming	105	5,208	3	29
Cotton farming	146	1,998	11	61
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	331	4,551	12	119
Cattle ranching & farming	422	9,061	15	64
Dairy cattle & milk production	128	2,407	3	28
Poultry & egg production	481	2,570	25	95
Animal production, except cattle & poultry & eggs	102	6,789	9	45
Commercial fishing	9	363	3	4
Commercial hunting & trapping	22	483	2	7
Support activities for agriculture & forestry	163	6,511	138	120
<i>Primary Agriculture Total --</i>	3,244	85,298	261	1,306
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	1,204	891	101	343
Other animal food	177	146	14	30
Total --	1,381	1,037	115	372
<u>Grain & Oilseed Milling</u>				
Flour milling & malt	391	326	22	43
Wet corn milling	753	374	33	68
Soybean & other oilseed processing	2,887	608	73	175
Fats & oils refining & blending	443	182	20	65
Breakfast cereal	498	534	52	185
Total --	4,972	2,023	200	536
<u>Sugar & Confectionary Products</u>				
Sugar cane mills & refining	20	27	1	2

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Beet sugar	0	0	0	0
Chocolate & confectionery from cacao beans	39	68	3	4
Confectionery from purchased chocolate	425	1,141	67	131
Nonchocolate confectionery	305	832	45	71
Total --	789	2,069	117	207
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen food	788	2,355	152	203
Fruit & vegetable canning, pickling, & drying	1,003	1,901	135	240
Total --	1,791	4,256	286	442
<u>Dairy Products</u>				
Fluid milk & butter	855	1,189	74	121
Cheese	196	208	9	13
Dry, condensed, & evaporated dairy product	432	374	29	59
Ice cream & frozen dessert	116	264	15	24
Total --	1,600	2,035	127	217
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering, rendering, & processing	1,947	4,348	177	201
Poultry processing	1,528	6,993	231	255
Total --	3,475	11,342	408	456
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product	654	3,914	188	225
Cookie, cracker, & pasta	890	2,034	125	228
Tortilla	171	817	37	53
Total --	1,715	6,765	350	506
<u>Other Foods</u>				
Snack food	1,291	1,798	116	332
Coffee & tea	131	198	9	16
Flavoring syrup & concentrate	95	40	4	35
Seasoning & dressing	234	480	24	30
All other food	149	446	24	36
Total --	1,900	2,963	176	450
<u>Beverages</u>				
Soft drink & ice	2,530	3,583	317	409
Breweries	43	33	5	19
Wineries	44	140	5	7
Distilleries	410	366	38	295
Total --	3,027	4,123	363	729
<u>Tobacco Products</u>				
	3,056	1,008	151	1,860

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)	
<u>Textile Mills</u>					
Fiber, yarn, & thread mills	416	1,550	71	96	
Broadwoven fabric mills	34	138	8	11	
Narrow fabric mills & schiffli machine embroidery	6	45	2	3	
Nonwoven fabric mills	384	883	73	125	
Knit fabric mills	30	159	7	8	
Textile & fabric finishing mills	137	740	32	40	
Fabric coating mills	104	369	20	25	
Total --	1,111	3,885	214	307	
<u>Textile Products Mills</u>					
Carpet & rug mills	76	247	11	19	
Curtain & linen mills	66	432	14	23	
Textile bag & canvas mills	122	793	44	57	
All other textile product mills	232	1,439	56	79	
Total --	496	2,911	125	179	
<u>Apparel</u>					
Apparel knitting mills	111	799	26	39	
Cut & sew apparel contractors	105	1,711	63	68	
Men's & boys' cut & sew apparel	412	3,042	130	201	
Women's & girls' cut & sew apparel	57	241	6	11	
Other cut & sew apparel	36	319	10	13	
Apparel accessories & other apparel	16	147	4	4	
Total --	738	6,260	240	336	
<u>Leather & Allied Products</u>					
Leather & hide tanning & finishing	21	71	3	3	
Footwear	76	538	16	23	
Other leather & allied product	28	197	9	13	
Total --	126	806	28	40	
	Secondary Agriculture Total --	26,177	51,482	2,898	6,637
	Agriculture Total --	30,975	139,355	3,293	8,270
Forestry Inputs					
Forestry, forest products, & timber tract production	151	339	21	69	
Commercial logging	421	2,734	170	190	
	Forestry Inputs Total --	572	3,073	191	258
Primary Forestry					
Sawmills & wood preservation	640	3,069	102	131	
Pulp mills	369	491	50	93	
Paper mills	3,893	4,521	620	1,415	
Paperboard Mills	627	809	81	171	
	Primary Forestry Total --	5,529	8,890	853	1,809

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	3	18	1	1
Engineered wood member & truss	103	708	29	45
Reconstituted wood product	45	137	8	29
Total --	151	863	37	75
<u>Wood Windows & Doors & Millwork</u>				
	525	3,299	141	184
<u>Wood Container & Pallets</u>				
	239	1,965	65	113
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	328	2,245	115	139
Prefabricated wood building	50	365	17	19
Total --	378	2,610	132	159
<u>All Other Miscellaneous Wood Products</u>				
	81	592	20	36
<u>Paperboard Containers</u>				
	1,787	5,213	328	402
<u>Paper Bags & Coated & Treated Paper</u>				
Coated & laminated paper, packaging paper & plastics film	811	1,964	135	224
All other paper bag & coated & treated paper	155	456	28	37
Total --	966	2,420	164	261
<u>Stationery Products</u>				
	394	1,286	77	103
<u>Other Converted Paper Products</u>				
Sanitary paper product	372	473	38	127
All other converted paper product	141	530	25	35
Total --	513	1,003	63	162
<u>Wood Kitchen Cabinets & Countertops</u>				
	192	1,657	59	55
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	726	4,997	183	270
Nonupholstered wood household furniture	54	393	14	26
Institutional furniture	111	617	22	39
Total --	891	6,008	219	335
<u>Office Furniture</u>				
Wood television, radio, & sewing machine cabinet	64	330	12	32
Office furniture & custom architectural woodwork & millwork	66	461	25	31
Showcase, partition, shelving, & locker	251	1,493	65	91
Total --	382	2,284	102	154

Table D.1. Direct Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Furniture Related Products</u>				
Mattress	203	750	27	61
Blind & shade	28	209	7	8
Total --	232	959	34	69
Secondary Forestry Total --	6,731	30,160	1,441	2,106
Forestry Total --	12,832	42,123	2,485	4,174
Agriculture & Forestry Total --	43,807	181,478	5,778	12,444
Construction --	24,139	224,501	8,585	10,099
Finance, Insurance, & Real Estate --	73,423	288,026	11,505	46,371
Government --	41,569	497,822	26,094	29,984
Manufacturing --	96,611	219,292	14,816	26,347
Mining --	1,653	6,718	295	660
Miscellaneous --	5,284	76,106	2,555	2,556
Retail Trade --	22,299	381,993	11,778	18,814
Services --	136,518	1,412,983	62,665	82,607
Transportation, Information, & Utilities --	17,444	107,402	5,750	8,259
Wholesale Trade --	22,758	127,046	8,650	14,902
Total Economy --	485,506	3,523,366	158,472	253,043

^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, 2009

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Fertilizer	13	7	1	2
Pesticide & other agricultural chemical	24	14	1	5
Lime & gypsum product	0	0	0	0
Total --	36	21	2	7
<u>Agricultural Machinery</u>				
Farm machinery & equipment	18	39	2	4
Lawn & garden equipment	0	0	0	0
Total --	18	39	2	4
<i>Agricultural Inputs Total --</i>	54	60	4	11
<i>Primary Agriculture</i>				
Oilseed farming	10	889	0 ^b	5
Grain farming	5	665	0 ^b	2
Vegetable & melon farming	19	316	1	11
Fruit farming	1	27	0 ^b	1
Tree nut farming	0 ^b	1	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	6	265	2	5
Tobacco farming	1	119	0 ^b	0 ^b
Cotton farming	0	0	0	0
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	0 ^b	30	0 ^b	0 ^b
Cattle ranching & farming	41	981	2	6
Dairy cattle & milk production	26	510	1	6
Poultry & egg production	62	378	5	12
Animal production, except cattle & poultry & eggs	4	432	1	2
Commercial fishing	0	0	0	0
Commercial hunting & trapping	2	35	0 ^b	1
Support activities for agriculture & forestry	6	255	5	4
<i>Primary Agriculture Total --</i>	182	4,904	17	54
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	0	0	0	0
Other animal food	0	0	0	0
Total --	0	0	0	0
<u>Grain & Oilseed Milling</u>				
Flour milling & malt	65	55	3	6
Wet corn milling	0	0	0	0
Soybean & other oilseed processing	0	0	0	0
Fats & oils refining & blending	66	27	3	9
Breakfast cereal	45	53	4	15
Total --	177	136	10	30
<u>Sugar & Confectionary Products</u>				
Sugar cane mills & refining	0	0	0	0

Table D.2. Direct Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Beet sugar	0	0	0	0
Chocolate/confectionery from cacao beans	0	0	0	0
Confectionery from purchased chocolate	238	586	43	84
Nonchocolate confectionery	3	8	0 ^b	1
Total --	240	593	44	84
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen food	24	67	5	7
Fruit & vegetable canning, pickling, & drying	0	0	0	0
Total --	24	67	5	7
<u>Dairy Products</u>				
Fluid milk & butter	0	0	0	0
Cheese	0	0	0	0
Dry, condensed, & evaporated dairy product	0	0	0	0
Ice cream & frozen dessert	18	42	2	4
Total --	18	42	2	4
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering, rendering, & processing	60	137	4	5
Poultry processing	425	1,976	59	66
Total --	485	2,114	64	71
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product	199	1,195	57	68
Cookie, cracker, & pasta	811	1,865	113	205
Tortilla	0	0	0	0
Total --	1,010	3,060	169	273
<u>Other Foods</u>				
Snack food	0	0	0	0
Coffee & tea	3	5	0 ^b	0 ^b
Flavoring syrup & concentrate	76	32	3	28
Seasoning & dressing	0	0	0	0
All other food	75	228	12	18
Total --	155	265	15	46
<u>Beverages</u>				
Soft drink & ice	541	771	66	85
Breweries	0	0	0	0
Wineries	4	13	1	1
Distilleries	0	0	0	0
Total --	546	784	67	86
<u>Tobacco Products</u>				
	0	0	0	0

Table D.2. Direct Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	222	840	36	49
Broadwoven fabric mills	5	22	1	1
Narrow fabric mills & schiffli machine embroidery	0	0	0	0
Nonwoven fabric mills	71	158	14	24
Knit fabric mills	26	137	6	7
Textile & fabric finishing mills	11	60	2	3
Fabric coating mills	0	0	0	0
Total --	334	1,216	60	84
<u>Textile Products Mills</u>				
Carpet & rug mills	5	14	1	1
Curtain & linen mills	14	83	4	6
Textile bag & canvas mills	41	288	13	18
All other textile product mills	5	35	1	2
Total --	65	421	19	26
<u>Apparel</u>				
Apparel knitting mills	108	774	26	38
Cut & sew apparel contractors	38	614	23	25
Men's & boys' cut & sew apparel	111	735	38	58
Women's & girls' cut & sew apparel	4	16	1	1
Other cut & sew apparel	10	62	3	5
Apparel accessories & other apparel	0	0	0	0
Total --	271	2,201	90	126
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	0	0	0	0
Footwear	0	0	0	0
Other leather & allied product	5	52	1	2
Total --	5	52	1	2
Secondary Agriculture Total --	3,331	10,953	546	839
Agriculture Total --	3,567	15,917	567	904
Forestry Inputs				
Forestry, forest products, & timber tract production	7	13	1	3
Commercial logging	21	150	8	9
Forestry Inputs Total --	28	163	9	12
Primary Forestry				
Sawmills & wood preservation	18	89	2	3
Pulp mills	80	118	8	15
Paper mills	132	155	21	48
Paperboard Mills	118	147	16	34
Primary Forestry Total --	348	509	48	100

Table D.2. Direct Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	1	7	0 ^b	0 ^b
Engineered wood member & truss	33	219	9	14
Reconstituted wood product	45	137	8	29
Total --	79	363	17	43
<u>Wood Windows & Doors & Millwork</u>				
	17	118	4	5
<u>Wood Container & Pallets</u>				
	16	139	4	7
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	0	0	0	0
Prefabricated wood building	9	68	3	3
Total --	9	68	3	3
<u>All Other Miscellaneous Wood Products</u>				
	4	28	1	2
<u>Paperboard Containers</u>				
	304	896	54	66
<u>Paper Bags & Coated & Treated Paper</u>				
Coated & laminated paper, packaging paper & plastics film	16	40	2	4
All other paper bag & coated & treated paper	12	38	2	3
Total --	28	78	4	7
<u>Stationery Products</u>				
	47	167	7	9
<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>				
	20	173	6	6
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	324	2,195	83	123
Nonupholstered wood household furniture	1	4	0 ^b	0 ^b
Institutional furniture	2	11	0 ^b	1
Total --	326	2,210	84	124
<u>Office Furniture</u>				
Wood television, radio, & sewing machine cabinet	15	81	3	7
Office furniture & custom architectural woodwork & millwork	4	25	1	2
Showcase, partition, shelving, & locker	32	188	9	12
Total --	51	293	13	21

Table D.2. Direct Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Furniture Related Products</u>				
Mattress	19	63	3	6
Blind & shade	0	0	0	0
Total --	19	63	3	6
Secondary Forestry Total --	919	4,597	200	300
Forestry Total --	1,296	5,270	257	412
Agriculture & Forestry Total --	4,862	21,187	824	1,316
Construction --	2,254	20,391	823	967
Finance, Insurance, & Real Estate --	9,484	33,673	1,637	6,002
Government --	6,548	48,597	2,624	3,116
Manufacturing --	10,685	25,539	1,655	2,803
Mining --	66	312	13	29
Miscellaneous --	525	8,317	246	246
Retail Trade --	2,479	45,981	1,305	2,092
Services --	11,304	128,315	5,165	6,760
Transportation, Information, & Utilities --	2,412	15,717	772	1,112
Wholesale Trade --	1,781	10,651	675	1,162
Total Economy --	52,400	358,680	15,738	25,604

^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, 2009

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Fertilizer	0	0	0	0
Pesticide & other agricultural chemical	44	27	2	8
Lime & gypsum product	45	116	7	14
Total --	89	143	9	22
<u>Agricultural Machinery</u>				
Farm machinery & equipment	9	21	1	2
Lawn & garden equipment	0	0	0	0
Total --	9	21	1	2
<i>Agricultural Inputs Total --</i>	98	164	10	24
<i>Primary Agriculture</i>				
Oilseed farming	6	696	0 ^b	3
Grain farming	4	763	0 ^b	2
Vegetable & melon farming	24	456	0 ^b	13
Fruit farming	2	49	0 ^b	1
Tree nut farming	0 ^b	6	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	30	1,353	4	27
Tobacco farming	7	712	0 ^b	2
Cotton farming	0	0	0	0
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	0 ^b	23	0 ^b	0 ^b
Cattle ranching & farming	62	1,734	3	9
Dairy cattle & milk production	20	494	1	4
Poultry & egg production	65	467	3	13
Animal production, except cattle & poultry & eggs	9	1,033	1	4
Commercial fishing	0	0	0	0
Commercial hunting & trapping	1	29	0 ^b	0 ^b
Support activities for agriculture & forestry	15	652	12	11
<i>Primary Agriculture Total --</i>	247	8,467	25	90
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	0	0	0	0
Other animal food	23	20	1	2
Total --	23	20	1	2
<u>Grain & Oilseed Milling</u>				
Flour milling & malt	74	61	4	9
Wet corn milling	753	374	33	68
Soybean & other oilseed processing	0	0	0	0
Fats & oils refining & blending	0	0	0	0
Breakfast cereal	0	0	0	0
Total --	827	435	37	77
<u>Sugar & Confectionary Products</u>				
Sugar cane mills & refining	0	0	0	0

Table D.3. Direct Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Beet sugar	0	0	0	0
Chocolate & confectionery from cacao beans	0	0	0	0
Confectionery from purchased chocolate	24	79	2	5
Nonchocolate confectionery	15	44	1	2
Total --	39	124	4	7
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen food	19	57	3	5
Fruit & vegetable canning, pickling, & drying	427	785	62	110
Total --	446	842	65	115
<u>Dairy Products</u>				
Fluid milk & butter	19	26	2	3
Cheese	0	0	0	0
Dry, condensed, & evaporated dairy product	0	0	0	0
Ice cream & frozen dessert	4	8	1	1
Total --	23	34	2	4
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering, rendering, & processing	247	548	24	27
Poultry processing	208	943	33	36
Total --	455	1,492	56	63
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product	173	1,037	49	59
Cookie, cracker, & pasta	7	14	1	2
Tortilla	0	0	0	0
Total --	179	1,051	50	61
<u>Other Foods</u>				
Snack food	0	0	0	0
Coffee & tea	100	152	7	12
Flavoring syrup & concentrate	0	0	0	0
Seasoning & dressing	0	0	0	0
All other food	13	35	2	4
Total --	113	187	9	16
<u>Beverages</u>				
Soft drink & ice	553	828	51	65
Breweries	0	0	0	0
Wineries	9	30	1	1
Distilleries	0	0	0	0
Total --	562	858	51	66
<u>Tobacco Products</u>				
	0	0	0	0

Table D.3. Direct Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	7	28	1	2
Broadwoven fabric mills	0	0	0	0
Narrow fabric mills & schiffli machine embroidery	6	42	2	2
Nonwoven fabric mills	6	15	1	2
Knit fabric mills	4	23	1	1
Textile & fabric finishing mills	29	154	7	9
Fabric coating mills	0	0	0	0
Total --	52	262	12	15
<u>Textile Products Mills</u>				
Carpet & rug mills	0	0	0	0
Curtain & linen mills	11	66	3	4
Textile bag & canvas mills	41	227	17	22
All other textile product mills	122	815	26	37
Total --	174	1,108	45	63
<u>Apparel</u>				
Apparel knitting mills	0	0	0	0
Cut & sew apparel contractors	11	200	7	7
Men's & boys' cut & sew apparel	42	361	12	18
Women's & girls' cut & sew apparel	8	35	0 ^b	1
Other cut & sew apparel	13	124	3	4
Apparel accessories & other apparel	2	15	0 ^b	0 ^b
Total --	75	735	22	31
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	0	0	0	0
Footwear	0	0	0	0
Other leather & allied product	3	30	1	1
Total --	3	30	1	1
Secondary Agriculture Total --	2,971	7,178	357	521
Agriculture Total --	3,316	15,809	392	634
Forestry Inputs				
Forestry, forest products, & timber tract production	35	77	5	16
Commercial logging	13	106	5	5
Forestry Inputs Total --	47	183	10	21
Primary Forestry				
Sawmills & wood preservation	53	260	8	10
Pulp mills	0	0	0	0
Paper mills	129	178	16	37
Paperboard Mills	41	59	4	8
Primary Forestry Total --	224	498	28	55

Table D.3. Direct Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	0 ^b	2	0 ^b	0 ^b
Engineered wood member & truss	21	142	6	9
Reconstituted wood product	0	0	0	0
Total --	21	144	6	9
<u>Wood Windows & Doors & Millwork</u>	136	849	37	49
<u>Wood Container & Pallets</u>	10	81	3	5
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	218	1,451	79	96
Prefabricated wood building	16	109	6	7
Total --	234	1,560	85	102
<u>All Other Miscellaneous Wood Products</u>	8	51	2	4
<u>Paperboard Containers</u>	168	494	30	37
<u>Paper Bags & Coated & Treated Paper</u>				
Coated & laminated paper, packaging paper & plastics film	121	285	21	35
All other paper bag & coated & treated paper	11	35	1	2
Total --	132	320	23	37
<u>Stationery Products</u>	141	457	28	38
<u>Other Converted Paper Products</u>				
Sanitary paper product	0	0	0	0
All other converted paper product	17	65	3	4
Total --	17	65	3	4
<u>Wood Kitchen Cabinets & Countertops</u>	33	282	10	10
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	319	2,302	75	111
Nonupholstered wood household furniture	9	69	2	4
Institutional furniture	69	375	14	25
Total --	398	2,746	92	141
<u>Office Furniture</u>				
Wood television, radio, & sewing machine cabinet	17	107	3	8
Office furniture & custom architectural woodwork & millwork	9	68	3	4
Showcase, partition, shelving, & locker	30	187	7	10
Total --	56	361	13	22

Table D.3. Direct Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Furniture Related Products</u>				
Mattress	48	184	6	13
Blind & shade	0	0	0	0
Total --	48	184	6	13
<i>Secondary Forestry Total --</i>	1,402	7,594	338	471
<i>Forestry Total --</i>	1,673	8,275	376	547
<i>Agriculture & Forestry Total --</i>	4,989	24,084	768	1,182
<i>Construction --</i>	4,710	44,394	1,653	1,945
<i>Finance, Insurance, & Real Estate --</i>	10,724	43,668	1,400	6,617
<i>Government --</i>	6,344	84,807	4,214	4,850
<i>Manufacturing --</i>	12,697	33,595	2,276	3,981
<i>Mining --</i>	662	2,338	103	252
<i>Miscellaneous --</i>	928	13,303	449	448
<i>Retail Trade --</i>	4,071	72,502	2,118	3,433
<i>Services --</i>	22,816	237,562	10,447	13,361
<i>Transportation, Information, & Utilities --</i>	2,220	14,315	748	1,049
<i>Wholesale Trade --</i>	3,796	21,700	1,441	2,483
<i>Total Economy --</i>	73,959	592,268	25,617	39,599

^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, 2009

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Fertilizer	141	87	5	9
Pesticide & other agricultural chemical	461	268	26	97
Lime & gypsum product	0	0	0	0
Total --	601	355	31	106
<u>Agricultural Machinery</u>				
Farm machinery & equipment	46	95	5	12
Lawn & garden equipment	409	1,114	45	90
Total --	455	1,209	50	102
<i>Agricultural Inputs Total --</i>	1,056	1,565	81	208
<i>Primary Agriculture</i>				
Oilseed farming	435	10,418	2	214
Grain farming	263	9,137	5	91
Vegetable & melon farming	16	110	1	9
Fruit farming	0 ^b	3	0 ^b	0 ^b
Tree nut farming	0 ^b	2	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	25	377	2	22
Tobacco farming	4	98	0 ^b	1
Cotton farming	141	1,826	11	59
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	0 ^b	20	0 ^b	0 ^b
Cattle ranching & farming	50	490	1	7
Dairy cattle & milk production	7	44	0 ^b	1
Poultry & egg production	47	127	2	9
Animal production, except cattle & poultry & eggs	37	1,043	3	16
Commercial fishing	9	363	3	4
Commercial hunting & trapping	10	228	1	3
Support activities for agriculture & forestry	96	3,495	83	72
<i>Primary Agriculture Total --</i>	1,140	27,779	114	510
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	322	183	38	130
Other animal food	70	55	7	14
Total --	393	238	45	144
<u>Grain & Oilseed Milling</u>				
Flour milling & malt	214	177	13	25
Wet corn milling	0	0	0	0
Soybean & other oilseed processing	2,887	608	73	175
Fats & oils refining & blending	234	91	13	43
Breakfast cereal	452	481	48	169
Total --	3,787	1,356	147	412
<u>Sugar & Confectionary Products</u>				
Sugar cane mills & refining	20	27	1	2

Table D.4. Direct Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Beet sugar	0	0	0	0
Chocolate & confectionery from cacao beans	12	20	1	1
Confectionery from purchased chocolate	19	49	3	6
Nonchocolate confectionery	267	723	41	64
Total --	317	819	46	73
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen food	401	1,175	81	108
Fruit & vegetable canning, pickling, & drying	193	353	28	51
Total --	594	1,529	110	159
<u>Dairy Products</u>				
Fluid milk & butter	139	191	13	22
Cheese	63	68	2	3
Dry, condensed, & evaporated dairy product	331	290	21	42
Ice cream & frozen dessert	94	214	12	19
Total --	628	763	48	86
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering, rendering, & processing	886	1,952	90	102
Poultry processing	0	0	0	0
Total --	886	1,952	90	102
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product	74	420	23	28
Cookie, cracker, & pasta	22	50	3	6
Tortilla	0	0	0	0
Total --	96	470	26	34
<u>Other Foods</u>				
Snack food	684	943	63	180
Coffee & tea	0	0	0	0
Flavoring syrup & concentrate	19	8	1	7
Seasoning & dressing	48	101	4	5
All other food	41	124	6	10
Total --	793	1,176	74	203
<u>Beverages</u>				
Soft drink & ice	764	1,082	95	123
Breweries	3	3	0 ^b	1
Wineries	8	27	1	1
Distilleries	0	0	0	0
Total --	775	1,112	97	126
<u>Tobacco Products</u>				
	1,091	402	55	664

Table D.4. Direct Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	58	212	10	14
Broadwoven fabric mills	10	39	2	4
Narrow fabric mills & schiffli machine embroidery	0	0	0	0
Nonwoven fabric mills	6	14	1	2
Knit fabric mills	0	0	0	0
Textile & fabric finishing mills	17	87	5	6
Fabric coating mills	2	6	0 ^b	0 ^b
Total --	92	359	18	25
<u>Textile Products Mills</u>				
Carpet & rug mills	0	0	0	0
Curtain & linen mills	9	54	2	4
Textile bag & canvas mills	11	78	4	5
All other textile product mills	10	67	2	3
Total --	31	199	8	12
<u>Apparel</u>				
Apparel knitting mills	0	0	0	0
Cut & sew apparel contractors	23	386	14	15
Men's & boys' cut & sew apparel	56	373	19	29
Women's & girls' cut & sew apparel	16	67	2	4
Other cut & sew apparel	0	0	0	0
Apparel accessories & other apparel	8	74	2	2
Total --	103	899	37	49
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	3	10	0 ^b	1
Footwear	12	84	3	4
Other leather & allied product	1	9	0 ^b	0 ^b
Total --	16	103	3	5
Secondary Agriculture Total --	9,603	11,376	805	2,093
Agriculture Total --	11,799	40,720	1,000	2,811
Forestry Inputs				
Forestry, forest products, & timber tract production	55	130	8	25
Commercial logging	257	1,608	105	117
Forestry Inputs Total --	313	1,738	113	142
Primary Forestry				
Sawmills & wood preservation	168	807	26	34
Pulp mills	289	373	42	78
Paper mills	2,309	2,595	381	871
Paperboard Mills	468	602	61	128
Primary Forestry Total --	3,234	4,376	511	1,111

Table D.4. Direct Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	2	9	0 ^b	1
Engineered wood member & truss	15	93	4	7
Reconstituted wood product	0	0	0	0
Total --	16	102	5	8
<u>Wood Windows & Doors & Millwork</u>	211	1,347	55	72
<u>Wood Container & Pallets</u>	106	819	30	52
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	76	544	25	30
Prefabricated wood building	0	0	0	0
Total --	76	544	25	30
<u>All Other Miscellaneous Wood Products</u>	2	13	0 ^b	1
<u>Paperboard Containers</u>	458	1,332	85	104
<u>Paper Bags & Coated & Treated Paper</u>				
Coated & laminated paper, packaging paper & plastics film	500	1,219	82	136
All other paper bag & coated & treated paper	17	48	4	5
Total --	517	1,267	86	141
<u>Stationery Products</u>	38	126	7	9
<u>Other Converted Paper Products</u>				
Sanitary paper product	372	473	38	127
All other converted paper product	0	0	0	0
Total --	372	473	38	127
<u>Wood Kitchen Cabinets & Countertops</u>	28	233	9	8
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	64	367	20	30
Nonupholstered wood household furniture	9	68	2	4
Institutional furniture	33	193	6	11
Total --	106	628	28	45
<u>Office Furniture</u>				
Wood television, radio, & sewing machine cabinet	11	49	2	6
Office furniture & custom architectural woodwork & millwork	13	104	4	5
Showcase, partition, shelving, & locker	23	132	6	9
Total --	47	285	13	20

Table D.4. Direct Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Furniture Related Products</u>				
Mattress	8	27	1	2
Blind & shade	18	133	5	6
Total --	26	160	6	8
Secondary Forestry Total --	2,003	7,329	387	624
Forestry Total --	5,549	13,443	1,011	1,878
Agriculture & Forestry Total --	17,348	54,163	2,011	4,689
Construction --	5,492	50,414	1,979	2,327
Finance, Insurance, & Real Estate --	19,974	80,945	3,355	13,030
Government --	10,930	137,526	7,805	8,934
Manufacturing --	22,397	50,868	3,605	6,730
Mining --	134	713	28	50
Miscellaneous --	1,293	18,067	718	715
Retail Trade --	5,538	89,139	2,941	4,674
Services --	36,849	397,071	16,869	22,900
Transportation, Information, & Utilities --	5,585	35,550	1,958	2,665
Wholesale Trade --	7,442	39,963	2,832	4,882
Total Economy --	132,982	954,418	44,101	71,594

^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, 2009

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Fertilizer	0	0	0	0
Pesticide & other agricultural chemical	11	7	1	2
Lime & gypsum product	63	129	13	26
Total --	74	136	14	28
<u>Agricultural Machinery</u>				
Farm machinery & equipment	18	40	2	4
Lawn & garden equipment	33	101	2	5
Total --	51	141	4	9
<i>Agricultural Inputs Total --</i>	125	277	18	37
<i>Primary Agriculture</i>				
Oilseed farming	113	6,774	1	56
Grain farming	82	7,028	2	28
Vegetable & melon farming	28	365	2	15
Fruit farming	5	66	0 ^b	3
Tree nut farming	0 ^b	12	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	239	4,360	14	213
Tobacco farming	82	3,123	2	23
Cotton farming	5	173	0 ^b	2
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	330	4,477	12	118
Cattle ranching & farming	226	4,501	7	34
Dairy cattle & milk production	56	903	1	12
Poultry & egg production	281	1,379	13	55
Animal production, except cattle & poultry & eggs	45	3,495	4	20
Commercial fishing	0	0	0	0
Commercial hunting & trapping	8	175	1	3
Support activities for agriculture & forestry	43	1,924	36	31
<i>Primary Agriculture Total --</i>	1,544	38,753	94	614
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	882	708	63	213
Other animal food	44	38	3	5
Total --	925	746	65	218
<u>Grain & Oilseed Milling</u>				
Flour milling & malt	38	33	2	3
Wet corn milling	0	0	0	0
Soybean & other oilseed processing	0	0	0	0
Fats & oils refining & blending	144	63	4	13
Breakfast cereal	0	0	0	0
Total --	182	96	6	16
<u>Sugar & Confectionary Products</u>				
Sugar cane mills & refining	0	0	0	0

Table D.5. Direct Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Beet sugar	0	0	0	0
Chocolate & confectionery from cacao beans	28	48	2	3
Confectionery from purchased chocolate	144	426	19	37
Nonchocolate confectionery	9	27	1	2
Total --	181	501	22	41
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen food	344	1,055	62	83
Fruit & vegetable canning, pickling, & drying	383	763	44	79
Total --	727	1,818	106	162
<u>Dairy Products</u>				
Fluid milk & butter	583	813	49	81
Cheese	71	74	4	6
Dry, condensed, & evaporated dairy product	0	0	0	0
Ice cream & frozen dessert	0	0	0	0
Total --	654	886	53	87
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering, rendering, & processing	710	1,612	55	63
Poultry processing	895	4,074	139	154
Total --	1,605	5,685	194	216
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product	193	1,177	54	64
Cookie, cracker, & pasta	50	105	8	15
Tortilla	171	817	37	53
Total --	414	2,099	98	132
<u>Other Foods</u>				
Snack food	607	855	53	152
Coffee & tea	28	42	2	4
Flavoring syrup & concentrate	0	0	0	0
Seasoning & dressing	185	379	19	24
All other food	13	39	2	3
Total --	833	1,314	76	183
<u>Beverages</u>				
Soft drink & ice	457	582	84	109
Breweries	38	29	4	17
Wineries	23	70	3	4
Distilleries	410	366	38	295
Total --	928	1,047	128	425
<u>Tobacco Products</u>				
	1,965	606	96	1,196

Table D.5. Direct Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	45	166	8	11
Broadwoven fabric mills	9	39	2	3
Narrow fabric mills & schiffli machine embroidery	0	0	0	0
Nonwoven fabric mills	253	579	48	83
Knit fabric mills	0	0	0	0
Textile & fabric finishing mills	60	320	15	18
Fabric coating mills	3	12	1	1
Total --	370	1,116	73	115
<u>Textile Products Mills</u>				
Carpet & rug mills	69	224	10	18
Curtain & linen mills	28	199	5	8
Textile bag & canvas mills	22	146	8	11
All other textile product mills	88	472	26	36
Total --	207	1,042	49	73
<u>Apparel</u>				
Apparel knitting mills	2	14	0 ^b	0 ^b
Cut & sew apparel contractors	25	403	15	16
Men's & boys' cut & sew apparel	200	1,541	61	94
Women's & girls' cut & sew apparel	21	86	2	4
Other cut & sew apparel	12	112	3	4
Apparel accessories & other apparel	6	59	1	1
Total --	265	2,215	83	121
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	18	60	2	3
Footwear	62	441	13	19
Other leather & allied product	18	103	7	10
Total --	98	604	22	32
Secondary Agriculture Total --				
	9,356	19,776	1,073	3,017
Agriculture Total --				
	11,025	58,805	1,185	3,668
Forestry Inputs				
Forestry, forest products, & timber tract production	40	85	6	18
Commercial logging	116	785	46	51
Forestry Inputs Total --	155	869	52	70
Primary Forestry				
Sawmills & wood preservation	348	1,662	56	72
Pulp mills	0	0	0	0
Paper mills	130	172	17	40
Paperboard Mills	0	0	0	0
Primary Forestry Total --	479	1,834	74	112

Table D.5. Direct Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	0	0	0	0
Engineered wood member & truss	16	115	4	7
Reconstituted wood product	0	0	0	0
Total --	16	115	4	7
<u>Wood Windows & Doors & Millwork</u>	119	728	33	43
<u>Wood Container & Pallets</u>	81	701	22	37
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	34	250	11	13
Prefabricated wood building	24	181	8	9
Total --	58	432	19	22
<u>All Other Miscellaneous Wood Products</u>	67	494	17	29
<u>Paperboard Containers</u>	578	1,659	111	137
<u>Paper Bags & Coated & Treated Paper</u>				
Coated & laminated paper, packaging paper & plastics film	112	255	21	35
All other paper bag & coated & treated paper	107	317	19	25
Total --	219	572	40	60
<u>Stationery Products</u>	168	536	35	47
<u>Other Converted Paper Products</u>				
Sanitary paper product	0	0	0	0
All other converted paper product	70	254	14	19
Total --	70	254	14	19
<u>Wood Kitchen Cabinets & Countertops</u>	107	927	32	30
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	14	104	3	5
Nonupholstered wood household furniture	27	200	7	13
Institutional furniture	5	31	1	2
Total --	47	335	11	19
<u>Office Furniture</u>				
Wood television, radio, & sewing machine cabinet	18	82	3	9
Office furniture & custom architectural woodwork & millwork	36	233	15	18
Showcase, partition, shelving, & locker	162	960	42	58
Total --	216	1,275	60	86

Table D.5. Direct Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Furniture Related Products</u>				
Mattress	118	433	16	36
Blind & shade	0	0	0	0
Total --	118	433	16	36
<i>Secondary Forestry Total --</i>	1,864	8,461	413	572
<i>Forestry Total --</i>	2,498	11,164	539	753
<i>Agriculture & Forestry Total --</i>	13,523	69,969	1,724	4,421
<i>Construction --</i>	10,020	93,450	3,552	4,180
<i>Finance, Insurance, & Real Estate --</i>	29,383	116,567	4,637	18,473
<i>Government --</i>	14,783	191,937	9,729	11,114
<i>Manufacturing --</i>	40,390	84,758	5,612	10,202
<i>Mining --</i>	703	2,998	136	297
<i>Miscellaneous --</i>	2,200	31,009	979	983
<i>Retail Trade --</i>	8,810	147,465	4,660	7,433
<i>Services --</i>	58,311	566,214	26,922	35,470
<i>Transportation, Information, & Utilities --</i>	6,415	36,864	2,007	3,049
<i>Wholesale Trade --</i>	8,678	48,433	3,301	5,682
<i>Total Economy --</i>	193,215	1,389,664	63,259	101,303

^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, Tri-Cities, 2009

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Agricultural Inputs</i>				
<u>Agricultural Chemicals</u>				
Fertilizer	3	2	0 ^b	0 ^b
Pesticide & other agricultural chemical	22	12	2	6
Lime & gypsum product	0	0	0	0
Total --	25	13	2	6
<u>Agricultural Machinery</u>				
Farm machinery & equipment	83	191	7	16
Lawn & garden equipment	113	306	12	25
Total --	195	497	20	41
<i>Agricultural Inputs Total --</i>	220	511	21	47
<i>Primary Agriculture</i>				
Oilseed farming	0 ^b	56	0 ^b	0 ^b
Grain farming	3	517	0 ^b	1
Vegetable & melon farming	8	185	1	5
Fruit farming	1	27	0 ^b	1
Tree nut farming	0 ^b	4	0 ^b	0 ^b
Greenhouse, nursery, & floriculture production	8	431	1	7
Tobacco farming	10	1,155	0 ^b	3
Cotton farming	0	0	0	0
Sugarcane & sugar beet farming	0	0	0	0
All other crop farming	0	0	0	0
Cattle ranching & farming	45	1,356	2	7
Dairy cattle & milk production	19	456	0 ^b	4
Poultry & egg production	27	218	2	5
Animal production, except cattle & poultry & eggs	6	787	1	3
Commercial fishing	0	0	0	0
Commercial hunting & trapping	1	16	0 ^b	0 ^b
Support activities for agriculture & forestry	3	185	3	2
<i>Primary Agriculture Total --</i>	133	5,394	11	38
<i>Secondary Agriculture</i>				
<u>Foods</u>				
Dog & cat food	0	0	0	0
Other animal food	40	32	4	7
Total --	40	32	4	7
<u>Grain & Oilseed Milling</u>				
Flour milling & 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
Breakfast cereal	0	0	0	0
Total --	0	0	0	0
<u>Sugar & Confectionary Products</u>				
Sugar cane mills & refining	0	0	0	0

Table D.6. Direct Impacts from Agriculture and Forestry^a, Tri-Cities, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
Beet sugar	0	0	0	0
Chocolate & confectionery from cacao beans	0	0	0	0
Confectionery from purchased chocolate	0	0	0	0
Nonchocolate confectionery	11	31	2	2
Total --	11	31	2	2
<u>Fruit & Vegetable Preserving & Specialty Foods</u>				
Frozen food	0	0	0	0
Fruit & vegetable canning, pickling, & drying	0	0	0	0
Total --	0	0	0	0
<u>Dairy Products</u>				
Fluid milk & butter	114	160	9	16
Cheese	62	66	3	4
Dry, condensed, & evaporated dairy product	101	84	8	17
Ice cream & frozen dessert	0	0	0	0
Total --	277	310	21	36
<u>Animal Slaughtering & Processing</u>				
Animal (except poultry) slaughtering, rendering, & processing	44	99	4	4
Poultry processing	0	0	0	0
Total --	44	99	4	4
<u>Seafood product Preparation & Packaging</u>				
	0	0	0	0
<u>Bakeries & Tortillas</u>				
Bread & bakery product	15	84	5	6
Cookie, cracker, & pasta	0	0	0	0
Tortilla	0	0	0	0
Total --	15	84	5	6
<u>Other Foods</u>				
Snack food	0	0	0	0
Coffee & tea	0	0	0	0
Flavoring syrup & concentrate	0	0	0	0
Seasoning & dressing	0	0	0	0
All other food	7	20	1	2
Total --	7	20	1	2
<u>Beverages</u>				
Soft drink & ice	215	320	20	26
Breweries	1	2	0 ^b	0 ^b
Wineries	0	0	0	0
Distilleries	0	0	0	0
Total --	216	321	20	27
<u>Tobacco Products</u>				
	0	0	0	0

Table D.6. Direct Impacts from Agriculture and Forestry^a, Tri-Cities, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Textile Mills</u>				
Fiber, yarn, & thread mills	84	303	16	21
Broadwoven fabric mills	10	38	2	4
Narrow fabric mills & schiffli machine embroidery	0 ^b	3	0 ^b	0 ^b
Nonwoven fabric mills	49	117	9	15
Knit fabric mills	0	0	0	0
Textile & fabric finishing mills	20	119	4	5
Fabric coating mills	98	351	19	24
Total --	262	932	50	68
<u>Textile Products Mills</u>				
Carpet & rug mills	2	9	0 ^b	0 ^b
Curtain & linen mills	4	30	1	1
Textile bag & canvas mills	6	53	1	2
All other textile product mills	6	51	1	1
Total --	19	142	3	5
<u>Apparel</u>				
Apparel knitting mills	2	12	0 ^b	1
Cut & sew apparel contractors	7	108	4	5
Men's & boys' cut & sew apparel	4	31	1	2
Women's & girls' cut & sew apparel	8	37	1	1
Other cut & sew apparel	2	22	0 ^b	1
Apparel accessories & other apparel	0	0	0	0
Total --	23	209	7	9
<u>Leather & Allied Products</u>				
Leather & hide tanning & finishing	0	0	0	0
Footwear	2	14	0 ^b	1
Other leather & allied product	0 ^b	4	0 ^b	0 ^b
Total --	3	18	1	1
Secondary Agriculture Total --	916	2,199	116	167
Agriculture Total --	1,269	8,103	148	253
Forestry Inputs				
Forestry, forest products, & timber tract production	14	33	2	6
Commercial logging	14	86	6	6
Forestry Inputs Total --	28	119	8	13
Primary Forestry				
Sawmills & wood preservation	53	251	9	11
Pulp mills	0	0	0	0
Paper mills	1,192	1,421	184	420
Paperboard Mills	0	0	0	0
Primary Forestry Total --	1,245	1,673	193	431

Table D.6. Direct Impacts from Agriculture and Forestry^a, Tri-Cities, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<i>Secondary Forestry</i>				
<u>Veneer, Plywood, & Engineered Wood Products</u>				
Veneer & plywood	0	0	0	0
Engineered wood member & truss	19	139	5	8
Reconstituted wood product	0	0	0	0
Total --	19	139	5	8
<u>Wood Windows & Doors & Millwork</u>	41	256	11	15
<u>Wood Container & Pallets</u>	26	226	7	12
<u>Manufactured Homes (Mobile Homes)</u>				
Manufactured home (mobile home)	0	0	0	0
Prefabricated wood building	1	7	0 ^b	0 ^b
Total --	1	7	0 ^b	0 ^b
<u>All Other Miscellaneous Wood Products</u>	1	6	0 ^b	0 ^b
<u>Paperboard Containers</u>	279	832	47	58
<u>Paper Bags & Coated & Treated Paper</u>				
Coated & laminated paper, packaging paper & plastics film	62	165	8	13
All other paper bag & coated & treated paper	8	18	2	3
Total --	70	184	10	16
<u>Stationery Products</u>	0	0	0	0
<u>Other Converted Paper Products</u>				
Sanitary paper product	0	0	0	0
All other converted paper product	54	211	8	11
Total --	54	211	8	11
<u>Wood Kitchen Cabinets & Countertops</u>	5	41	1	1
<u>Household & Institutional Furniture</u>				
Upholstered household furniture	5	28	1	2
Nonupholstered wood household furniture	8	53	2	4
Institutional furniture	1	8	0 ^b	1
Total --	14	89	4	7
<u>Office Furniture</u>				
Wood television, radio, & sewing machine cabinet	3	11	1	1
Office furniture & custom architectural woodwork & millwork	4	31	1	2
Showcase, partition, shelving, & locker	5	27	1	2
Total --	12	69	3	5

Table D.6. Direct Impacts from Agriculture and Forestry^a, Tri-Cities, 2009 (Cont.)

Sector	TIO (million \$)	Employment (number)	Labor Income (million \$)	TVA (million \$)
<u>Other Furniture Related Products</u>				
Mattress	11	42	1	3
Blind & shade	10	76	2	3
Total --	21	118	4	6
Secondary Forestry Total --				
	542	2,180	102	140
Forestry Total --				
	1,815	3,972	303	584
Agriculture & Forestry Total --				
	3,085	12,075	451	836
Construction --				
	1,664	15,852	579	680
Finance, Insurance, & Real Estate --				
	3,858	13,174	477	2,248
Government --				
	2,963	34,954	1,723	1,971
Manufacturing --				
	10,442	24,532	1,667	2,631
Mining --				
	89	356	16	33
Miscellaneous --				
	337	5,410	164	164
Retail Trade --				
	1,401	26,905	753	1,183
Services --				
	7,238	83,822	3,262	4,117
Transportation, Information, & Utilities --				
	812	4,955	264	385
Wholesale Trade --				
	1,062	6,299	403	693
Total Economy --				
	32,951	228,336	9,757	14,942

^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, 2009**

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2009

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<i>Agricultural Inputs</i>																
<u>Agricultural Chemicals</u>																
Fertilizers	1.46	229	1.62	254	5.17	499	7.38	713	4.75	27	6.26	35	4.21	44	5.64	59
Pesticide & other agricultural chemicals	1.43	805	1.62	910	5.10	1,667	7.83	2,560	3.46	112	4.56	147	2.03	241	2.56	304
Lime & gypsum products	1.43	154	1.73	186	2.11	515	3.22	789	1.69	34	2.22	45	1.54	62	2.02	81
Total --		1,188		1,350		2,681		4,062		173		227		347		443
<u>Agricultural Machinery</u>																
Farm machinery & equipment	1.35	232	1.54	266	1.95	750	2.69	1,037	2.13	36	2.81	47	1.81	69	2.34	89
Lawn & garden equipment	1.32	734	1.51	841	1.67	2,539	2.27	3,448	1.93	114	2.55	150	1.76	210	2.29	274
Total --		966		1,107		3,289		4,485		150		198		279		363
<i>Agricultural Inputs Total --</i>		2,154		2,457		5,970		8,547		323		425		626		807
<i>Primary Agriculture</i>																
Oilseed farming	1.32	746	1.41	796	1.10	20,698	1.12	21,121	18.45	53	24.33	69	1.39	385	1.49	415
Grain farming	1.39	494	1.51	536	1.08	19,546	1.10	19,910	6.08	45	8.02	60	1.66	204	1.87	230
Vegetable & melon farming	1.28	122	1.41	134	1.22	1,746	1.29	1,851	2.81	14	3.67	18	1.28	68	1.42	76
Fruit farming	1.24	12	1.35	14	1.20	207	1.26	216	4.62	1	6.02	2	1.22	7	1.33	8
Tree nut farming	1.32	1	1.53	1	1.14	29	1.19	30	2.10	0 ^b	2.74	0 ^b	1.38	0 ^b	1.65	1
Greenhouse, nursery, & floriculture production	1.04	322	1.11	342	1.02	6,940	1.05	7,110	1.16	27	1.47	34	1.03	283	1.07	295
Tobacco farming	1.42	149	1.57	164	1.09	5,680	1.11	5,807	5.78	16	7.60	21	1.89	55	2.20	64
Cotton farming	1.36	198	1.53	223	1.28	2,557	1.39	2,768	2.33	27	3.06	35	1.48	90	1.73	105
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	1.39	462	1.54	509	1.30	5,914	1.39	6,318	4.22	51	5.54	67	1.61	191	1.85	219
Cattle ranching & farming	1.64	692	1.78	752	1.36	12,322	1.42	12,829	4.28	64	5.62	84	2.80	178	3.36	214
Dairy cattle & milk production	1.47	188	1.60	203	1.20	2,890	1.26	3,023	5.54	17	7.29	22	1.98	55	2.32	64
Poultry & egg production	1.43	690	1.56	752	1.45	3,723	1.65	4,247	2.61	66	3.43	87	1.74	166	2.13	202
Animal production, except cattle/poultry/eggs	1.33	136	1.49	152	1.06	7,170	1.08	7,305	1.90	17	2.49	23	1.36	60	1.57	70
Commercial fishing	1.25	11	1.68	14	1.04	379	1.13	410	1.24	4	1.66	5	1.24	5	1.73	8

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Commercial hunting & trapping	1.46	32	1.68	37	1.15	556	1.24	598	3.13	5	4.14	7	1.76	12	2.17	15
Support activities for agriculture & forestry	1.14	186	1.99	323	1.02	6,648	1.20	7,824	1.05	145	1.38	191	1.09	130	1.78	213
Primary Agriculture Total --		4,440		4,954		97,004		101,365		552		726		1,891		2,198
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	1.50	1,806	1.68	2,027	3.64	3,245	5.74	5,114	2.33	236	3.07	311	1.63	559	2.02	691
Other animal foods	1.60	284	1.79	317	3.47	506	5.38	784	2.49	35	3.28	46	2.18	65	2.84	84
Total --		2,090		2,344		3,751		5,898		271		357		624		775
<u>Grain & Oilseed Milling</u>																
Flour milling & malt	1.57	616	1.81	707	4.94	1,609	7.30	2,378	4.42	97	5.82	128	3.88	168	5.14	222
Wet corn milling	1.50	1,126	1.69	1,272	7.06	2,639	10.38	3,878	4.75	156	6.26	205	3.87	264	5.15	352
Soybean & other oilseed processing	1.66	4,805	1.82	5,258	12.58	7,644	18.91	11,488	6.61	484	8.70	637	4.82	843	6.37	1,114
Fats & oils refining & blending	1.93	856	2.09	928	6.29	1,144	9.65	1,756	3.89	77	5.12	102	2.52	163	3.19	206
Breakfast cereal	1.50	747	1.70	848	2.80	1,497	4.41	2,353	2.08	108	2.74	142	1.48	273	1.81	334
Total --		8,150		9,013		14,533		21,852		922		1,214		1,711		2,227
<u>Sugar & Confectionary Products</u>																
Sugar cane mills & refining	1.37	27	1.54	30	2.56	70	3.62	99	2.81	4	3.69	5	3.29	5	4.55	7
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
Chocolate & confectionery from cacao beans	1.47	58	1.67	66	2.44	167	3.41	232	2.98	8	3.92	11	3.25	13	4.44	17
Confectionery from purchased chocolate	1.40	596	1.66	706	1.77	2,019	2.58	2,945	1.74	117	2.29	154	1.61	211	2.11	276
Nonchocolate confectionery	1.56	476	1.83	557	1.88	1,568	2.71	2,257	1.93	87	2.54	115	1.95	139	2.64	188
Total --		1,157		1,359		3,823		5,533		216		284		368		488
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen foods	1.49	1,170	1.80	1,420	1.88	4,435	2.78	6,557	1.77	268	2.33	353	1.89	383	2.63	532

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Fruit & vegetable canning, pickling, & drying	1.41	1,416	1.65	1,657	2.18	4,141	3.25	6,188	1.92	259	2.53	341	1.83	438	2.43	582
Total --		2,586		3,078		8,576		12,744		527		694		821		1,115
<u>Dairy Products</u>																
Fluid milk & butter	1.50	1,279	1.71	1,460	2.89	3,436	4.18	4,968	2.62	193	3.45	254	2.57	311	3.46	419
Cheese	1.43	281	1.59	313	3.22	668	4.53	939	3.74	34	4.92	45	3.99	53	5.42	73
Dry, condensed, & evaporated dairy products	1.55	668	1.75	753	3.95	1,479	5.87	2,198	3.14	91	4.13	119	2.70	158	3.56	209
Ice cream & frozen desserts	1.56	182	1.83	213	2.24	593	3.25	859	2.20	34	2.89	44	2.21	52	3.00	71
Total --		2,410		2,739		6,177		8,964		352		463		575		772
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering, rendering, & processing	1.38	2,690	1.57	3,058	1.99	8,660	2.71	11,781	2.22	394	2.92	519	2.66	534	3.75	754
Poultry processing	1.33	2,030	1.57	2,392	1.44	10,040	1.87	13,106	1.68	388	2.21	510	1.91	488	2.76	704
Total --		4,720		5,450		18,701		24,888		782		1,029		1,023		1,459
<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 products	1.48	969	1.89	1,235	1.50	5,854	2.07	8,113	1.52	286	2.00	376	1.68	378	2.39	538
Cookie, cracker, & pastas	1.47	1,312	1.73	1,541	2.05	4,164	3.00	6,102	1.96	245	2.57	322	1.85	422	2.45	558
Tortillas	1.54	263	1.88	321	1.62	1,323	2.22	1,815	1.70	62	2.24	82	1.77	93	2.43	128
Total --		2,544		3,098		11,341		16,031		593		780		893		1,224
<u>Other Foods</u>																
Snack foods	1.46	1,889	1.66	2,147	2.56	4,609	3.78	6,794	2.38	276	3.14	363	1.77	587	2.23	741
Coffee & tea	1.44	188	1.64	215	2.83	560	3.98	788	3.24	29	4.27	38	2.95	48	3.95	64
Flavoring syrup & concentrates	1.27	120	1.37	130	4.19	168	6.34	254	2.77	11	3.65	14	1.34	47	1.51	53
Seasoning & dressing	1.51	352	1.73	403	2.20	1,054	3.10	1,490	2.33	55	3.07	72	2.70	80	3.73	111
All other foods	1.46	218	1.74	260	1.89	844	2.68	1,196	1.88	44	2.48	59	1.95	71	2.64	95

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Total --		2,767		3,154		7,235		10,523		415		546		833		1,064
<u>Beverages</u>																
Soft drink & ice	1.37	3,455	1.58	3,987	2.25	8,075	3.51	12,592	1.78	564	2.35	744	2.03	829	2.81	1,148
Breweries	1.25	53	1.42	61	2.69	89	4.59	152	1.72	8	2.27	10	1.27	24	1.51	28
Wineries	1.37	60	1.59	70	1.72	240	2.29	320	2.22	10	2.93	13	2.28	16	3.08	22
Distilleries	1.16	476	1.30	533	2.07	759	3.39	1,241	1.60	60	2.12	79	1.13	333	1.25	367
Total --		4,045		4,651		9,163		14,305		642		847		1,203		1,565
<u>Tobacco Products</u>																
	1.26	3,836	1.35	4,133	3.61	3,640	6.11	6,162	2.09	315	2.76	416	1.22	2,263	1.31	2,440
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.28	535	1.51	628	1.30	2,021	1.81	2,810	1.41	100	1.85	132	1.45	139	2.03	195
Broadwoven fabric mills	1.30	45	1.59	54	1.39	192	2.00	276	1.40	11	1.84	14	1.41	16	1.94	22
Narrow fabric mills & schiffli machine embroidery	1.27	8	1.66	10	1.19	54	1.65	74	1.23	3	1.62	3	1.29	3	1.87	5
Nonwoven fabric mills	1.27	487	1.51	580	1.53	1,356	2.43	2,145	1.37	100	1.80	132	1.34	167	1.79	223
Knit fabric mills	1.38	42	1.71	52	1.42	226	1.96	312	1.47	11	1.93	14	1.63	13	2.37	20
Textile & fabric finishing mills	1.38	189	1.72	235	1.42	1,051	1.94	1,434	1.52	49	1.99	64	1.65	66	2.34	93
Fabric coating mills	1.34	139	1.62	168	1.52	563	2.18	807	1.52	31	2.00	41	1.68	42	2.37	59
Total --		1,444		1,727		5,463		7,857		304		399		447		615
<u>Textile Product Mills</u>																
Carpet & rug mills	1.27	97	1.47	112	1.34	332	1.85	456	1.48	16	1.95	21	1.39	27	1.85	36
Curtain & linen mills	1.27	84	1.55	103	1.25	538	1.61	696	1.39	20	1.83	26	1.38	32	1.86	44
Textile bag & canvas mills	1.25	152	1.66	202	1.25	993	1.79	1,417	1.23	54	1.62	71	1.28	73	1.81	103
All other textile product mills	1.29	299	1.59	369	1.26	1,812	1.67	2,405	1.35	75	1.77	99	1.39	109	1.92	151
Total --		633		786		3,675		4,974		165		217		242		334
<u>Apparel</u>																
Apparel knitting mills	1.37	152	1.70	189	1.33	1,067	1.73	1,382	1.51	40	1.99	52	1.53	60	2.10	82
Cut & sew apparel contractors	1.28	134	1.94	203	1.12	1,923	1.47	2,508	1.17	74	1.54	97	1.25	85	1.86	126

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Mens & boys cut & sew apparel	1.30	536	1.71	703	1.33	4,033	1.79	5,447	1.37	179	1.80	235	1.36	274	1.86	373
Womens & girls cut & sew apparel	1.52	86	1.81	103	2.00	483	2.57	620	3.02	17	3.97	23	2.59	29	3.46	38
Other cut & sew apparel	1.41	52	1.80	66	1.34	429	1.72	549	1.57	15	2.06	20	1.66	22	2.29	31
Apparel accessories & other apparel	1.42	23	1.80	29	1.30	192	1.65	243	1.55	6	2.05	8	1.88	8	2.71	12
Total --		984		1,293		8,127		10,749		331		436		478		662
Leather & Allied Products																
Leather & hide tanning & finishing	1.50	31	1.75	37	1.81	127	2.44	172	1.98	6	2.61	7	2.29	8	3.24	11
Footwear	1.32	101	1.62	123	1.31	703	1.66	894	1.52	24	2.01	32	1.58	37	2.15	50
Other leather & allied products	1.30	37	1.68	48	1.29	254	1.75	346	1.33	12	1.75	15	1.36	18	1.86	24
Total --		169		208		1,084		1,413		42		55		62		85
Secondary Agriculture Total --		37,534		43,032		105,287		151,891		5,878		7,738		11,540		14,827
Agriculture Total --		44,128		50,443		208,262		261,803		6,754		8,889		14,058		17,831
Forestry Inputs																
Forestry, forest products, & timber tract production	1.30	196	1.58	238	3.85	1,308	4.93	1,672	2.06	44	2.74	58	1.39	95	1.76	121
Commercial logging	1.42	599	1.95	823	1.53	4,182	2.23	6,092	1.33	226	1.77	301	1.48	280	2.18	414
Forestry Inputs Total --		795		1,061		5,490		7,764		270		360		375		534
Primary Forestry																
Sawmills & wood preservation	1.35	862	1.60	1,024	1.46	4,496	1.91	5,875	1.69	172	2.23	227	1.83	239	2.57	336
Pulp mills	1.49	552	1.76	649	3.20	1,570	4.89	2,399	2.08	104	2.74	137	1.91	177	2.54	235
Paper mills	1.40	5,467	1.67	6,488	2.92	13,216	4.84	21,899	1.76	1,089	2.31	1,434	1.52	2,154	1.95	2,764
Paperboard Mills	1.46	916	1.71	1,073	3.06	2,478	4.72	3,816	2.06	168	2.72	221	1.80	307	2.35	401
Primary Forestry Total --		7,797		9,235		21,760		33,988		1,533		2,019		2,877		3,736
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
			(million \$)				(number)				(million \$)				(million \$)	
Veneer & plywood	1.24	4	1.56	5	1.25	23	1.70	31	1.31	1	1.73	1	1.38	1	1.96	2
Engineered wood member & truss	1.28	132	1.63	168	1.27	901	1.71	1,210	1.36	39	1.79	51	1.36	61	1.84	83
Reconstituted wood products	1.16	52	1.37	62	1.30	177	1.89	258	1.26	10	1.66	13	1.11	32	1.31	38
Total --		187		234		1,101		1,499		50		66		95		122
<u>Wood Windows & Doors & Millwork</u>	1.33	697	1.69	885	1.34	4,429	1.83	6,031	1.43	201	1.88	264	1.52	280	2.13	392
<u>Wood Containers & Pallets</u>	1.27	302	1.61	383	1.21	2,379	1.56	3,069	1.33	86	1.75	114	1.31	147	1.74	195
<u>Manufactured Homes (Mobile Homes)</u>																
Manufactured homes (mobile homes)	1.31	429	1.73	567	1.31	2,931	1.83	4,105	1.28	147	1.69	194	1.39	194	1.98	276
Prefabricated wood buildings	1.31	66	1.72	87	1.30	476	1.79	654	1.33	22	1.76	29	1.45	28	2.10	40
Total --		494		653		3,407		4,759		169		223		222		317
<u>All Other Miscellaneous Wood Products</u>	1.35	110	1.70	138	1.35	801	1.77	1,044	1.50	30	1.97	40	1.45	52	1.92	69
<u>Paperboard Containers</u>	1.29	2,306	1.56	2,781	1.65	8,611	2.43	12,659	1.55	509	2.04	669	1.74	697	2.44	982
<u>Paper Bags & Coated & Treated Paper</u>																
Coated & laminated paper, packaging paper & plastics film	1.28	1,036	1.52	1,230	1.67	3,273	2.51	4,924	1.53	207	2.02	273	1.52	339	2.04	455
All other paper bag & coated & treated paper	1.27	198	1.52	237	1.56	712	2.30	1,048	1.49	42	1.96	55	1.60	59	2.23	83
Total --		1,234		1,467		3,985		5,972		250		328		399		538
<u>Stationery Products</u>	1.33	523	1.61	635	1.64	2,111	2.39	3,069	1.57	120	2.06	158	1.70	175	2.35	243
<u>Other Converted Paper Products</u>																
Sanitary paper products	1.25	466	1.42	529	2.12	1,003	3.25	1,537	1.77	67	2.34	88	1.37	174	1.66	211

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
			(million \$)				(number)					(million \$)				(million \$)
All other converted paper products	1.36	192	1.64	232	1.63	864	2.28	1,208	1.70	43	2.24	57	1.81	63	2.50	87
Total --		658		761		1,867		2,745		110		145		237		298
<u>Wood Kitchen Cabinets & Countertops</u>	1.45	279	1.88	362	1.39	2,301	1.82	3,010	1.51	89	1.98	117	1.89	103	2.80	153
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.26	915	1.58	1,145	1.25	6,249	1.64	8,210	1.35	247	1.78	325	1.38	374	1.89	511
Nonupholstered wood household furniture	1.29	70	1.63	89	1.28	505	1.68	662	1.38	20	1.82	26	1.34	35	1.77	46
Institutional furniture	1.33	147	1.62	179	1.40	868	1.84	1,138	1.54	34	2.02	45	1.51	59	2.00	78
Total --		1,132		1,413		7,622		10,010		300		395		467		635
<u>Office Furniture</u>																
Wood television, radio, & sewing machine cabinet	1.26	81	1.52	98	1.38	457	1.82	602	1.49	18	1.97	24	1.30	42	1.62	52
Custom architectural woodwork & millwork	1.28	85	1.73	114	1.29	593	1.83	844	1.25	32	1.64	42	1.34	41	1.91	59
Showcase, partition, shelving, & locker	1.33	335	1.66	419	1.34	1,994	1.81	2,708	1.39	90	1.82	118	1.46	132	2.01	182
Total --		500		631		3,043		4,153		140		184		216		294
<u>Other Furniture Related Products</u>																
Mattresses	1.35	274	1.58	322	1.65	1,234	2.18	1,637	1.90	51	2.50	67	1.62	99	2.09	127
Blind & shades	1.37	39	1.72	49	1.31	274	1.71	358	1.46	11	1.92	14	1.67	14	2.39	20
Total --		313		371		1,508		1,996		61		81		113		147
Secondary Forestry Total --		8,736		10,716		43,165		60,016		2,116		2,785		3,202		4,385
Forestry Total --		17,327		21,012		70,414		101,768		3,920		5,164		6,455		8,655
Agriculture & Forestry Total --		61,455		71,455		278,677		363,571		10,673		14,053		20,513		26,486

Table E.1. Total Impacts from Agriculture and Forestry^a, Tennessee, 2009 (Cont.)

Sector	TIO			Employment				Labor Income				TVA							
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total			
		(million \$)				(number)					(million \$)					(million \$)			
Construction --		34,133		45,820		301,223		400,790		12,277		16,221		15,696		22,679			
Finance, Insurance, & Real Estate --		103,062		123,148		449,336		600,965		18,847		24,861		63,452		75,447			
Government --		50,607		77,790		564,875		795,767		29,139		38,317		34,783		50,957			
Manufacturing --		128,389		151,371		397,358		592,714		24,511		32,269		41,868		55,586			
Mining --		2,361		2,853		10,786		14,972		519		685		1,030		1,324			
Miscellaneous --		7,999		11,240		97,216		124,761		3,461		4,555		4,145		6,079			
Retail Trade --		25,739		37,900		408,610		512,070		12,899		17,004		20,857		28,119			
Services --		183,415		257,969		1,786,183		2,420,802		78,790		103,954		110,173		154,701			
Transportation, Information, & Utilities --		24,308		32,160		160,827		227,643		8,317		10,968		12,189		16,878			
Wholesale Trade --		30,079		40,780		183,051		274,041		11,389		15,001		19,297		25,685			

^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, 2009

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<i>Agricultural Inputs</i>																
<u>Agricultural Chemicals</u>																
Fertilizers	1.51	19	1.65	21	5.15	38	7.25	53	2.83	2	3.50	3	2.63	4	3.30	5
Pesticide & other agricultural chemicals	1.32	31	1.43	34	3.89	53	5.55	76	2.50	3	3.09	4	1.68	9	1.98	10
Lime & gypsum 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 --		51		55		91		130		6		7		13		15
<u>Agricultural Machinery</u>																
Farm machinery & equipment	1.24	22	1.37	24	1.74	67	2.29	88	1.72	3	2.12	4	1.52	7	1.85	8
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 --		22		24		67		88		3		4		7		8
<i>Agricultural Inputs Total --</i>		73		79		158		218		9		11		19		23
<i>Primary Agriculture</i>																
Oilseed farming	1.27	12	1.34	13	1.04	921	1.04	927	15.12	1	18.78	1	1.34	6	1.41	7
Grain farming	1.33	6	1.42	7	1.03	684	1.03	688	5.05	1	6.27	1	1.59	3	1.74	3
Vegetable & melon farming	1.25	24	1.34	25	1.23	388	1.28	404	2.60	3	3.16	3	1.26	13	1.36	14
Fruit farming	1.22	2	1.30	2	1.23	33	1.27	34	3.53	0 ^b	4.28	0 ^b	1.20	1	1.28	1
Tree nut farming	1.29	0 ^b	1.46	0 ^b	1.14	1	1.17	1	1.87	0 ^b	2.27	0 ^b	1.35	0 ^b	1.56	0 ^b
Greenhouse, nursery, & floriculture production	1.03	6	1.26	8	1.01	268	1.06	280	1.03	2	1.25	3	1.02	5	1.17	6
Tobacco farming	1.36	2	1.48	2	1.05	125	1.06	127	3.02	0 ^b	3.73	0 ^b	1.79	1	2.04	1
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	1.33	0 ^b	1.62	0 ^b	1.03	31	1.05	32	1.36	0 ^b	1.67	0 ^b	1.53	0 ^b	2.01	0 ^b
Cattle ranching & farming	1.59	64	1.69	69	1.41	1,379	1.45	1,418	3.09	6	3.81	7	2.47	15	2.88	18
Dairy cattle & milk production	1.26	32	1.34	34	1.15	589	1.19	605	3.79	3	4.67	3	1.64	9	1.84	10
Poultry & egg production	1.16	72	1.25	78	1.28	484	1.42	537	1.57	8	1.93	10	1.40	17	1.69	21
Animal production, except cattle/poultry/eggs	1.21	5	1.33	6	1.03	445	1.04	450	1.51	1	1.85	1	1.25	2	1.42	3
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	2	1.49	2	1.13	40	1.20	42	2.59	0 ^b	3.24	0 ^b	1.56	1	1.84	1

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
Support activities for agriculture & forestry	1.18	7	1.83	10	1.02	260	1.15	292	1.05	5	1.30	6	1.09	4	1.64	7
Primary Agriculture Total --		234		255		5,650		5,837		29		36		78		91
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 foods	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>Grain & Oilseed Milling</u>																
Flour milling & malt	1.48	97	1.63	106	4.22	234	5.75	319	4.18	13	5.18	16	3.73	23	4.66	29
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	1.37	91	1.44	95	3.62	100	5.19	143	2.44	7	3.02	8	1.83	16	2.15	19
Breakfast cereal	1.28	58	1.40	64	2.22	118	3.17	168	1.80	8	2.22	10	1.35	21	1.57	24
Total --		245		265		451		630		28		34		60		72
<u>Sugar & Confectionary Products</u>																
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
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
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	1.26	298	1.44	342	1.58	926	2.25	1,317	1.41	61	1.74	75	1.34	112	1.66	138
Nonchocolate confectionery	1.29	4	1.48	4	1.61	12	2.28	17	1.50	1	1.88	1	1.51	1	1.94	2
Total --		302		346		938		1,334		61		76		113		140
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen foods	1.36	32	1.59	38	1.72	116	2.45	165	1.48	8	1.83	9	1.56	11	2.04	14
Fruit & vegetable canning, pickling, & drying	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 --		32		38		116		165		8		9		11		14
<u>Dairy Products</u>																
Fluid milk & 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.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
Cheese	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, 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	1.38	25	1.55	29	1.92	82	2.59	110	1.88	4	2.32	5	1.90	7	2.42	9
Total --		25		29		82		110		4		5		7		9
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering, rendering, & processing	1.27	76	1.38	83	1.77	243	2.21	304	2.08	9	2.58	11	2.51	13	3.32	17
Poultry processing	1.31	558	1.47	626	1.41	2,777	1.72	3,390	1.60	95	1.97	117	1.81	119	2.43	160
Total --		634		710		3,020		3,694		104		129		131		176
<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 products	1.36	270	1.64	327	1.40	1,667	1.82	2,173	1.38	78	1.70	97	1.51	103	2.01	137
Cookie, cracker, & pastas	1.37	1,113	1.54	1,251	1.82	3,387	2.48	4,622	1.70	191	2.10	236	1.64	336	2.05	419
Tortillas	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 --		1,383		1,577		5,054		6,795		269		333		438		555
<u>Other Foods</u>																
Snack foods	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	4	1.47	5	2.49	12	3.20	15	3.12	1	3.86	1	2.87	1	3.62	1
Flavoring syrup & concentrates	1.28	97	1.35	103	3.72	120	5.26	170	2.42	8	3.00	9	1.32	37	1.44	41
Seasoning & dressing	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 foods	1.36	103	1.55	117	1.72	393	2.28	519	1.67	19	2.06	24	1.75	31	2.22	40
Total --		204		224		525		704		28		34		69		81
<u>Beverages</u>																
Soft drink & ice	1.31	711	1.46	788	2.02	1,554	2.91	2,246	1.59	105	1.98	131	1.89	161	2.44	207
Breweries	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Wineries	1.27	5	1.43	6	1.57	20	2.01	26	1.70	1	2.10	1	1.76	1	2.23	2
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

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Total --		716		794		1,574		2,272		106		132		162		209
<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	258	1.31	290	1.21	1,012	1.55	1,301	1.25	45	1.54	56	1.28	62	1.68	82
Broadwoven fabric mills	1.22	6	1.40	7	1.29	28	1.65	36	1.34	1	1.66	2	1.36	2	1.75	2
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	1.22	86	1.40	99	1.43	226	2.15	339	1.25	18	1.55	22	1.24	30	1.56	37
Knit fabric mills	1.29	34	1.52	40	1.34	183	1.75	239	1.33	9	1.65	11	1.46	10	1.98	14
Textile & fabric finishing mills	1.37	14	1.59	17	1.38	83	1.73	104	1.52	3	1.88	4	1.66	4	2.20	6
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 --		398		453		1,532		2,019		76		93		109		142
<u>Textile Product Mills</u>																
Carpet & rug mills	1.16	5	1.31	6	1.26	18	1.69	24	1.24	1	1.53	1	1.20	2	1.50	2
Curtain & linen mills	1.18	17	1.40	20	1.20	100	1.54	128	1.22	4	1.50	5	1.22	7	1.54	9
Textile bag & canvas mills	1.19	49	1.48	60	1.19	344	1.55	447	1.19	16	1.47	20	1.24	22	1.63	29
All other textile product mills	1.22	6	1.41	7	1.20	42	1.47	52	1.29	1	1.60	2	1.34	2	1.73	3
Total --		77		94		504		651		23		28		33		43
<u>Apparel</u>																
Apparel knitting mills	1.34	144	1.58	171	1.33	1,025	1.63	1,264	1.44	37	1.78	45	1.46	55	1.88	71
Cut & sew apparel contractors	1.21	46	1.70	65	1.10	675	1.37	843	1.12	26	1.38	32	1.18	29	1.64	41
Mens & boys cut & sew apparel	1.21	135	1.51	168	1.28	943	1.69	1,244	1.24	47	1.53	58	1.24	72	1.59	92
Womens & girls cut & sew apparel	1.37	6	1.57	7	1.86	30	2.33	38	2.05	1	2.54	1	1.84	2	2.31	3
Other cut & sew apparel	1.25	12	1.57	15	1.30	80	1.74	108	1.24	4	1.53	5	1.28	6	1.67	8
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 --		343		426		2,754		3,496		115		142		164		214
<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

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
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	1.28	7	1.49	8	1.20	63	1.40	74	1.42	2	1.75	2	1.49	3	1.90	3
Total --		7		8		63		74		2		2		3		3
Secondary Agriculture Total --		4,368		4,963		16,613		21,944		823		1,018		1,301		1,659
Agriculture Total --		4,675		5,298		22,421		27,999		862		1,065		1,398		1,773
Forestry Inputs																
Forestry, forest products, & timber tract production	1.28	8	1.51	10	4.94	66	5.96	80	2.03	2	2.56	2	1.35	4	1.65	5
Commercial logging	1.32	28	1.72	37	1.42	213	1.94	291	1.27	11	1.61	14	1.37	13	1.93	18
Forestry Inputs Total --		37		47		279		372		13		16		17		23
Primary Forestry																
Sawmills & wood preservation	1.26	22	1.42	25	1.35	121	1.64	146	1.64	4	2.04	5	1.79	5	2.35	7
Pulp mills	1.43	115	1.59	128	2.69	318	3.67	433	2.20	18	2.72	22	2.04	30	2.55	38
Paper mills	1.32	175	1.50	199	2.53	392	3.92	606	1.57	33	1.94	41	1.40	67	1.70	81
Paperboard Mills	1.37	161	1.54	182	2.65	391	3.93	579	1.75	28	2.17	35	1.56	54	1.93	66
Primary Forestry Total --		474		534		1,221		1,764		83		102		156		193
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	1.21	1	1.44	2	1.21	9	1.53	11	1.28	0 ^b	1.60	0 ^b	1.36	0 ^b	1.82	1
Engineered wood member & truss	1.23	40	1.49	48	1.23	269	1.58	347	1.27	12	1.58	14	1.28	19	1.64	24
Reconstituted wood products	1.15	52	1.31	59	1.26	171	1.72	235	1.21	10	1.50	12	1.10	31	1.25	36
Total --		93		109		450		594		22		27		50		60
<u>Wood Windows & Doors & Millwork</u>	1.27	22	1.50	26	1.27	150	1.58	186	1.38	6	1.71	7	1.48	8	1.94	10
<u>Wood Containers & Pallets</u>	1.21	19	1.45	22	1.16	161	1.40	195	1.26	5	1.56	6	1.26	9	1.58	11

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<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	1.24	11	1.53	14	1.24	85	1.60	109	1.26	4	1.55	5	1.36	5	1.83	6
Total --		11		14		85		109		4		5		5		6
<u>All Other Miscellaneous Wood Products</u>																
	1.27	5	1.53	6	1.29	36	1.61	44	1.36	1	1.68	2	1.34	2	1.68	3
<u>Paperboard Containers</u>																
	1.23	375	1.42	431	1.53	1,375	2.10	1,882	1.44	77	1.78	96	1.60	106	2.11	140
<u>Paper Bags & Coated & Treated Paper</u>																
Coated & laminated paper, packaging paper & plastics film																
	1.24	19	1.40	22	1.54	61	2.11	84	1.46	3	1.81	4	1.46	6	1.84	7
All other paper bag & coated & treated paper	1.24	15	1.41	17	1.46	56	1.97	75	1.44	3	1.79	4	1.55	4	2.04	5
Total --		35		40		117		158		6		8		10		13
<u>Stationery Products</u>																
	1.30	60	1.47	69	1.53	256	1.97	329	1.63	11	2.02	14	1.80	17	2.33	21
<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>																
	1.36	27	1.67	34	1.33	229	1.65	286	1.38	9	1.71	11	1.70	10	2.35	14
<u>Household & Institutional Furniture</u>																
Upholstered household furniture																
	1.20	387	1.43	462	1.20	2,642	1.51	3,315	1.25	104	1.54	128	1.28	157	1.65	202
Nonupholstered wood household furniture	1.26	1	1.50	1	1.24	5	1.53	6	1.33	0 ^b	1.64	0 ^b	1.31	0 ^b	1.63	0 ^b
Institutional furniture	1.25	2	1.46	3	1.33	14	1.68	18	1.38	1	1.71	1	1.38	1	1.72	1
Total --		390		465		2,661		3,339		105		129		158		204
<u>Office Furniture</u>																

Table E.2. Total Impacts from Agriculture and Forestry^a, Chattanooga, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
Wood television, radio, & sewing machine cabinet	1.24	19	1.44	22	1.34	108	1.66	135	1.43	4	1.77	5	1.29	10	1.52	11
Custom architectural woodwork & millwork	1.22	4	1.55	5	1.24	30	1.66	41	1.19	2	1.47	2	1.26	2	1.68	3
Showcase, partition, shelving, & locker	1.24	40	1.49	48	1.27	238	1.65	310	1.27	11	1.57	14	1.33	16	1.72	21
Total --		63		75		377		485		17		21		28		35
Other Furniture Related Products																
Mattresses	1.24	23	1.41	26	1.51	96	1.94	123	1.53	4	1.89	5	1.38	9	1.67	11
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 --		23		26		96		123		4		5		9		11
Secondary Forestry Total --		1,124		1,318		5,994		7,730		267		330		411		527
Forestry Total --		1,635		1,899		7,495		9,866		362		448		584		743
Agriculture & Forestry Total --		6,310		7,197		29,916		37,865		1,224		1,513		1,982		2,515
Construction --		3,005		3,830		26,505		33,926		1,096		1,364		1,392		1,889
Finance, Insurance, & Real Estate --		12,143		13,975		48,060		63,183		2,264		2,812		7,530		8,632
Government --		8,368		10,719		63,492		84,562		3,254		4,020		4,082		5,493
Manufacturing --		13,615		15,432		42,498		58,792		2,506		3,098		4,183		5,275
Mining --		91		107		456		592		20		25		41		50
Miscellaneous --		754		983		10,034		12,095		316		390		378		516
Retail Trade --		2,806		3,870		48,560		58,135		1,405		1,752		2,284		2,925
Services --		14,541		19,170		154,351		195,937		6,206		7,713		8,665		11,449
Transportation, Information, & Utilities --		3,236		4,032		23,013		30,150		1,083		1,342		1,602		2,080
Wholesale Trade --		2,245		2,861		14,496		20,021		841		1,042		1,441		1,811

^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, 2009

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<i>Agricultural Inputs</i>																
<u>Agricultural Chemicals</u>																
Fertilizers	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	1.47	65	1.65	73	5.67	153	8.27	223	4.27	9	5.45	12	2.34	19	2.91	24
Lime & gypsum products	1.44	65	1.68	76	2.02	235	2.87	332	1.86	13	2.37	17	1.67	23	2.13	30
Total --		130		149		387		555		23		29		42		53
<u>Agricultural Machinery</u>																
Farm machinery & equipment	1.34	12	1.50	13	1.91	40	2.50	53	2.43	2	3.11	2	2.02	3	2.55	4
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 --		12		13		40		53		2		2		3		4
<i>Agricultural Inputs Total --</i>		142		162		427		608		24		31		45		57
<i>Primary Agriculture</i>																
Oilseed farming	1.29	8	1.37	8	1.03	716	1.04	720	6.64	1	8.50	1	1.35	4	1.45	4
Grain farming	1.34	6	1.47	7	1.02	780	1.03	785	3.11	1	3.97	1	1.60	2	1.82	3
Vegetable & melon farming	1.25	30	1.33	32	1.18	540	1.22	558	5.84	3	7.36	3	1.26	17	1.35	18
Fruit farming	1.22	3	1.30	3	1.18	58	1.22	60	4.34	0 ^b	5.46	0 ^b	1.20	2	1.29	2
Tree nut farming	1.29	0 ^b	1.37	0 ^b	1.08	7	1.10	7	0.00	0 ^b	0.00	0 ^b	1.34	0 ^b	1.45	0 ^b
Greenhouse, nursery, & floriculture production	1.03	31	1.13	34	1.01	1,367	1.03	1,395	1.08	5	1.33	6	1.02	28	1.09	29
Tobacco farming	1.37	9	1.49	10	1.04	743	1.05	750	5.76	1	7.35	1	1.80	3	2.05	4
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	1.34	0 ^b	1.65	0 ^b	1.04	24	1.06	25	1.41	0 ^b	1.80	0 ^b	1.55	0 ^b	2.07	0 ^b
Cattle ranching & farming	1.48	91	1.59	98	1.26	2,185	1.30	2,247	3.40	9	4.33	11	2.36	22	2.80	26
Dairy cattle & milk production	1.30	26	1.42	29	1.11	551	1.16	572	2.53	3	3.22	4	1.72	8	2.05	9
Poultry & egg production	1.20	77	1.28	83	1.19	558	1.30	607	2.29	7	2.92	9	1.47	19	1.72	22
Animal production, except cattle/poultry/eggs	1.22	11	1.34	12	1.03	1,060	1.04	1,070	1.74	1	2.21	2	1.26	5	1.43	6
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	1.38	2	1.57	2	1.15	33	1.23	35	2.75	0 ^b	3.54	0 ^b	1.62	1	1.94	1

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Support activities for agriculture & forestry	1.15	17	1.90	28	1.02	664	1.17	764	1.05	13	1.35	17	1.09	12	1.72	18
Primary Agriculture Total --		313		347		9,287		9,596		42		54		122		143
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 foods	1.29	29	1.41	32	2.85	57	4.04	81	2.77	3	3.53	4	2.35	6	3.00	7
Total --		29		32		57		81		3		4		6		7
<u>Grain & Oilseed Milling</u>																
Flour milling & malt	1.54	114	1.75	128	4.94	300	7.13	434	4.13	18	5.27	23	3.62	31	4.65	40
Wet corn milling	1.48	1,118	1.65	1,245	7.08	2,646	10.13	3,787	4.71	154	6.01	197	3.82	261	4.94	337
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 --		1,231		1,373		2,946		4,221		172		220		292		377
<u>Sugar & Confectionary Products</u>																
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
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
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	1.39	34	1.58	38	1.71	136	2.22	177	2.30	6	2.94	7	2.05	10	2.63	12
Nonchocolate confectionery	1.42	21	1.61	24	1.80	80	2.37	105	2.35	3	2.99	4	2.35	5	3.08	7
Total --		55		62		217		282		9		11		15		19
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen foods	1.42	27	1.68	32	1.83	104	2.62	149	1.76	6	2.24	8	1.87	9	2.51	12
Fruit & vegetable canning, pickling, & drying	1.37	585	1.58	676	2.17	1,706	3.22	2,527	1.81	112	2.30	143	1.72	189	2.21	244
Total --		611		708		1,810		2,676		118		150		198		255
<u>Dairy Products</u>																
Fluid milk & butter	1.37	26	1.55	29	2.71	70	3.88	100	2.27	4	2.90	5	2.21	7	2.89	9

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Cheese	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, 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	1.38	5	1.62	6	2.11	17	3.13	26	1.77	1	2.26	1	1.75	2	2.31	2
Total --		31		36		88		126		5		7		8		11
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering, rendering, & processing	1.32	326	1.48	366	1.92	1,053	2.58	1,412	2.07	49	2.64	62	2.45	66	3.35	90
Poultry processing	1.30	269	1.50	312	1.42	1,339	1.83	1,727	1.63	53	2.07	67	1.84	66	2.56	92
Total --		595		678		2,392		3,140		102		130		132		182
<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 products	1.42	246	1.77	306	1.47	1,529	2.00	2,071	1.51	74	1.92	94	1.64	97	2.26	133
Cookie, cracker, & pastas	1.37	9	1.60	11	2.03	29	3.04	43	1.70	2	2.18	2	1.61	3	2.07	4
Tortillas	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 --		255		317		1,558		2,114		76		97		100		138
<u>Other Foods</u>																
Snack foods	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	1.43	143	1.61	161	2.86	433	3.93	595	3.26	22	4.16	28	2.95	36	3.83	47
Flavoring syrup & concentrates	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Seasoning & dressing	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 foods	1.39	18	1.65	21	1.89	67	2.74	97	1.65	4	2.11	5	1.69	6	2.22	8
Total --		161		182		500		692		26		33		43		55
<u>Beverages</u>																
Soft drink & ice	1.37	756	1.52	843	2.27	1,882	3.23	2,672	2.12	107	2.70	137	2.41	157	3.22	210
Breweries	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Wineries	1.41	12	1.58	14	1.75	52	2.19	65	3.17	2	4.05	2	3.26	3	4.26	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

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	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 --		(million \$)				(number)				(million \$)				(million \$)		
		768		857		1,934		2,737		109		139		160		213
<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	1.12	8	1.29	10	1.20	34	1.59	45	1.25	1	1.60	2	1.30	2	1.75	3
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	1.17	7	1.50	9	1.16	49	1.57	66	1.17	2	1.50	3	1.23	3	1.70	4
Nonwoven fabric mills	1.20	8	1.39	9	1.46	22	2.16	33	1.35	1	1.73	2	1.33	2	1.72	3
Knit fabric mills	1.26	5	1.52	6	1.34	30	1.78	40	1.41	1	1.79	2	1.56	2	2.18	2
Textile & fabric finishing mills	1.29	37	1.56	45	1.36	210	1.82	281	1.42	10	1.81	12	1.54	13	2.10	18
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 --		65		78		345		465		16		21		22		30
<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	1.19	13	1.44	16	1.21	80	1.59	105	1.28	3	1.63	4	1.28	5	1.66	7
Textile bag & canvas mills	1.18	49	1.56	64	1.24	281	1.86	423	1.16	19	1.47	25	1.19	26	1.62	36
All other textile product mills	1.21	147	1.44	176	1.22	992	1.53	1,245	1.33	35	1.70	44	1.38	50	1.84	67
Total --		209		256		1,353		1,772		57		73		82		110
<u>Apparel</u>																
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
Cut & sew apparel contractors	1.29	15	1.86	21	1.12	224	1.41	282	1.18	8	1.51	10	1.27	9	1.82	13
Mens & boys cut & sew apparel	1.31	55	1.64	68	1.28	463	1.62	586	1.44	17	1.83	21	1.43	26	1.88	34
Womens & girls cut & sew apparel	1.53	12	1.75	13	1.91	67	2.34	83	4.22	2	5.39	3	3.53	3	4.60	4
Other cut & sew apparel	1.43	18	1.75	23	1.33	164	1.63	201	1.69	5	2.16	6	1.79	7	2.39	10
Apparel accessories & other apparel	1.39	2	1.74	3	1.30	20	1.65	25	1.49	1	1.89	1	1.77	1	2.46	1
Total --		102		128		938		1,176		32		41		46		62
<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

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
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	4	1.64	5	1.26	37	1.52	45	1.61	1	2.06	1	1.67	2	2.20	2
Total --		4		5		37		45		1		1		2		2
Secondary Agriculture Total --		4,116		4,712		14,176		19,528		728		929		1,105		1,463
Agriculture Total --		4,571		5,221		23,890		29,731		795		1,014		1,273		1,663
Forestry Inputs																
Forestry, forest products, & timber tract production	1.28	44	1.53	53	4.12	319	5.15	399	2.07	10	2.68	13	1.37	22	1.71	27
Commercial logging	1.44	19	1.87	24	1.45	153	1.92	204	1.36	6	1.76	8	1.55	8	2.19	12
Forestry Inputs Total --		63		77		472		602		17		21		30		38
Primary Forestry																
Sawmills & wood preservation	1.33	71	1.54	83	1.45	378	1.85	481	1.71	14	2.19	18	1.85	19	2.51	26
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	1.40	182	1.61	208	2.74	488	4.09	729	2.02	32	2.58	41	1.69	62	2.13	78
Paperboard Mills	1.47	60	1.67	68	2.96	176	4.18	249	2.53	10	3.24	13	2.14	17	2.73	22
Primary Forestry Total --		313		359		1,042		1,459		56		72		99		127
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	1.29	0 ^b	1.49	0 ^b	1.24	2	1.47	3	1.75	0 ^b	2.24	0 ^b	1.89	0 ^b	2.58	0 ^b
Engineered wood member & truss	1.27	26	1.58	33	1.28	181	1.68	239	1.35	8	1.73	10	1.35	12	1.77	16
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 --		27		33		184		242		8		10		12		16
<u>Wood Windows & Doors & Millwork</u>	1.30	177	1.61	220	1.33	1,129	1.78	1,512	1.40	52	1.78	66	1.48	72	2.00	97
<u>Wood Containers & Pallets</u>	1.24	12	1.54	15	1.20	97	1.52	123	1.32	4	1.68	4	1.29	6	1.67	8

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<u>Manufactured Homes (Mobile Homes)</u>																
Manufactured homes (mobile homes)	1.27	277	1.64	358	1.29	1,879	1.80	2,608	1.25	99	1.60	126	1.34	129	1.85	177
Prefabricated wood buildings	1.27	21	1.65	27	1.29	141	1.80	196	1.28	7	1.63	10	1.36	9	1.91	13
Total --		298		385		2,019		2,804		106		136		138		190
<u>All Other Miscellaneous Wood Products</u>	1.31	10	1.62	13	1.36	70	1.81	92	1.40	3	1.79	4	1.36	5	1.75	7
<u>Paperboard Containers</u>	1.29	217	1.52	256	1.67	823	2.38	1,174	1.57	48	2.00	61	1.76	65	2.38	89
<u>Paper Bags & Coated & Treated Paper</u>																
Coated & laminated paper, packaging paper & plastics film	1.26	152	1.48	178	1.67	476	2.49	709	1.48	32	1.89	40	1.47	52	1.91	67
All other paper bag & coated & treated paper	1.29	14	1.46	16	1.56	55	2.05	72	1.80	2	2.30	3	1.98	3	2.66	5
Total --		166		194		531		782		34		43		55		72
<u>Stationery Products</u>	1.32	186	1.57	222	1.64	751	2.35	1,075	1.54	44	1.97	56	1.67	63	2.24	85
<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	1.34	23	1.59	28	1.62	105	2.22	144	1.67	5	2.13	7	1.77	8	2.37	10
Total --		23		28		105		144		5		7		8		10
<u>Wood Kitchen Cabinets & Countertops</u>	1.43	47	1.81	60	1.39	390	1.79	503	1.49	15	1.90	20	1.84	18	2.63	25
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.24	397	1.51	481	1.23	2,842	1.56	3,599	1.36	102	1.74	131	1.39	155	1.85	205
Nonupholstered wood household furniture	1.27	12	1.57	15	1.28	88	1.64	113	1.37	3	1.75	4	1.32	6	1.69	8
Institutional furniture	1.31	91	1.57	108	1.40	525	1.82	683	1.49	21	1.90	27	1.46	37	1.88	48
Total --		499		604		3,455		4,395		127		162		198		261

Table E.3. Total Impacts from Agriculture and Forestry^a, Knoxville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<u>Office Furniture</u>																
Wood television, radio, & sewing machine cabinet	1.25	22	1.47	26	1.33	142	1.65	177	1.53	5	1.96	6	1.32	11	1.60	13
Custom architectural woodwork & millwork	1.28	12	1.65	15	1.28	86	1.72	116	1.27	4	1.62	5	1.37	5	1.88	7
Showcase, partition, shelving, & locker	1.33	40	1.61	48	1.33	248	1.72	322	1.43	10	1.83	13	1.50	15	2.01	20
Total --		73		88		476		615		19		24		31		40
<u>Other Furniture Related Products</u>																
Mattresses	1.30	62	1.49	71	1.56	288	2.00	368	1.89	11	2.41	14	1.60	21	2.01	26
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 --		62		71		288		368		11		14		21		26
Secondary Forestry Total --		1,799		2,189		10,318		13,829		475		606		692		926
Forestry Total --		2,175		2,625		11,832		15,890		548		700		820		1,091
Agriculture & Forestry Total --		6,746		7,846		35,722		45,621		1,343		1,714		2,093		2,754
Construction --		6,464		8,442		58,876		76,717		2,352		3,018		2,976		4,164
Finance, Insurance, & Real Estate --		15,212		17,557		67,997		86,270		2,440		3,123		9,115		10,523
Government --		7,427		11,163		93,153		126,777		4,588		5,848		5,434		7,672
Manufacturing --		16,739		19,648		57,713		83,905		3,553		4,533		6,016		7,762
Mining --		970		1,141		4,161		5,701		205		263		414		517
Miscellaneous --		1,360		1,845		16,916		21,289		593		757		698		989
Retail Trade --		4,658		6,567		77,155		94,356		2,310		2,953		3,777		4,923
Services --		30,385		41,260		299,465		397,463		13,115		16,780		17,782		24,312
Transportation, Information, & Utilities --		3,004		3,877		20,849		28,715		1,049		1,343		1,505		2,029
Wholesale Trade --		4,957		6,504		30,787		44,726		1,878		2,400		3,173		4,102

^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, 2009

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<i>Agricultural Inputs</i>																
<u><i>Agricultural Chemicals</i></u>																
Fertilizers	1.41	199	1.54	217	4.81	419	6.62	578	4.70	22	6.02	28	4.07	36	5.34	47
Pesticide & other agricultural chemicals	1.41	648	1.56	719	4.65	1,247	6.91	1,854	3.21	85	4.11	109	1.95	190	2.39	233
Lime & gypsum 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 --		847		936		1,666		2,431		107		137		226		280
<u><i>Agricultural Machinery</i></u>																
Farm machinery & equipment	1.30	59	1.48	68	1.90	180	2.63	250	1.86	10	2.37	13	1.61	19	2.02	24
Lawn & garden equipment	1.30	533	1.47	602	1.63	1,816	2.16	2,407	1.88	84	2.41	107	1.72	154	2.18	196
Total --		593		670		1,996		2,657		94		120		174		220
<i>Agricultural Inputs Total --</i>		1,440		1,606		3,663		5,089		201		257		400		500
<i>Primary Agriculture</i>																
Oilseed farming	1.36	593	1.45	630	1.15	11,970	1.18	12,290	21.03	44	26.95	57	1.44	308	1.54	330
Grain farming	1.43	376	1.55	407	1.13	10,280	1.15	10,538	6.97	36	8.92	46	1.75	158	1.95	177
Vegetable & melon farming	1.30	21	1.41	23	1.52	166	1.65	181	3.56	2	4.48	3	1.32	12	1.43	13
Fruit farming	1.26	0 ^b	1.30	0 ^b	1.25	4	1.27	4	0.00	0 ^b	0.00	0 ^b	1.24	0 ^b	1.29	0 ^b
Tree nut farming	1.34	0 ^b	1.50	0 ^b	1.68	3	1.87	3	2.94	0 ^b	3.70	0 ^b	1.42	0 ^b	1.62	0 ^b
Greenhouse, nursery, & floriculture production	1.04	26	1.09	27	1.03	387	1.05	398	1.16	2	1.38	3	1.02	23	1.06	23
Tobacco farming	1.48	6	1.62	7	1.21	118	1.26	123	4.97	1	6.35	1	2.00	2	2.30	3
Cotton farming	1.41	199	1.56	221	1.33	2,419	1.43	2,610	2.49	28	3.16	35	1.55	91	1.78	104
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	1.43	0 ^b	1.79	1	1.07	22	1.12	23	1.40	0 ^b	1.79	0 ^b	1.66	0 ^b	2.27	0 ^b
Cattle ranching & farming	1.43	71	1.53	76	1.33	651	1.42	695	4.62	6	5.89	8	2.39	18	2.81	21
Dairy cattle & milk production	1.56	11	1.67	11	1.51	66	1.66	72	11.86	1	15.12	1	2.08	3	2.39	4
Poultry & egg production	1.63	76	1.76	82	2.04	259	2.44	310	3.66	7	4.66	9	2.02	19	2.41	22
Animal production, except cattle/poultry/eggs	1.37	51	1.50	56	1.10	1,149	1.14	1,192	2.04	6	2.60	8	1.37	22	1.56	25
Commercial fishing	1.26	11	1.64	14	1.04	376	1.11	405	1.21	4	1.58	5	1.21	5	1.66	7
Commercial hunting & trapping	1.49	15	1.70	17	1.15	262	1.23	280	3.33	2	4.30	3	1.83	6	2.23	7

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Support activities for agriculture & forestry	1.14	109	1.89	182	1.02	3,560	1.20	4,185	1.04	86	1.34	111	1.08	77	1.70	121
Primary Agriculture Total --		1,565		1,753		31,694		33,310		227		290		744		858
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	1.43	461	1.61	517	3.84	704	6.47	1,187	1.79	69	2.29	88	1.38	179	1.64	213
Other animal foods	1.65	116	1.83	129	3.64	200	5.63	309	2.27	16	2.91	20	2.01	29	2.55	37
Total --		577		646		904		1,496		84		108		208		249
<u>Grain & Oilseed Milling</u>																
Flour milling & malt	1.58	338	1.79	383	5.03	888	7.22	1,276	4.31	55	5.51	70	3.81	96	4.90	123
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	1.72	4,966	1.86	5,383	12.93	7,857	18.84	11,445	6.90	505	8.83	646	5.02	877	6.47	1,130
Fats & oils refining & blending	2.01	471	2.17	508	6.74	615	10.23	933	3.44	45	4.39	58	2.29	98	2.81	120
Breakfast cereal	1.53	691	1.71	773	2.82	1,354	4.27	2,054	2.08	99	2.66	127	1.49	251	1.78	301
Total --		6,466		7,047		10,714		15,707		705		901		1,322		1,674
<u>Sugar & Confectionary Products</u>																
Sugar cane mills & refining	1.38	27	1.53	30	2.55	69	3.50	95	2.81	4	3.59	5	3.27	5	4.39	7
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
Chocolate & confectionery from cacao beans	1.46	17	1.65	19	2.42	48	3.34	67	2.63	3	3.36	3	2.86	4	3.80	5
Confectionery from purchased chocolate	1.40	26	1.62	30	1.75	87	2.48	123	1.70	5	2.17	7	1.59	9	2.02	12
Nonchocolate confectionery	1.56	417	1.80	480	1.87	1,348	2.61	1,885	1.89	76	2.41	98	1.92	123	2.52	160
Total --		488		560		1,552		2,170		88		112		141		185
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen foods	1.45	579	1.73	691	1.82	2,144	2.64	3,108	1.69	137	2.16	175	1.81	196	2.44	264
Fruit & vegetable canning, pickling, & drying	1.38	267	1.60	309	2.13	754	3.15	1,114	1.80	51	2.29	65	1.72	87	2.22	112
Total --		846		1,000		2,898		4,221		188		240		283		376
<u>Dairy Products</u>																
Fluid milk & butter	1.47	205	1.66	231	2.82	537	3.99	761	2.42	32	3.09	41	2.38	51	3.12	67

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
Cheese	1.44	91	1.58	100	3.19	217	4.28	292	4.65	11	5.95	13	5.01	17	6.60	22
Dry, condensed, & evaporated dairy products	1.61	532	1.78	590	4.02	1,165	5.74	1,665	3.40	71	4.35	90	2.93	123	3.77	158
Ice cream & frozen desserts	1.59	149	1.82	172	2.24	480	3.14	672	2.21	27	2.82	35	2.23	43	2.94	56
Total --		977		1,092		2,400		3,390		140		179		234		304
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering, rendering, & processing	1.36	1,204	1.53	1,356	1.95	3,799	2.61	5,100	2.04	185	2.61	236	2.42	248	3.31	340
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 --		1,204		1,356		3,799		5,100		185		236		248		340
<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 products	1.43	106	1.80	133	1.47	619	2.03	851	1.43	33	1.83	42	1.57	43	2.16	60
Cookie, cracker, & pastas	1.46	33	1.70	38	2.04	102	2.93	146	1.88	6	2.40	8	1.78	11	2.29	14
Tortillas	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 --		139		171		721		998		39		50		54		74
<u>Other Foods</u>																
Snack foods	1.48	1,009	1.65	1,131	2.56	2,413	3.66	3,456	2.36	148	3.01	189	1.76	317	2.17	390
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 & concentrates	1.26	24	1.35	25	4.10	32	6.04	47	2.70	2	3.46	3	1.32	9	1.47	11
Seasoning & dressing	1.52	73	1.70	82	2.17	219	2.93	295	2.49	11	3.19	14	2.92	16	3.90	21
All other foods	1.45	60	1.69	70	1.86	230	2.55	315	1.86	12	2.38	15	1.94	19	2.55	25
Total --		1,166		1,308		2,894		4,114		173		221		361		447
<u>Beverages</u>																
Soft drink & ice	1.33	1,017	1.51	1,155	2.17	2,344	3.26	3,533	1.74	166	2.23	212	1.96	241	2.64	325
Breweries	1.27	4	1.42	5	2.57	7	4.04	12	1.80	1	2.30	1	1.31	2	1.54	2
Wineries	1.36	12	1.55	13	1.70	46	2.20	60	2.21	2	2.82	2	2.28	3	2.99	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

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Total --		1,032		1,172		2,397		3,604		168		215		246		331
<u>Tobacco Products</u>	1.25	1,368	1.34	1,459	3.21	1,289	5.15	2,070	2.02	110	2.58	141	1.22	813	1.31	869
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.11	64	1.29	74	1.20	254	1.60	341	1.22	12	1.55	16	1.25	17	1.70	23
Broadwoven fabric mills	1.19	12	1.44	15	1.33	52	1.88	74	1.28	3	1.63	4	1.29	5	1.72	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	1.25	7	1.44	8	1.48	21	2.13	30	1.40	1	1.78	2	1.38	2	1.79	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	1.36	23	1.67	29	1.41	123	1.93	168	1.43	6	1.82	8	1.54	9	2.11	12
Fabric coating mills	1.28	2	1.54	3	1.47	9	2.13	13	1.37	1	1.75	1	1.49	1	2.04	1
Total --		109		128		458		625		24		30		34		45
<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	1.24	11	1.50	14	1.25	67	1.62	88	1.32	3	1.69	4	1.32	5	1.72	6
Textile bag & canvas mills	1.24	14	1.59	18	1.24	97	1.68	131	1.24	5	1.58	6	1.30	7	1.77	9
All other textile product mills	1.22	13	1.46	15	1.22	82	1.54	103	1.32	3	1.68	4	1.37	4	1.83	6
Total --		38		47		246		321		11		14		16		21
<u>Apparel</u>																
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
Cut & sew apparel contractors	1.25	29	1.82	42	1.11	430	1.40	542	1.15	16	1.48	20	1.24	18	1.78	26
Mens & boys cut & sew apparel	1.26	70	1.62	90	1.31	489	1.77	662	1.31	24	1.67	31	1.30	38	1.73	50
Womens & girls cut & sew apparel	1.47	24	1.72	28	1.95	130	2.47	165	2.67	5	3.42	6	2.33	8	3.03	11
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	1.37	11	1.71	14	1.29	95	1.61	118	1.48	3	1.89	4	1.76	4	2.46	6
Total --		134		174		1,144		1,487		49		62		68		92
<u>Leather & Allied Products</u>																
Leather & hide tanning & finishing	1.50	5	1.73	5	1.81	19	2.39	25	1.97	1	2.52	1	2.27	1	3.12	2

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Footwear	1.29	15	1.55	19	1.29	108	1.61	134	1.47	4	1.88	5	1.52	6	2.02	8
Other leather & allied products	1.33	1	1.61	2	1.25	11	1.53	13	1.47	0 ^b	1.88	0 ^b	1.52	1	2.01	1
Total --		21		26		138		173		5		6		7		10
Secondary Agriculture Total --		14,567		16,186		31,554		45,476		1,968		2,516		4,036		5,018
Agriculture Total --		17,572		19,545		66,910		83,875		2,396		3,064		5,180		6,376
Forestry Inputs																
Forestry, forest products, & timber tract production	1.34	74	1.61	89	4.02	523	5.03	655	2.26	18	2.92	23	1.46	36	1.83	46
Commercial logging	1.40	361	1.90	489	1.49	2,400	2.19	3,514	1.35	141	1.76	185	1.46	171	2.12	249
Forestry Inputs Total --		435		578		2,923		4,169		159		208		207		295
Primary Forestry																
Sawmills & wood preservation	1.32	222	1.54	258	1.44	1,165	1.83	1,478	1.67	44	2.14	56	1.81	61	2.46	83
Pulp mills	1.43	415	1.66	481	3.07	1,145	4.61	1,717	1.93	81	2.46	103	1.77	138	2.29	178
Paper mills	1.37	3,155	1.59	3,681	2.82	7,316	4.57	11,846	1.68	639	2.14	817	1.47	1,278	1.83	1,597
Paperboard Mills	1.41	662	1.63	761	2.92	1,758	4.35	2,616	1.99	121	2.54	155	1.74	223	2.21	283
Primary Forestry Total --		4,453		5,182		11,384		17,657		885		1,132		1,700		2,141
Secondary Forestry																
<u>Veneer, Plywood, & Engineered Wood Products</u>																
Veneer & plywood	1.20	2	1.51	2	1.24	11	1.71	15	1.24	1	1.58	1	1.29	1	1.78	1
Engineered wood member & truss	1.25	19	1.57	23	1.28	119	1.72	159	1.31	6	1.67	7	1.31	9	1.73	12
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 --		20		26		130		175		6		8		10		13
<u>Wood Windows & Doors & Millwork</u>	1.32	278	1.62	343	1.33	1,798	1.75	2,355	1.43	79	1.83	101	1.53	110	2.07	150
<u>Wood Containers & Pallets</u>	1.25	132	1.55	164	1.21	990	1.54	1,264	1.29	39	1.65	50	1.28	66	1.65	85

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<u>Manufactured Homes (Mobile Homes)</u>																
Manufactured homes (mobile homes)	1.28	97	1.64	124	1.28	697	1.71	928	1.29	32	1.65	41	1.40	43	1.93	59
Prefabricated wood buildings	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 --		97		124		697		928		32		41		43		59
<u>All Other Miscellaneous Wood Products</u>	1.32	2	1.63	3	1.35	17	1.75	22	1.44	1	1.84	1	1.40	1	1.81	2
<u>Paperboard Containers</u>	1.29	589	1.52	696	1.65	2,199	2.34	3,119	1.55	131	1.97	167	1.73	179	2.36	244
<u>Paper Bags & Coated & Treated Paper</u>																
Coated & laminated paper, packaging paper & plastics film	1.27	636	1.48	739	1.65	2,015	2.38	2,906	1.53	126	1.96	161	1.52	207	1.98	270
All other paper bag & coated & treated paper	1.25	21	1.48	25	1.55	74	2.28	109	1.40	5	1.79	6	1.50	7	2.03	9
Total --		657		765		2,089		3,015		131		168		214		279
<u>Stationery Products</u>	1.33	50	1.57	59	1.64	207	2.27	286	1.60	11	2.04	14	1.75	16	2.34	22
<u>Other Converted Paper Products</u>																
Sanitary paper products	1.24	460	1.38	514	2.06	976	3.04	1,440	1.74	66	2.22	84	1.35	172	1.61	204
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 --		460		514		976		1,440		66		84		172		204
<u>Wood Kitchen Cabinets & Countertops</u>	1.41	39	1.79	50	1.37	321	1.77	413	1.44	13	1.83	17	1.76	15	2.53	21
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.21	78	1.53	99	1.25	459	1.73	633	1.24	25	1.58	32	1.27	37	1.68	50
Nonupholstered wood household furniture	1.28	12	1.57	15	1.27	86	1.62	110	1.37	3	1.75	4	1.33	6	1.71	8
Institutional furniture	1.33	43	1.57	51	1.38	267	1.73	334	1.59	10	2.04	12	1.57	16	2.02	21
Total --		134		164		812		1,077		38		48		60		78

Table E.4. Total Impacts from Agriculture and Forestry^a, Memphis, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<u>Office Furniture</u>																
Wood television, radio, & sewing machine cabinet	1.23	14	1.47	17	1.42	69	1.89	92	1.44	3	1.84	4	1.26	8	1.53	9
Custom architectural woodwork & millwork	1.31	17	1.66	22	1.27	133	1.65	173	1.32	6	1.68	7	1.43	8	1.96	10
Showcase, partition, shelving, & locker	1.32	30	1.61	37	1.33	175	1.77	234	1.36	8	1.74	11	1.43	12	1.91	16
Total --		61		75		377		498		17		22		27		36
<u>Other Furniture Related Products</u>																
Mattresses	1.32	10	1.52	12	1.64	44	2.16	58	1.79	2	2.28	2	1.54	4	1.93	5
Blind & shades	1.33	24	1.63	30	1.29	171	1.66	220	1.40	7	1.79	9	1.60	9	2.21	12
Total --		35		42		215		278		9		11		13		17
Secondary Forestry Total --		2,555		3,024		10,828		14,870		573		732		927		1,211
Forestry Total --		7,442		8,784		25,135		36,696		1,618		2,072		2,834		3,647
Agriculture & Forestry Total --		25,014		28,329		92,045		120,571		4,014		5,135		8,013		10,023
Construction --		7,653		9,989		66,491		86,637		2,766		3,555		3,530		4,946
Finance, Insurance, & Real Estate --		27,643		32,602		124,052		162,346		5,313		6,815		17,594		20,600
Government --		12,433		19,164		148,286		206,128		8,280		10,555		9,736		13,796
Manufacturing --		29,483		34,167		89,698		129,989		5,696		7,280		10,149		12,986
Mining --		178		213		981		1,287		42		54		73		95
Miscellaneous --		1,851		2,599		22,559		28,993		913		1,166		1,054		1,507
Retail Trade --		6,342		8,989		95,700		118,482		3,203		4,098		5,166		6,769
Services --		48,213		65,549		494,772		644,122		20,765		26,624		29,585		40,091
Transportation, Information, & Utilities --		7,860		10,164		52,681		72,528		2,771		3,550		3,905		5,301
Wholesale Trade --		9,720		12,771		57,946		84,209		3,688		4,719		6,267		8,116

^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, 2009

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<i>Agricultural Inputs</i>																
<u>Agricultural Chemicals</u>																
Fertilizers	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	1.42	16	1.64	18	5.07	34	8.04	54	3.94	2	5.38	3	2.24	5	2.93	6
Lime & gypsum products	1.39	87	1.74	109	2.13	275	3.56	459	1.57	21	2.15	28	1.46	38	1.97	51
Total --		103		128		309		514		23		31		43		57
<u>Agricultural Machinery</u>																
Farm machinery & equipment	1.33	24	1.55	28	1.93	77	2.76	110	2.09	4	2.86	5	1.78	7	2.38	10
Lawn & garden equipment	1.32	44	1.50	50	1.64	166	2.14	217	2.58	6	3.53	8	2.28	10	3.09	14
Total --		67		77		243		326		9		13		17		24
<i>Agricultural Inputs Total --</i>		171		205		552		840		32		44		60		81
<i>Primary Agriculture</i>																
Oilseed farming	1.30	148	1.40	158	1.05	7,120	1.06	7,207	16.36	10	22.35	13	1.37	76	1.48	83
Grain farming	1.37	112	1.50	122	1.04	7,333	1.06	7,420	5.25	10	7.18	13	1.64	46	1.86	53
Vegetable & melon farming	1.26	35	1.41	39	1.21	441	1.31	476	2.25	4	3.08	5	1.26	20	1.43	22
Fruit farming	1.22	6	1.32	6	1.19	78	1.25	83	4.37	0 ^b	6.00	1	1.20	3	1.30	4
Tree nut farming	1.29	0 ^b	1.59	1	1.10	13	1.16	14	1.57	0 ^b	2.15	0 ^b	1.35	0 ^b	1.73	0 ^b
Greenhouse, nursery, & floriculture production	1.04	249	1.12	268	1.02	4,469	1.06	4,616	1.20	16	1.66	22	1.03	219	1.08	230
Tobacco farming	1.41	116	1.56	128	1.11	3,466	1.14	3,569	5.77	12	7.89	16	1.87	43	2.19	50
Cotton farming	1.33	6	1.51	7	1.09	188	1.13	195	2.11	1	2.89	1	1.44	3	1.71	3
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	1.37	454	1.52	503	1.27	5,680	1.36	6,098	3.92	47	5.36	64	1.58	187	1.84	217
Cattle ranching & farming	1.72	388	1.88	424	1.46	6,583	1.53	6,887	4.76	34	6.50	47	2.93	99	3.58	121
Dairy cattle & milk production	1.39	78	1.50	84	1.22	1,098	1.27	1,151	9.21	6	12.60	8	1.88	23	2.20	27
Poultry & egg production	1.24	347	1.35	380	1.41	1,946	1.61	2,219	2.31	31	3.16	42	1.53	85	1.89	105
Animal production, except cattle/poultry/eggs	1.29	58	1.46	66	1.05	3,665	1.07	3,731	1.80	7	2.47	10	1.33	26	1.57	31
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.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Commercial hunting & trapping	1.44	12	1.68	14	1.15	201	1.25	218	3.02	2	4.12	3	1.73	5	2.18	6
Support activities for agriculture & forestry	1.10	47	2.02	87	1.02	1,961	1.19	2,294	1.04	38	1.42	51	1.08	34	1.85	58
Primary Agriculture Total --		2,056		2,287		44,242		46,177		217		297		870		1,010
Secondary Agriculture																
<u>Foods</u>																
Dog & cat food	1.34	1,178	1.52	1,339	3.26	2,305	5.16	3,654	2.43	153	3.32	209	1.66	354	2.12	452
Other animal foods	1.30	57	1.46	64	2.85	110	4.36	168	2.55	7	3.48	9	2.20	12	2.98	16
Total --		1,235		1,403		2,415		3,822		159		218		366		468
<u>Grain & Oilseed Milling</u>																
Flour milling & malt	1.59	61	1.85	71	5.01	164	7.52	247	5.50	9	7.51	13	4.76	16	6.53	22
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	1.33	191	1.43	206	3.84	243	5.78	365	3.47	14	4.74	19	2.28	30	2.96	39
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 --		252		276		407		612		23		32		46		61
<u>Sugar & Confectionary Products</u>																
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
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
Chocolate & confectionery from cacao beans	1.45	40	1.67	46	2.45	119	3.51	170	3.21	6	4.39	8	3.50	9	4.98	12
Confectionery from purchased chocolate	1.43	206	1.71	246	1.78	757	2.56	1,093	2.02	38	2.76	52	1.83	67	2.50	91
Nonchocolate confectionery	1.40	13	1.67	16	1.80	48	2.59	69	2.05	2	2.80	3	2.06	4	2.89	5
Total --		259		308		924		1,332		46		63		80		109
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen foods	1.52	522	1.88	647	1.94	2,043	2.92	3,084	1.90	118	2.60	161	2.03	169	2.95	244
Fruit & vegetable canning, pickling, & drying	1.42	543	1.68	644	2.19	1,674	3.30	2,518	2.15	95	2.94	130	2.02	160	2.80	221
Total --		1,064		1,290		3,717		5,602		213		292		328		465
<u>Dairy Products</u>																

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Fluid milk & butter	1.53	890	1.78	1,035	3.00	2,442	4.50	3,655	2.78	137	3.80	188	2.72	221	3.81	309
Cheese	1.42	101	1.62	115	3.28	242	4.87	359	3.30	13	4.50	18	3.50	21	4.95	29
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	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 --		991		1,150		2,684		4,014		151		206		242		338
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering, rendering, & processing	1.43	1,013	1.64	1,164	2.07	3,339	2.86	4,602	2.58	143	3.53	195	3.15	198	4.61	290
Poultry processing	1.37	1,229	1.66	1,488	1.49	6,061	2.02	8,218	1.76	244	2.40	333	2.01	309	3.03	465
Total --		2,242		2,652		9,400		12,819		387		529		507		755
<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 products	1.44	278	1.90	366	1.50	1,769	2.13	2,508	1.56	84	2.13	114	1.72	111	2.56	164
Cookie, cracker, & pastas	1.39	69	1.70	85	2.04	215	3.26	342	1.76	14	2.40	20	1.66	25	2.27	34
Tortillas	1.52	261	1.92	329	1.65	1,344	2.34	1,908	1.74	64	2.38	87	1.81	95	2.59	136
Total --		608		779		3,329		4,759		162		221		231		335
<u>Other Foods</u>																
Snack foods	1.38	836	1.60	970	2.50	2,142	3.81	3,260	2.39	126	3.26	173	1.75	267	2.29	348
Coffee & tea	1.45	40	1.69	47	2.90	121	4.25	177	3.28	6	4.48	9	2.97	11	4.12	15
Flavoring syrup & concentrates	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Seasoning & dressing	1.43	265	1.68	312	2.18	826	3.20	1,215	2.28	44	3.12	60	2.60	63	3.75	91
All other foods	1.44	18	1.76	22	1.91	73	2.78	107	1.93	4	2.64	5	2.00	6	2.81	9
Total --		1,160		1,351		3,163		4,759		181		247		347		463
<u>Beverages</u>																
Soft drink & ice	1.27	581	1.55	711	2.20	1,280	4.06	2,365	1.46	123	1.99	168	1.58	173	2.30	251
Breweries	1.22	46	1.41	54	2.67	76	4.82	137	1.69	7	2.31	9	1.26	21	1.52	26
Wineries	1.38	31	1.64	37	1.75	123	2.44	172	2.15	6	2.93	8	2.20	9	3.07	13

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Distilleries	1.17	480	1.33	545	2.12	775	3.60	1,317	1.63	61	2.23	84	1.14	336	1.27	375
Total --		1,139		1,346		2,254		3,991		197		269		539		665
<u>Tobacco Products</u>	1.26	2,481	1.37	2,696	3.80	2,301	6.77	4,106	2.13	204	2.91	279	1.24	1,484	1.35	1,615
<u>Textile Mills</u>																
Fiber, yarn, & thread mills	1.14	51	1.37	62	1.22	202	1.75	290	1.25	10	1.70	14	1.29	14	1.89	20
Broadwoven fabric mills	1.25	11	1.55	14	1.36	53	1.94	76	1.43	3	1.95	3	1.45	4	2.07	5
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	307	1.49	375	1.49	865	2.48	1,435	1.33	65	1.82	88	1.31	109	1.81	150
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	1.38	83	1.77	106	1.42	455	2.03	649	1.50	22	2.05	30	1.64	30	2.42	44
Fabric coating mills	1.34	4	1.65	5	1.53	19	2.23	27	1.59	1	2.18	1	1.79	1	2.62	2
Total --		457		563		1,594		2,477		100		137		157		222
<u>Textile Product Mills</u>																
Carpet & rug mills	1.15	79	1.34	93	1.25	281	1.75	393	1.32	13	1.80	17	1.27	22	1.74	31
Curtain & linen mills	1.27	35	1.56	44	1.24	248	1.58	316	1.49	8	2.03	11	1.48	13	2.07	17
Textile bag & canvas mills	1.24	28	1.71	38	1.25	183	1.85	271	1.23	10	1.68	14	1.29	14	1.89	20
All other textile product mills	1.20	105	1.58	138	1.24	586	1.83	864	1.22	31	1.67	43	1.26	46	1.81	66
Total --		247		313		1,298		1,844		62		84		94		134
<u>Apparel</u>																
Apparel knitting mills	1.36	2	1.69	3	1.29	18	1.63	23	1.67	1	2.28	1	1.71	1	2.43	1
Cut & sew apparel contractors	1.29	33	2.05	52	1.13	455	1.52	614	1.17	18	1.61	25	1.27	21	1.97	32
Mens & boys cut & sew apparel	1.32	264	1.78	355	1.33	2,049	1.82	2,809	1.41	86	1.92	118	1.40	133	1.99	188
Womens & girls cut & sew apparel	1.54	32	1.87	39	2.06	177	2.74	235	2.92	7	3.99	9	2.53	11	3.49	15
Other cut & sew apparel	1.46	17	1.89	22	1.36	153	1.73	195	1.74	5	2.37	7	1.86	7	2.66	10
Apparel accessories & other apparel	1.48	9	1.90	12	1.32	78	1.68	99	1.71	2	2.34	3	2.15	3	3.20	5
Total --		357		482		2,929		3,975		118		162		175		251
<u>Leather & Allied Products</u>																

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Leather & hide tanning & finishing	1.54	27	1.84	33	1.87	112	2.60	156	2.04	5	2.78	7	2.38	7	3.51	10
Footwear	1.34	83	1.68	104	1.32	581	1.72	758	1.56	20	2.13	27	1.62	31	2.30	44
Other leather & allied products	1.28	24	1.76	32	1.33	136	2.04	210	1.26	8	1.72	11	1.29	13	1.84	18
Total --		134		169		829		1,124		33		46		50		72
Secondary Agriculture Total --		12,626		14,782		37,243		55,237		2,037		2,783		4,647		5,952
Agriculture Total --		14,852		17,274		82,037		102,254		2,286		3,124		5,577		7,043
Forestry Inputs																
Forestry, forest products, & timber tract production	1.22	49	1.48	59	3.20	271	4.23	359	1.75	10	2.39	13	1.29	24	1.63	30
Commercial logging	1.44	167	1.99	230	1.56	1,222	2.24	1,757	1.31	60	1.79	82	1.49	77	2.24	115
Forestry Inputs Total --		215		289		1,493		2,116		70		96		100		145
Primary Forestry																
Sawmills & wood preservation	1.38	479	1.67	583	1.50	2,494	2.02	3,363	1.73	98	2.37	133	1.88	136	2.74	198
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	1.43	187	1.72	224	2.86	492	4.67	803	2.00	35	2.73	48	1.70	68	2.26	90
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 --		666		807		2,986		4,166		133		181		203		289
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	1.28	21	1.68	27	1.27	146	1.74	200	1.39	6	1.90	8	1.39	9	1.95	13
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 --		21		27		146		200		6		8		9		13
<u>Wood Windows & Doors & Millwork</u>	1.32	157	1.74	207	1.35	984	1.92	1,399	1.42	47	1.93	64	1.50	65	2.19	95

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
<u>Wood Containers & Pallets</u>	1.27	103	1.65	134	1.21	846	1.58	1,105	1.36	29	1.85	40	1.33	50	1.83	68
<u>Manufactured Homes (Mobile Homes)</u>																
Manufactured homes (mobile homes)	1.31	45	1.77	60	1.29	324	1.81	453	1.32	15	1.80	20	1.44	19	2.14	29
Prefabricated wood buildings	1.32	32	1.78	43	1.31	237	1.82	329	1.38	10	1.88	14	1.50	13	2.27	20
Total --		77		103		561		782		25		34		32		48
<u>All Other Miscellaneous Wood Products</u>	1.37	91	1.77	118	1.36	674	1.82	900	1.54	25	2.10	35	1.48	43	2.05	59
<u>Paperboard Containers</u>	1.30	748	1.61	931	1.67	2,774	2.59	4,302	1.54	172	2.11	235	1.73	236	2.53	346
<u>Paper Bags & Coated & Treated Paper</u>																
Coated & laminated paper, packaging paper & plastics film	1.26	142	1.56	174	1.68	430	2.76	704	1.46	31	2.00	42	1.45	51	2.02	70
All other paper bag & coated & treated paper	1.28	138	1.57	169	1.58	501	2.41	763	1.52	29	2.08	40	1.64	42	2.39	61
Total --		279		343		931		1,467		60		82		92		131
<u>Stationery Products</u>	1.33	223	1.67	280	1.66	890	2.56	1,369	1.55	54	2.12	74	1.68	78	2.43	113
<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	1.35	95	1.70	119	1.65	419	2.45	622	1.64	23	2.25	31	1.75	33	2.51	48
Total --		95		119		419		622		23		31		33		48
<u>Wood Kitchen Cabinets & Countertops</u>	1.47	157	1.96	209	1.40	1,301	1.88	1,742	1.55	50	2.12	68	1.97	58	3.05	90
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.27	18	1.62	23	1.25	131	1.64	172	1.41	5	1.93	6	1.45	7	2.06	10
Nonupholstered wood household furniture	1.30	35	1.69	46	1.29	257	1.73	345	1.41	10	1.93	13	1.36	17	1.87	24
Institutional furniture	1.34	7	1.67	9	1.41	44	1.90	59	1.58	2	2.15	2	1.55	3	2.13	4
Total --		61		78		432		576		16		22		27		38

Table E.5. Total Impacts from Agriculture and Forestry^a, Nashville, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
<u>Office Furniture</u>																
Wood television, radio, & sewing machine cabinet	1.24	22	1.55	28	1.42	117	1.97	162	1.47	5	2.01	7	1.28	12	1.64	15
Custom architectural woodwork & millwork	1.27	46	1.80	65	1.30	302	2.00	465	1.22	18	1.67	25	1.30	24	1.94	35
Showcase, partition, shelving, & locker	1.33	215	1.71	277	1.34	1,289	1.88	1,806	1.40	58	1.91	80	1.47	86	2.11	123
Total --		283		370		1,708		2,433		82		111		121		174
<u>Other Furniture Related Products</u>																
Mattresses	1.35	160	1.62	191	1.66	719	2.28	987	1.93	30	2.63	41	1.64	59	2.18	78
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 --		160		191		719		987		30		41		59		78
Secondary Forestry Total --		2,455		3,111		12,385		17,884		618		845		905		1,302
Forestry Total --		3,336		4,207		16,865		24,166		821		1,122		1,208		1,735
Agriculture & Forestry Total --		18,188		21,481		98,902		126,419		3,107		4,245		6,785		8,778
Construction --		14,127		19,534		125,803		171,186		5,104		6,970		6,532		9,803
Finance, Insurance, & Real Estate --		42,163		51,613		187,574		257,744		7,886		10,776		25,913		31,628
Government --		17,683		29,046		213,304		308,413		10,677		14,602		12,679		19,530
Manufacturing --		52,550		62,625		154,551		238,947		9,479		12,959		16,419		22,510
Mining --		1,004		1,244		4,672		6,687		226		309		462		607
Miscellaneous --		3,481		4,967		41,131		53,577		1,398		1,911		1,729		2,627
Retail Trade --		10,250		15,704		158,511		204,217		5,136		7,019		8,299		11,597
Services --		79,758		116,239		732,669		1,038,686		34,402		46,997		48,338		70,402
Transportation, Information, & Utilities --		8,939		12,078		57,197		83,515		2,958		4,042		4,517		6,415
Wholesale Trade --		11,627		16,321		71,128		110,449		4,417		6,038		7,475		10,313

^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, Tri-Cities, 2009

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<i>Agricultural Inputs</i>																
<i>Agricultural Chemicals</i>																
Fertilizers	1.27	4	1.34	4	3.87	8	4.91	10	5.47	0 ^b	6.70	0 ^b	4.48	0 ^b	5.63	1
Pesticide & other agricultural chemicals	1.17	26	1.26	28	3.26	38	4.90	57	1.82	3	2.23	4	1.33	8	1.53	9
Lime & gypsum 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 --		30		32		45		66		3		4		8		10
<i>Agricultural Machinery</i>																
Farm machinery & equipment	1.20	99	1.31	108	1.64	312	2.05	391	1.76	13	2.15	16	1.53	25	1.83	30
Lawn & garden equipment	1.17	132	1.28	144	1.42	436	1.80	551	1.50	18	1.83	23	1.40	35	1.68	42
Total --		231		252		748		943		31		38		60		72
<i>Agricultural Inputs Total --</i>		261		283		794		1,009		34		42		68		82
<i>Primary Agriculture</i>																
Oilseed farming	1.18	1	1.21	1	1.01	57	1.01	57	6.18	0 ^b	7.56	0 ^b	1.20	0 ^b	1.24	0 ^b
Grain farming	1.20	3	1.26	3	1.01	521	1.01	522	2.67	0 ^b	3.26	0 ^b	1.33	1	1.42	1
Vegetable & melon farming	1.15	10	1.25	11	1.05	195	1.09	202	1.33	1	1.60	2	1.14	5	1.24	6
Fruit farming	1.13	1	1.17	2	1.05	29	1.06	29	2.03	0 ^b	2.38	0 ^b	1.10	1	1.14	1
Tree nut farming	1.17	0 ^b	1.28	0 ^b	1.02	4	1.04	4	1.33	0 ^b	1.59	0 ^b	1.18	0 ^b	1.31	0 ^b
Greenhouse, nursery, & floriculture production	1.02	8	1.11	9	1.00	432	1.02	439	1.03	2	1.21	2	1.01	7	1.07	8
Tobacco farming	1.23	12	1.29	13	1.02	1,177	1.02	1,183	2.68	1	3.25	1	1.45	4	1.58	4
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	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Cattle ranching & farming	1.56	70	1.65	74	1.35	1,826	1.37	1,861	2.83	6	3.44	7	2.19	15	2.51	17
Dairy cattle & milk production	1.33	25	1.39	26	1.08	494	1.11	504	3.75	2	4.56	2	1.58	6	1.74	7
Poultry & egg production	1.28	35	1.36	37	1.13	246	1.22	266	1.81	3	2.20	4	1.47	8	1.71	9
Animal production, except cattle/poultry/eggs	1.21	8	1.31	8	1.02	806	1.03	812	1.47	1	1.78	1	1.20	3	1.32	4
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	1.31	1	1.44	1	1.11	18	1.16	18	2.40	0 ^b	2.98	0 ^b	1.49	0 ^b	1.72	0 ^b

Table E.6. Total Impacts from Agriculture and Forestry^a, Tri-Cities, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Support activities for agriculture & forestry	1.06	4	1.67	6	1.01	187	1.12	207	1.03	3	1.27	4	1.05	2	1.55	4
Primary Agriculture Total --		178		190		5,992		6,106		19		23		55		62
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 foods	1.22	49	1.32	53	2.36	76	3.50	113	1.68	6	2.06	7	1.53	11	1.84	14
Total --		49		53		76		113		6		7		11		14
<u>Grain & Oilseed Milling</u>																
Flour milling & 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>																
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
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
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
Nonchocolate confectionery	1.19	13	1.33	15	1.47	46	1.93	60	1.46	2	1.78	3	1.46	4	1.82	4
Total --		13		15		46		60		2		3		4		4
<u>Fruit & Vegetable Preserving & Specialty Foods</u>																
Frozen foods	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Fruit & vegetable canning, pickling, & drying	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>Dairy Products</u>																
Fluid milk & butter	1.34	153	1.45	166	2.35	375	3.11	497	2.08	20	2.54	24	2.02	31	2.51	39

Table E.6. Total Impacts from Agriculture and Forestry^a, Tri-Cities, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
Cheese	1.31	81	1.39	87	2.61	172	3.38	223	2.82	8	3.44	10	2.95	12	3.70	16
Dry, condensed, & evaporated dairy products	1.37	138	1.48	149	3.06	258	4.34	365	2.09	17	2.56	21	1.86	31	2.26	38
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 --		372		402		804		1,084		45		55		75		92
<u>Animal Slaughtering & Processing</u>																
Animal (except poultry) slaughtering, rendering, & processing	1.18	52	1.28	56	1.60	158	2.00	198	1.74	6	2.12	8	1.99	8	2.58	11
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 --		52		56		158		198		6		8		8		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 products	1.20	18	1.47	23	1.31	110	1.76	149	1.22	6	1.49	7	1.27	8	1.66	10
Cookie, cracker, & pastas	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Tortillas	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 --		18		23		110		149		6		7		8		10
<u>Other Foods</u>																
Snack foods	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 & concentrates	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Seasoning & dressing	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 foods	1.24	8	1.40	9	1.57	32	2.05	42	1.51	2	1.85	2	1.53	2	1.91	3
Total --		8		9		32		42		2		2		2		3
<u>Beverages</u>																
Soft drink & ice	1.17	251	1.27	272	1.75	559	2.37	758	1.55	31	1.90	38	1.65	43	2.12	55
Breweries	1.14	2	1.22	2	1.73	3	2.34	4	1.61	0 ^b	1.96	0 ^b	1.22	1	1.38	1
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	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, Tri-Cities, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Total --		253		274		562		762		32		39		44		56
<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	98	1.31	110	1.19	361	1.57	477	1.21	19	1.47	23	1.23	26	1.57	33
Broadwoven fabric mills	1.16	12	1.36	14	1.25	47	1.73	65	1.19	3	1.46	4	1.19	4	1.50	5
Narrow fabric mills & schiffli machine embroidery	1.18	0 ^b	1.37	0 ^b	1.12	3	1.33	4	1.21	0 ^b	1.47	0 ^b	1.26	0 ^b	1.65	0 ^b
Nonwoven fabric mills	1.13	55	1.27	62	1.32	154	1.86	219	1.22	10	1.48	13	1.20	18	1.47	22
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	25	1.40	28	1.27	151	1.55	184	1.39	5	1.70	7	1.49	7	1.92	9
Fabric coating mills	1.18	116	1.34	132	1.33	468	1.77	621	1.29	25	1.57	30	1.37	32	1.77	42
Total --		306		347		1,185		1,570		63		76		88		111
<u>Textile Product Mills</u>																
Carpet & rug mills	1.16	3	1.24	3	1.19	10	1.40	12	1.47	0 ^b	1.80	0 ^b	1.38	0 ^b	1.69	1
Curtain & linen mills	1.19	5	1.35	6	1.17	35	1.37	41	1.34	1	1.63	1	1.32	2	1.63	2
Textile bag & canvas mills	1.22	7	1.42	8	1.17	62	1.38	73	1.29	2	1.57	2	1.35	2	1.73	3
All other textile product mills	1.21	8	1.33	9	1.17	59	1.32	67	1.47	1	1.80	1	1.53	2	1.93	2
Total --		22		25		166		193		4		5		6		8
<u>Apparel</u>																
Apparel knitting mills	1.18	2	1.41	2	1.21	14	1.54	18	1.25	1	1.56	1	1.25	1	1.60	1
Cut & sew apparel contractors	1.15	8	1.60	11	1.08	117	1.36	146	1.09	5	1.33	6	1.13	5	1.51	7
Mens & boys cut & sew apparel	1.18	4	1.43	5	1.21	38	1.49	46	1.25	1	1.54	2	1.24	2	1.55	3
Womens & girls cut & sew apparel	1.31	11	1.44	12	1.65	61	1.92	71	2.64	2	3.22	2	2.22	3	2.75	3
Other cut & sew apparel	1.25	3	1.46	3	1.21	26	1.41	30	1.40	1	1.71	1	1.45	1	1.84	1
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 --		28		34		256		313		9		11		12		15
<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

Table E.6. Total Impacts from Agriculture and Forestry^a, Tri-Cities, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
		(million \$)				(number)				(million \$)				(million \$)		
Footwear	1.18	2	1.37	3	1.21	17	1.46	20	1.27	1	1.55	1	1.30	1	1.62	1
Other leather & allied products	1.19	1	1.42	1	1.18	5	1.44	6	1.25	0 ^b	1.55	0 ^b	1.26	0 ^b	1.61	0 ^b
Total --		3		3		21		26		1		1		1		1
Secondary Agriculture Total --		1,125		1,242		3,417		4,508		175		214		258		326
Agriculture Total --		1,564		1,715		10,202		11,623		229		279		381		469
Forestry Inputs																
Forestry, forest products, & timber tract production	1.10	16	1.23	18	1.38	46	1.91	64	1.22	2	1.53	3	1.11	7	1.27	8
Commercial logging	1.21	17	1.57	22	1.18	101	1.72	148	1.14	6	1.43	8	1.23	8	1.69	11
Forestry Inputs Total --		32		39		147		212		9		11		15		19
Primary Forestry																
Sawmills & wood preservation	1.23	65	1.40	74	1.34	335	1.65	415	1.43	13	1.76	15	1.51	17	1.95	22
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	1.23	1,471	1.38	1,649	2.25	3,196	3.43	4,873	1.46	270	1.79	329	1.31	551	1.56	654
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 --		1,537		1,723		3,532		5,288		282		345		568		676
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	1.19	22	1.41	26	1.19	165	1.46	204	1.25	6	1.53	7	1.25	10	1.56	12
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 --		22		26		165		204		6		7		10		12
<u>Wood Windows & Doors & Millwork</u>	1.21	50	1.44	60	1.24	318	1.59	409	1.26	14	1.54	17	1.31	19	1.69	25
<u>Wood Containers & Pallets</u>	1.17	31	1.38	36	1.14	258	1.38	312	1.21	8	1.48	10	1.19	14	1.47	18

Table E.6. Total Impacts from Agriculture and Forestry^a, Tri-Cities, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
<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	1	1.45	1	1.20	8	1.48	10	1.26	0 ^b	1.55	0 ^b	1.35	0 ^b	1.78	0 ^b
Total --		1		1		8		10		0 ^b		0 ^b		0 ^b		0 ^b
<u>All Other Miscellaneous Wood Products</u>	1.25	1	1.46	1	1.24	8	1.48	9	1.37	0 ^b	1.68	0 ^b	1.33	0 ^b	1.63	1
<u>Paperboard Containers</u>	1.19	333	1.35	376	1.46	1,216	1.95	1,623	1.38	66	1.69	80	1.50	87	1.93	112
<u>Paper Bags & Coated & Treated Paper</u>																
Coated & laminated paper, packaging paper & plastics film	1.17	72	1.29	80	1.43	236	1.86	308	1.43	12	1.74	14	1.41	19	1.74	23
All other paper bag & coated & treated paper	1.12	9	1.34	10	1.37	25	2.24	41	1.15	2	1.41	3	1.18	3	1.53	4
Total --		81		90		262		349		14		17		22		28
<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	1.25	67	1.40	75	1.45	306	1.82	385	1.54	13	1.88	16	1.60	18	2.03	23
Total --		67		75		306		385		13		16		18		23
<u>Wood Kitchen Cabinets & Countertops</u>	1.30	6	1.56	7	1.28	53	1.55	64	1.33	2	1.63	2	1.59	2	2.14	3
<u>Household & Institutional Furniture</u>																
Upholstered household furniture	1.15	5	1.37	6	1.18	33	1.52	43	1.17	2	1.44	2	1.19	2	1.49	3
Nonupholstered wood household furniture	1.18	9	1.40	11	1.21	64	1.53	81	1.22	3	1.49	3	1.19	5	1.45	6
Institutional furniture	1.18	2	1.37	2	1.28	10	1.62	12	1.28	0 ^b	1.56	0 ^b	1.26	1	1.54	1
Total --		16		19		107		136		5		6		8		10

Table E.6. Total Impacts from Agriculture and Forestry^a, Tri-Cities, 2009 (Cont.)

Sector	TIO				Employment				Labor Income				TVA			
	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total	Type I	Indirect	Type Sam	Total
	(million \$)				(number)				(million \$)				(million \$)			
Office Furniture																
Wood television, radio, & sewing machine cabinet	1.15	3	1.32	4	1.32	15	1.73	19	1.26	1	1.54	1	1.15	2	1.34	2
Custom architectural woodwork & millwork	1.18	5	1.46	6	1.20	38	1.55	49	1.17	2	1.43	2	1.23	2	1.60	3
Showcase, partition, shelving, & locker	1.17	6	1.39	7	1.22	33	1.59	43	1.19	2	1.46	2	1.23	2	1.56	3
Total --		14		16		85		111		4		5		6		8
Other Furniture Related Products																
Mattresses	1.21	14	1.34	15	1.44	60	1.77	74	1.55	2	1.89	3	1.37	5	1.63	5
Blind & shades	1.22	12	1.42	14	1.20	92	1.45	111	1.30	3	1.59	4	1.44	4	1.88	5
Total --		26		29		152		185		5		6		8		10
Secondary Forestry Total --		648		739		2,939		3,797		138		168		197		249
Forestry Total --		2,217		2,502		6,618		9,297		429		524		779		944
Agriculture & Forestry Total --		3,781		4,217		16,820		20,920		657		803		1,160		1,413
Construction --		2,034		2,533		19,373		24,074		723		889		899		1,188
Finance, Insurance, & Real Estate --		5,291		5,902		21,001		25,970		779		955		2,970		3,324
Government --		3,436		4,669		38,863		50,455		1,881		2,292		2,212		2,921
Manufacturing --		12,119		13,602		36,223		50,176		2,228		2,723		3,491		4,350
Mining --		107		123		488		634		23		28		43		52
Miscellaneous --		456		588		6,346		7,587		200		244		227		304
Retail Trade --		1,540		2,077		28,125		33,173		799		977		1,259		1,569
Services --		8,942		11,504		98,151		122,268		3,822		4,676		5,071		6,555
Transportation, Information, & Utilities --		1,034		1,271		6,965		9,202		349		428		509		646
Wholesale Trade --		1,277		1,598		8,249		11,271		482		589		815		1,001

^aTotals may not add due to rounding.

^bValues of zero are nonzero values less than 1.