The U.S. National and State-Level Economic Benefits of Avocado Imports from Mexico

Research Report to the Asociación de Productores y Empacadores de Aguacate (APEAM, A.C.) and the Mexican Hass Avocado Import Association (MHAIA)

Forecasting and Business Analytics, LLC

Dr. Gary W. Williams
FABA Team and Professor,
Texas A&M University

Dr. Oral Capps, Jr.,
FABA Managing Partner and Executive Professor,
Texas A&M University

Dan Hanselka
FABA Team and Extension Associate,
Texas A&M University

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Forecasting and Business Analytics, LLC
9409 Whitney Lane
College Station, TX 77845
Phone: 979-255-7081
Email: capps@faba-llc.com
Webpage: http://www.faba-llc.com

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by Forecasting and Business Analytics, LLC, (FABA), August 2016

Authors:
Dr. Gary W. Williams
FABA Team and Professor, Texas A&M University

Dr. Oral Capps, Jr.
FABA Managing Partner and Executive Professor, Texas A&M University

Dan Hanselka
FABA Team and Extension Associate, Texas A&M University

Abstract:
This report is a combined update of two earlier studies completed in 2014 on the economic benefits of U.S. imports of Mexican avocados - one that considered the benefits at the national level and the other at the state level. Using data for 2015, this report concludes that avocado imports have positive and economically important effects on the U.S. and state economies. U.S. imports of Mexican avocados added $3.5 billion in economic output, $2.2 billion in GDP, $1.2 billion in labor income, $594 million in taxes, and 18,695 jobs to the U.S. economy in 2015. California and Texas were the states where the greatest economic activity was generated by imports of Mexican avocados. The primary implication of this study is that imports of Mexican avocados are pro-growth for the U.S. economy. Given the steep predicted growth path of imports of Mexican avocados, their current positive contribution to the U.S. economy will only intensify over the years.

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We gratefully acknowledge funding for this project from the Mexican Hass Avocado Import Association (MHAIA). Nevertheless, the authors are solely responsible for the content of this report. The findings and conclusions are those of the authors and do not necessarily represent the views of MHAIA or Texas A&M University.

FABA is a Limited Liability Company formed in Texas in 2001. FABA is founded on the belief that to utilize information effectively in a decision-making process, it takes real world experience, sound econometric and statistical skills, and advanced analytical ability. FABA provides a mix of theoretical horsepower and real world experience to work with firms to provide these ingredients. FABA has resources with experience across many different private sector applications, with a common goal of utilizing econometric and statistical tools to create effective forecasting processes that enable better decisions. FABA provides complete forecasting and business analytic solutions. The commonality of past and current work centers on the development of econometric/statistical models to aid in decision-making in the business community in two ways: (1) to better interpret the business, economic, business and financial landscape and (2) to generate forecasts for future activities.

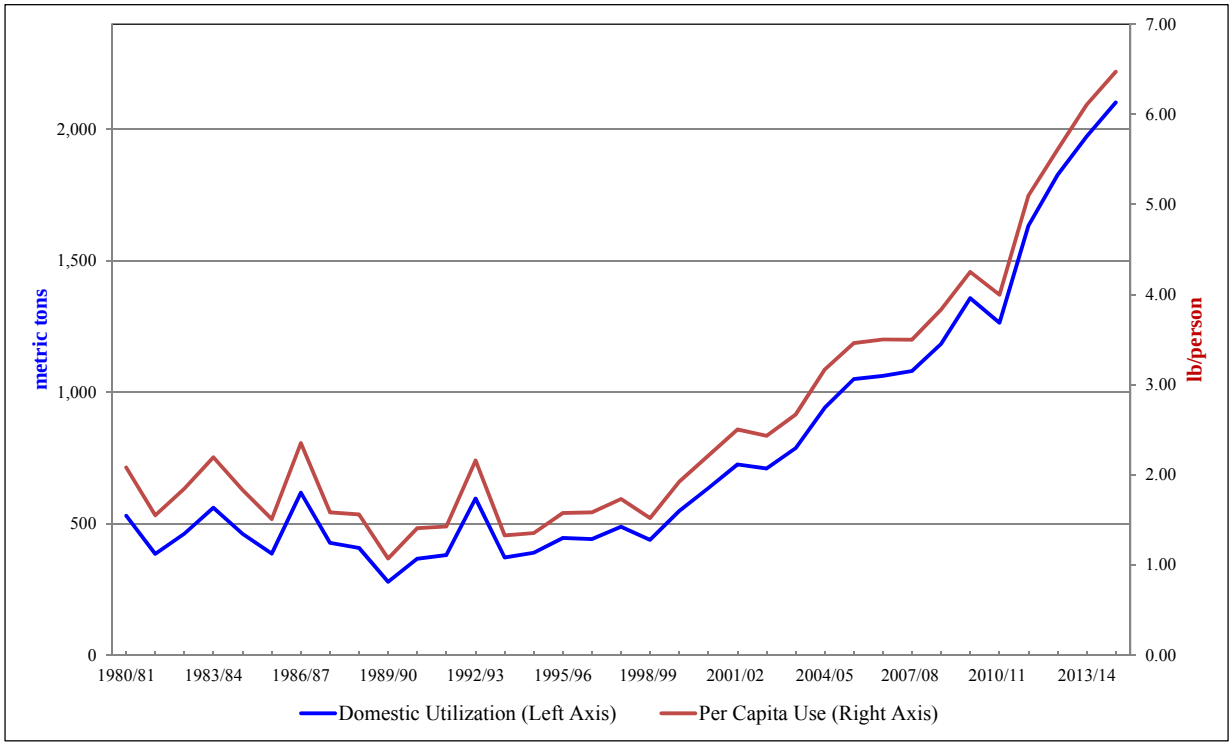
The U.S. National and State-Level Economic Benefits of Avocado Imports from Mexico

Economists have long understood that imports do not reduce or slow economic growth but lead directly to faster economic growth and improved standards of living in both exporting and importing countries by fostering specialization and the transfer of technology. In the process, jobs are created in both countries and both enjoy higher standards of living. For many products like food, however, imports are often seen primarily as a threat to domestic producers. The role of imports in expanding consumer food availability and choices as well as potentially contributing positively to the U.S. economy as they stimulate economic activity all along their respective supply chains is often ignored.

Avocados, a rapidly growing U.S. food import, have received increasing attention for both expanding nutritional food choices for U.S. consumers (see Huang, 2013 and Wien, et al., 2013, for example) and at the same time impacting the California and Florida avocado industries (see, Peterson et al., 2004 and Nalampang, Tantiwongampai, & Evans, 2006, for example). Between 1990 and 2015, U.S. avocado imports grew from nearly 13,400 metric tons (mt) to over 867,000 mt which has supported a 675% expansion in U.S. avocado utilization and a 6-fold increase in U.S. annual per capita consumption of avocados over that period from 1.1 lb to 6.5 lb (Figure 1). Imports now account for about 82% of U.S. avocado consumption compared to 11% in 1990 (USDA 2015a). Over 93% of avocado imports now come from Mexico.

If international trade theory holds true, the rapidly growing imports should also be contributing positively to the broader U.S. economy. Using updated data on U.S. avocado imports for 2015, this analysis re-visits the question of the impacts of avocado imports on the U.S. economy. Two key questions are considered: (1) Have U.S. imports of Mexican avocados contributed to the growth of the U.S. national and state economies as might be expected? (2) If so, then what is the level and industry distribution of the economic contribution of those imports? This report is a combined update of **two** previous analyses of the economic benefits of U.S. imports of Mexican avocados - one that considered the benefits at the national level (Williams, Capps, and Hanselka 2014a) and the other at the state level (Williams, Capps, and Hanselka 2014b). After providing some background on the economic dimensions of U.S. avocado imports, the analytical methodology is explained. The analytical results are then discussed with a focus first on the aggregate, economy-wide impacts and then

Figure 1: U.S. Domestic Utilization of Avocados, Total and Per Capita, 1980/81-2014/15



Source: Graphic by authors using data from USDA (2015a).

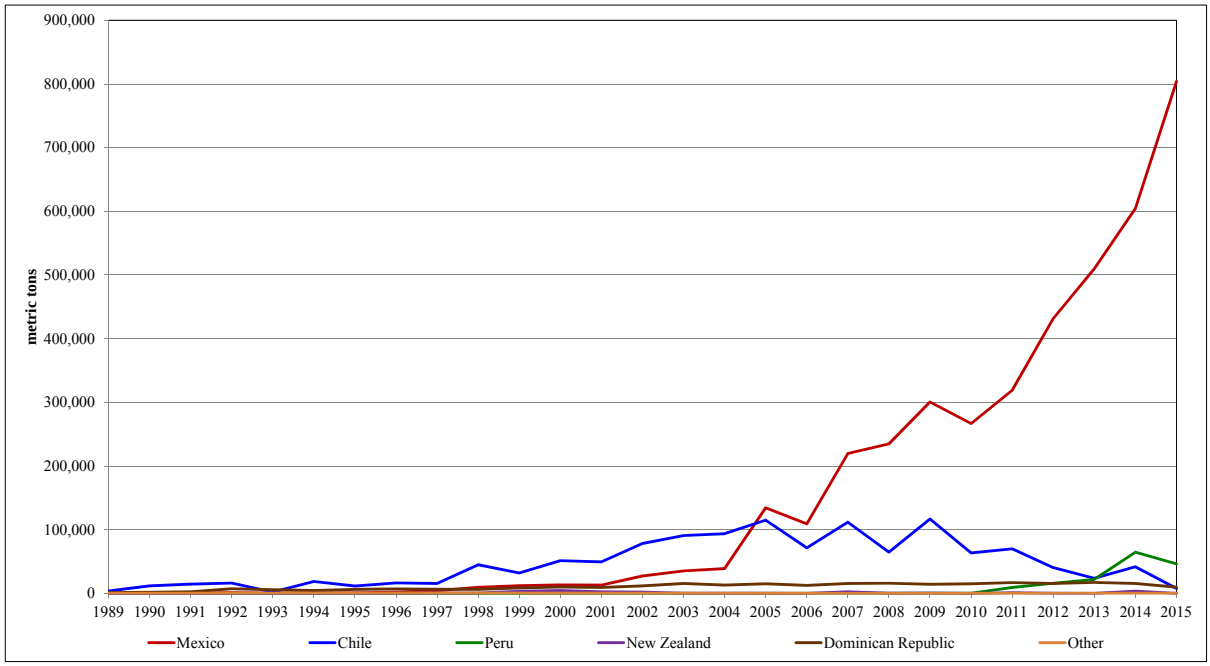
on the state-level impacts. The national and state-level industry breakdowns of those impacts are also discussed. Salient conclusions and implications of the analysis are then highlighted.

Economic Dimensions of U.S. Avocado Imports

Between 1989 and 2004, U.S. imports of avocados increased steadily from about 4,700 metric tons (mt) to about 145,300 mt, mostly from Chile (Figure 2). Between 2004 and 2005, however, a spike in Mexican avocado imports from just under 39,000 mt to over 134,000 mt boosted total U.S. imports by 80% to over 264,000 mt. Imports from Mexico have continued to accelerate at a blistering average annual rate of nearly 30% since CY 2007, steadily crowding out imports from Chile. Total U.S. avocado imports reached almost 870,000 mt in 2015 with Mexico accounting for 93% of those imports compared to less than 1% in 1990 and only 27% in 2004.

The growing U.S. demand for avocados is the result of various forces, including the growth of the U.S. Hispanic and Caribbean population, a rapidly spreading consumer trend towards ethnic as well as health-promoting foods, and intensifying promotion efforts by the U.S. avocado industry under the Hass Avocado Promotion, Research and Information Order

Figure 2: U.S. Imports of Mexican Avocados by Country of Origin, 1989-2015



Source: Graphics by authors using data from USDA (2016).

established in 2002 (Williams, Capps, & Hanselka, 2014a; Khazan, 2015). These favorable demand conditions coupled with the sequential issuance of U.S. Department of Agriculture (USDA) rules in 1997 and 2001 to lift a ban on imports from the state of Michoacan, Mexico into the United States encouraged the sharp increases in avocado imports (Roberts & Perez, 2006; Carman & Sexton, 2011; Carman, Saitone, & Sexton, R.J., 2013; Huang, 2013). The ban was implemented in 1914 to prevent entry of avocado seed weevils into the United States. After a series of appeals, the state of Michoacán was allowed to begin exporting Hass avocados to the United States in 1997. Michoacán produces 85% of Mexican avocados. Restrictions limiting exports from Michoacán to a handful of northeastern states remained after 1997 but those were gradually lifted over the years. No other Mexican state, however, has been allowed access of their avocados to the United States. Effective June 27, 2016, however, Hass avocados from anywhere in Mexico are now allowed into the continental United States, Hawaii, and Puerto Rico provided individual Mexican States meet certain requirements. The first Mexican state to benefit will likely be Jalisco which produces about 3% of Mexican avocados. There is mature commercial production in Jalisco with some packers already shipping to other export markets, including Canada, Japan and Europe (Linden 2016). Several U.S. avocado distributors already have working relationships with Jalisco producers.

The growth in Mexican import volume has been accompanied by a broadening of the seasonal pattern of Mexican imports to almost consistent year-round availability (Carman, Li, & Sexton, 2009). Weekly volumes of Hass avocados arriving into U.S. markets from all country suppliers are exhibited in Figure 3. An obvious seasonal pattern exists in shipment volumes throughout each year. Avocado imports, particularly from Mexico, tend to peak in the winter and spring months when California avocados are out of season.

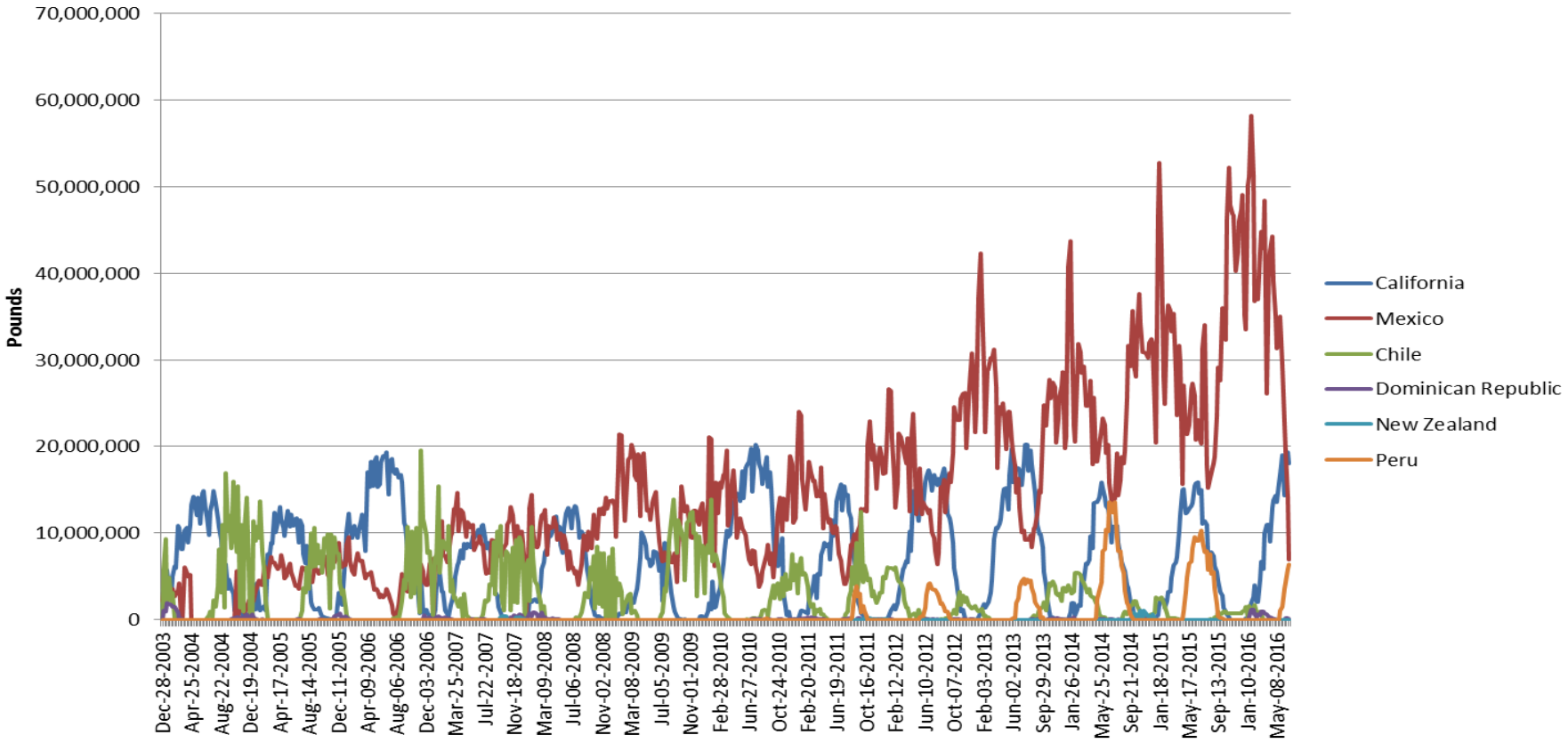
Imports of avocados from Peru generally provide a boost to summer supplies while imports from Chile and the Dominican Republic provide a winter enhancement of domestic supplies. Occasional inflows from New Zealand are also common. California, the only domestic supplier of Hass avocados, has seen its share of U.S. avocado consumption drop from nearly 100% in the 1980s and 1990s to about 15% in 2014 and 2015 (USDA 2015a).

In the United States, avocados are traditionally consumed fresh in salads, as a side dish, or as guacamole. The growth of the U.S. Hispanic and Caribbean population, however, has spurred the demand for avocados as ingredients in their own traditional dishes. At the same time, an explosion of fusion foods featuring Hispanic and Caribbean cuisine in the United States has integrated avocados solidly into domestic diets in a growing range of dishes. The fast food industry has increasingly added avocados to their menus as the growth in avocado imports now allow these food chains to keep avocados on the menu year-round (Polis, 2012).

Avocados have been touted as one of the so-called super foods enhancing its demand among increasingly health conscious U.S. consumers. Avocados are a nutrient-dense food and are high in insoluble fiber as well as potassium, the B vitamins, vitamin E, magnesium, and folate. Health claims for the avocado abound, including the ability to regulate blood pressure, prevent heart disease, encourage healthy bones, support cardiovascular health, and stave off migraines. While avocados are high in fat content, most of it is of the healthy monounsaturated type, reported to reduce “bad” cholesterol (low-density lipoproteins or LDLs) and to help increase “good” cholesterol (high-density lipoproteins or HDL).

Avocados consumed in the western region of the United States, and particularly California where over a third of the U.S. Hispanic population lives, are primarily of the Hass variety (Pollack and Perez, 2006). Although more than two dozen varieties of avocados are grown commercially in the United States, Hass avocados comprise 96% of U.S. avocado

Figure 3: Weekly Shipment by Volume of Avocados Arriving into the U.S. Market from All Suppliers, 2004 to 2016



Weekly Descriptive Statistics (pounds)						
	Mexico	California	Chile	Dominican Republic	New Zealand	Peru
mean	14,740,319	6,871,671	2,626,842	85,004	16,071	672,991
median	12,094,174	6,182,001	912,600	0	0	0
std	11,130,554	5,952,604	3,531,193	219,222	88,754	2,048,026
min	0	0	0	0	0	0
max	58,151,125	20,183,825	19,503,350	1,939,350	1,020,000	13,517,070

Source: Graphics by authors using data from Hass Avocado Board (2016b).

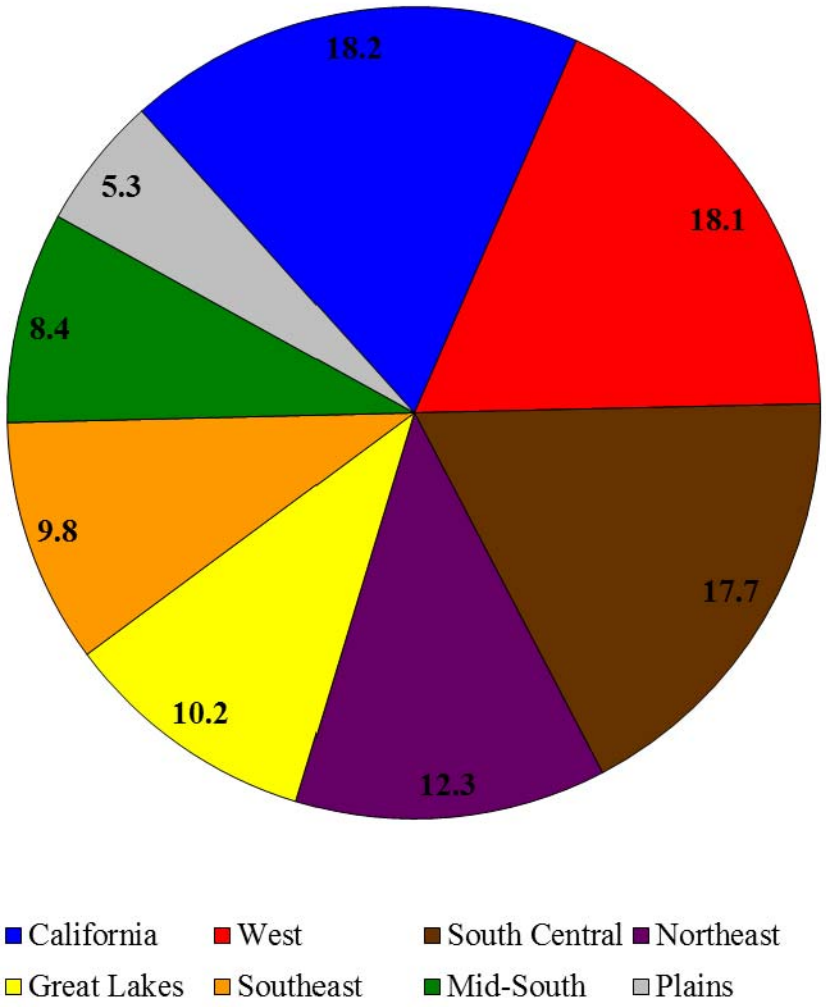
consumption and, hence, are the most widely available. Hass avocados have a thick, leathery skin that turns dark green-to-black as the fruit matures. With the second largest U.S. Hispanic population, Texas is also a large market for Hass avocados. Mexico produces Hass avocados almost exclusively so most U.S. avocado imports are of the Hass variety. Retail and food service markets reportedly prefer Hass avocados for consistency (Pollack & Perez, 2006). Also, Hass is the variety most heavily promoted by the industry through the Hass Avocado Promotion and Research Order.

Green-skinned avocados are common in the eastern half of the United States where the larger populations of Caribbean immigrants are found. The Florida avocado industry is the primary supplier of green-skinned avocados to these markets. Green-skinned avocados are generally larger in size than Hass avocados and have less fat and more moisture (Pollack & Perez, 2006). Green-skinned varieties are also thinner skinned than the Hass variety and tend to bruise more easily during shipment which tends to limit the range of their market.

State-Level Avocado Consumption

Avocados are consumed in every state of the union. The largest share is consumed in western states and the least in the south and plains states. Based on the most recently available quarterly avocado sales data from Information Resources, Inc. (IRI) on the retail volume of avocados sold across the eight IRI regions in 2015 (Hass Avocado Board 2016a), California accounted for the largest share of regional avocado consumption (22.6%) followed closely by the West region (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming) (18.1%), the South Central region (Arkansas, Louisiana, Oklahoma, and Texas) (17.7%), the Northeast region (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island) (12.3%), the Great Lakes region (Illinois, Indiana, Michigan, Ohio, Wisconsin) (10.2%), the Southeast region (Alabama, Florida, Georgia, Mississippi, South Carolina) (9.8%), the Mid-South region (Delaware, District of Colombia, Kentucky, Maryland, North Carolina, Tennessee, and West Virginia) (8.4%), and the Plains region (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota) (5.3%) (Figure 4).

Figure 4: Estimated Shares of U.S. Avocado Consumption Volume by Region (%), 2015



Source: Calculations by authors using data available from the Hass Avocado Board (2016a).

Avocado Import Supply Chain

Imported avocados are packed in the country of origin and shipped to U.S. markets to various buyers. Imported Mexican avocados from Michoacán are trucked to the United States primarily through Texas border crossings. The imported avocados may be shipped to wholesalers who distribute them to supermarkets and other retail establishments. Alternatively, imports may be shipped directly to supermarkets or to restaurants, fast-food establishments, and other retailers. As avocados move from U.S. ports of entry to wholesalers, distributors, supermarkets, restaurants, fast-food establishments, and elsewhere along the supply chain, they generate economic growth

by stimulating economic activity within the avocado supply chain itself and, as a result, economic activity along associated supply chains with which the avocado import supply chain intersects. For example, shipments of avocados passing through U.S. land or water ports require services from port officials such as the U.S. Customs and Border Protection and other Federal Inspection Agencies responsible for the enforcement of federal laws pertaining to such activities. Avocados passing through maritime ports require a large range of services related to the transfer of goods from water to land transportation. As the avocados move inland from the ports, the shipments of imported avocados stimulate a large number of other economic activities related to transportation, wholesale and retail trade, advertising, construction, finance, manufacturing, infrastructure, and numerous after-market services.

The economic activities stimulated at each point in the supply chain not only generate services and jobs at those points but also services and jobs along the supply chains that intersect at those points. For example, the transport of avocados requires fuel. That demand for fuel generated by the transport of imported avocados generates a demand by fuel retailers for fuel from their suppliers who then must demand more fuel from refiners who demand more oil from oil suppliers and so on. At each point on the fuel supply chain, the additional demand for fuel initiated by the shipments of imported avocados contributes to profits and employment. In addition, the suppliers of fuel equipment, transportation services, repair services, and other fuel support services are also all benefited by the additional demand for fuel generated by avocado imports. The same process holds true at each point in the avocado import supply chain resulting in additional economic activity along transportation, wholesaling, retailing, and other supply chains that intersect with the avocado import supply chain.

Methodology

In this study, we conduct an economic contribution analysis and focus particularly on the contribution of avocado imports from Mexico in 2015 to the value of U.S. output, U.S. value-added, employment, labor income, and taxes paid (federal, local, and state-level) in that year. To determine the extent of the contribution that imports of Mexican avocados have on the U.S. economy, this study first measures the direct, indirect, and induced effects of avocado imports on the U.S. economy. The *direct effects* on the economy are the initial economic activities measured that are impacted by imports. The direct effects result in two types of secondary effects. The

indirect effects result from the purchase of inputs among local industries as a result of the imports. The *induced effects* result from the expenditure of institutions such as households and governments benefitting from increased activity among local businesses (IMPLAN, 2013a).

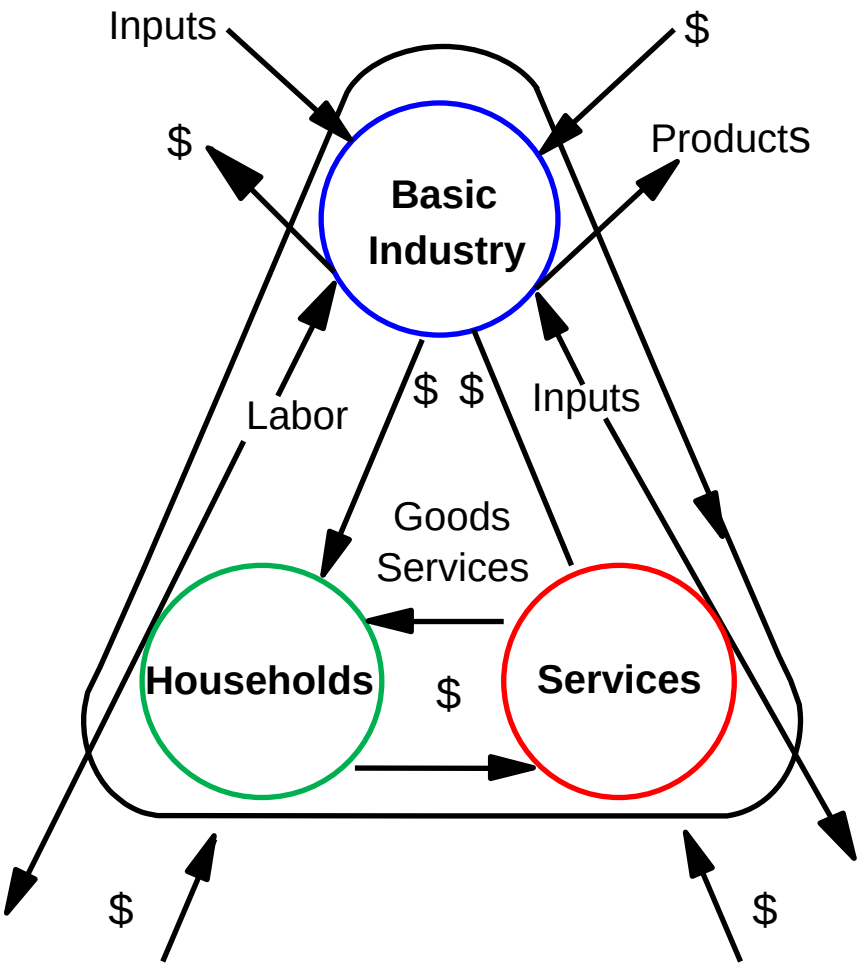
The general methodology employed is referred to as "economic contribution analysis" and is based on the idea that a dollar spent in a region or country stimulates additional economic activity or multiplies as it circulates through the economy. To estimate the national and state-level economic contribution of the sale of imported avocados from Mexico through the import supply chain, we use the IMPLAN (IMpact analysis for PLANning) input-output system (IMPLAN, 2013b). Input-output analysis is based on the idea that a change in one sector of the economy has effects on other sectors of the economy. Input-output analysis captures the relationships between industries and estimates the change in each sector's sales due to an initial change in final demand for a given industry's output. The sum of these changes is the industry's multiplier.

To measure impacts, the IMPLAN model produces multipliers which estimate the total economic contribution of expenditures within an economy. Multipliers are calculated based on the purchasing patterns of industries and institutions in the regional economy. Each industry and region combination has a unique spending pattern and a unique multiplier relating to the direct, indirect, and induced effects of the spending.

Four types of economic effects are reported in IMPLAN analyses. The ***employment*** contribution measures the number of jobs (both full-time and part-time) attributable to the direct economic activity stimulated. The contribution to ***labor income*** measures the effect of spending by businesses on the incomes of households and indicates a benefit to local residents. The ***value-added*** measures the contribution to gross domestic product and indicates the return to resources used by the business. The ***output*** contribution measures economic activity (total spending) generated. Labor income is a subset of value-added which is part of output. These four effects provide a better perspective of the contribution of an economic activity like avocado imports but they are three separate views and not meant to be summed.

The foundation of a community's economy is those businesses which sell some or all of their goods and services to buyers outside of the community (Woods et al., 2007). Such a business is a considered to be a "basic industry". The flows of products out of, and dollars into, a community are represented by the two arrows in the upper right portion of Figure 5. To produce these goods and services for "export" outside the community, the basic industry purchases inputs from outside

Figure 5: Overview of Community Economic System



Source: Woods, McCorkle, & Niemeyer (2007)

the community, labor from the residents or "households" of the community, and inputs from service industries located within the community. The flow of labor, goods, and services in the community is completed by households using their earnings to purchase goods and services from the community's service industries. A depicted Figure 5, a change in any one segment of a community's economy will have reverberations throughout the entire economic system of the community (Woods et al., 2007).

Procedures Followed in the National Aggregate Analysis

Before the economic contribution analysis of avocado imports from Mexico to the United States could begin, an IMPLAN input-output model of the U.S. economy had to be developed. Using

2013 data for the United States, the IMPLAN software was used to write component information, add structural matrices, create regional absorption tables, commodity balances, market shares, and inter-international transfers, and compute and create multipliers for the U.S. model. By constructing social accounts that describe the structure and function of a specific economy, IMPLAN creates a localized model to investigate the consequences of projected economic transactions in a geographic region (IMPLAN, 2013b).

With the U.S. model constructed, the next step in the analysis process was to determine what sector in IMPLAN to use in conducting the analysis of the avocado imports. IMPLAN consists of 536 different sectors from production to transportation, wholesale, manufacturing, retail, services and others. For this particular analysis, industry sector 395 – wholesale trade was used because this industry sector best reflects the impact that avocado imports from Mexico would have on the U.S economy.

The production function for the wholesale trade industry sector in the U.S. model was edited to reflect sales of avocados by adjusting the calculated IMPLAN coefficients for the various commodities associated with the 536 sectors that contribute to the production function of sector 395. The coefficients calculated by IMPLAN for those associated commodities not directly needed for the operations of the wholesale trade sector, specifically things that are cost of goods sold, were summed up and added to the current IMPLAN coefficient for "commodity 3530 – Non-comparable imports". After modifying the coefficient for "Non-comparable imports," the above mentioned selected commodity coefficients were set to zero, and the model's coefficients were re-balanced and saved. With the adjustments made to these coefficients, the model's multipliers were then re-constructed to reflect these changes in coefficients. The reason for modifying these coefficients (production function) in the wholesale trade industry (sector 395) was to enable the results of the model to best reflect the impact of importing rather than domestically producing avocados. Further, these adjustments allow the backward leakages associated with avocado farming/production to be stopped and not included in the contribution analysis, while still allowing for the impacts for the other backward leakages to be reflected for the other associated industry sectors (transportation, warehousing, storage, etc.).

The next step was to select an "industry change" activity with an event for the wholesale trade industry. An activity is a grouping of one or more events that represents a related change within the study area (IMPLAN, 2013a). The value of avocado imports from Mexico to the United

States for 2015 was then entered as the industry sales for the wholesale trade sector event within the U.S. model. At this point in the analysis, IMPLAN requests whether gross retail sales or gross retail margin be selected. For this analysis, gross retail margin was selected in order to best reflect the producer price and not the purchase price. Producer prices are the prices received by the producer for the goods and services that are sold or the prices paid by the store to its suppliers (IMPLAN, 2013a). With the avocado import value entered in the model, the analysis of this industry change to the U.S. economy was conducted which entailed selecting and naming a scenario for the given "industry change" activity, analyzing a single region, whereby IMPLAN conducted direct, indirect, and induced impacts.

Finally, summary and industry sector results for the direct, indirect, induced, and total effects for output (total spending), employment (full and part-time jobs), value added (contribution to GDP), labor income (employee compensation), and taxes (local, state, and federal) were reported within the IMPLAN model for this particular industry change activity.

Procedures Followed in the State-Level Analysis

The same general methodology and procedures used in the aggregate U.S. economic contribution analysis of Mexican avocado imports is used in the analysis of the state-level contributions of those imports. For each state, the 2015 value of the respective state's imports of Mexican avocado imports was entered into the respective state model as the industry sales for the wholesale trade sector event. However, the value of avocado imports for each state in 2015 had to be estimated because state-level import data are not available. The problem is that shipments of any imported commodity like avocados into some states may simply be transported through the state to other destinations (transshipments).

In deriving estimates of the value of Mexican avocado imports by state, the initial attention centered on the retail value of avocados consumed in the United States based USDA data (USDA 2015a). The *national* value of avocado consumption was calculated as the national quantity of utilized U.S. production of avocados in 2015 (USDA 2015a) multiplied by the average national retail price of avocados in 2013 adjusted to a 2015 value[1] plus the 2015 value of avocado imports (USDA 2016b).

[1] The most recent USDA (2015c) published national retail price for avocados is for 2013. That price was adjusted by the percentage change in the unit price of avocados from 2013 to 2015 published in the IRI/FreshLook Regional Composite Data available from the Hass Avocado Board (2016a).

Then the U.S. *regional* values of avocado consumption were estimated by multiplying the estimated national value of avocado assumption by the U.S. regional avocado shares of the value (dollar sales) of avocado consumption in 2015 from the Regional Composite Data reports published by Symphony Information Resources Inc. Group/FreshLook Marketing (IRI/FreshLook) and made available by the Hass Avocado Board (2016a). IRI/FreshLook gathers chain-wide fresh avocado sales data across all major U.S. retail markets. Although the data do not capture 100% of all U.S. avocado sales, the data provide a useful representation of the avocado category by region at the retail level of the marketing channel. The data are used by retailers, shippers, handlers, and others involved in the avocado business to identify opportunities for planning purposes.

The IRI/FreshLook avocado sales data include an aggregation of sales in the grocery, mass, club, drug, dollar and military channels. IRI/FreshLook gathers and reports chain-wide fresh avocado sales data across all major U.S. retail markets on a calendar quarter basis. The data are organized into and reported for eight U.S. regions, including: (1) California, (2) Great Lakes, (3)Mid-South, (4) Northeast, (5) Plains, (6) South Central, (7) Southeast, and (8) West. These regions include avocado sales data for the major metropolitan markets in those regions plus some additional cities in each region. The major metropolitan markets captured in each of the eight regions include: (1) **California:** Los Angeles; Sacramento; San Diego; and San Francisco; (2) **Great Lakes:** Chicago, IL; Cincinnati, OH; Cleveland, OH; Columbus, OH; and Detroit, MI; (3) **Mid-South:** Baltimore, MD; Louisville, KY; Memphis, TN; Raleigh, NC; Richmond, VA; and Roanoke, VA; (4) **Northeast:** Albany, NY; Boston, MA; Buffalo, NY; New England; New York; Philadelphia, PA; and Pittsburgh, PA**;** (5) **Plains:** St. Louis, MO; Omaha, NE; Des Moines, IA; Minneapolis/St. Paul, MN; Kansas City, KS/MO; and Wichita, KS; (6) **South Central:** Dallas, TX; Houston, TX; and Little Rock, AR; (7) **Southeast:** Atlanta, GA; Charlotte, SC; Columbia, SC; Jacksonville, FL; Miami, FL; Orlando, FL; and Tampa/St. Petersburg, FL; and (8) **West:** Boise, ID; Denver, CO; Las Vegas, NV; Phoenix, AZ; Portland, OR; Seattle, WA; and Spokane, WA. According to these data, the regional avocado shares of the value (dollar sales) of avocado consumption in 2015 were: (1) California 18%, (2) West (17%), (3) Northeast (15%), (4) South Central (14%), (5) Southeast 11%, (6) Great Lakes (11%), (7) Mid-South (9%), and (8) Plains (5%). While not identical, these estimated shares of the regional value of avocado consumption are similar to the shares by volume as shown in Figure 1.

For each of the eight regions, the state values of avocado consumption in 2015 were then calculated as a product of the respective estimated regional values of avocado consumption and the shares of each state of the aggregate GDP for the corresponding region. To account for the fact that California produces and sells avocados across the U.S., the estimated values of state avocado consumption in 2015 were reduced by the value of California avocados consumed in the corresponding state in 2015 to generate the state values of avocado consumption net of the value California avocados consumed (net state value of avocado consumption). The state values of California avocado consumption were estimated by multiplying the value of California avocado production in 2015 as published by the California Avocado Commission (2016) by the share of each state of national aggregate GDP.

Finally, the state values of Mexican avocado imports were estimated by multiplying the value of imports of Mexican avocados in 2015 ($1.523 billion) by the share of each state of the aggregate net state value of avocado consumption. The resulting estimates of the value of avocado imports by state for calendar year 2015 are exhibited in Table 1. Not surprisingly, the two top states were California at $288.7 million and Texas at $164.3 million. These state figures then formed the inputs into the IMPLAN model as described above.

Analysis of the Economic Benefits from Imports of Avocados from Mexico

Following a summary of the aggregate economic contributions of avocado imports from Mexico to the U.S. economy, the economic contributions of Mexican avocado imports to the economy of individual states are discussed in this section of the report. In both cases, the emphasis is on the contribution of avocado imports to the value of output, value-added, employment, labor income, and taxes paid (federal, state, and local). Avocado import contribution multipliers are also presented. The multipliers demonstrate the contribution of imports of Mexican avocados to output, value added, and labor income per dollar of avocado imports. An employment multiplier is also presented which reflects the number of jobs generated per million dollars of avocado imports from Mexico. Finally, a tax multiplier is presented which shows the value of all taxes generated at the federal, state, and local levels as a result of all activities stimulated by avocado imports from Mexico as a share of the value of imports. The aggregate economy-wide contributions are also broken down by industry to indicate the industry distribution of the contribution of avocado imports from Mexico to the United States and state-level economies.

Table 1: Estimates of State Value of Avocado Imports from Mexico, 2015

State	Import Value	State	Import Value
	$ million		$ million
Alabama	$16,921,481	Montana	$6,434,584
Alaska	$7,397,117	Nebraska	$8,147,901
Arizona	$40,706,000	Nevada	$19,791,674
Arkansas	$12,760,842	New Hampshire	$4,202,467
California	$288,701,314	New Jersey	$32,900,015
Colorado	$44,110,097	New Mexico	$12,920,300
Connecticut	$14,970,750	New York	$83,443,814
Delaware	$4,367,175	North Carolina	$32,042,737
District of Columbia	$7,859,773	North Dakota	$3,918,923
Florida	$73,142,457	Ohio	$38,378,794
Georgia	$41,072,466	Oklahoma	$18,687,047
Hawaii	$11,171,183	Oregon	$30,164,925
Idaho	$9,139,511	Pennsylvania	$39,907,775
Illinois	$48,912,011	Rhode Island	$3,303,523
Indiana	$21,231,471	South Carolina	$16,464,050
Iowa	$12,443,850	South Dakota	$3,335,981
Kansas	$10,561,366	Tennessee	$20,157,293
Kentucky	$12,487,550	Texas	$164,314,269
Louisiana	$25,200,921	Utah	$20,607,817
Maine	$3,277,523	Vermont	$1,760,423
Maryland	$23,342,903	Virginia	$30,782,710
Massachusetts	$27,606,642	Washington	$62,151,393
Michigan	$29,443,881	West Virginia	$4,730,940
Minnesota	$23,819,948	Wisconsin	$19,299,243
Mississippi	$8,873,556	Wyoming	$5,410,694
Missouri	$20,968,919	**Total**	**$1,523,750,000**

Summary of National Aggregate Analysis Results

The analysis provides clear evidence that avocado imports from Mexico make a substantial contribution to the U.S. economy along the avocado import supply chain which has a multiplier effect along intersecting supply chains, generating output, value-added, income, jobs and taxes as a result. The total of all the direct, indirect, and induced effects of the $1.5 billion of imports of Mexican avocados in 2015 on U.S. output or total spending amounted to $3.52 billion (Table 2). That is, the $1.5 billion of U.S. imports of Mexican avocados in 2015 stimulated economic activity in the United States that generated a total of $3.52 billion in output or total spending. At the same time, the total economic activity stimulated by those imports added $2.16 billion in 2015

Table 2: Summary National Economic Contribution of 2015 Avocado Imports from Mexico

Output ($ million)	Value-added ($ million)	Employment (no. of jobs)	Labor Income ($ million)	Taxes* ($ million)
$3,524.3	$2,161.3	18,695	$1,206.4	$593.9
(0.02% of GDP)		(0.012% of U.S.)		

* federal, state, local.

Table 3: National Contribution Multipliers of 2015 Avocado Imports from Mexico

Output Multiplier ($ output/ $imports)	Value-added Multiplier ($VA/$imports)	Employment Multiplier (jobs added/$million imports)	Labor Income Multiplier ($income/ $imports)	Tax Multiplier (% of import value)
2.31	1.41	12.3	0.79	38.9%

Table 4: National Economic Impact of 2015 Avocado Imports from Mexico by Industry

Industry	Output ($ million)	Value-Added ($ million)	Employment (no. of jobs)	Labor Income ($ million)	Taxes* ($ million)
Wholesale/Retail	$1,706.2	$1,150.5	7,931.6	$613.2	$225.3
Manufacturing	$281.9	$80.9	529.0	$38.1	$3.4
Transportation & Warehousing	$121.4	$65.5	852.3	$46.2	$2.8
Services	$1,229.1	$769.8	8,472.2	$447.3	$46.1
-Food & accommodation	$67.5	$38.2	1,047.9	$27.2	$4.8
-Other	$1,161.6	$731.6	7,424.3	$420.1	$41.3
Agriculture	$20.5	$10.2	157.2	$6.3	$0.2
Other	$165.2	$84.3	753.0	$55.2	$6.5
Total**	$3,524.3	$2,161.3	18,695.3	$1,206.4	$284.2

* Indirect business taxes. ** Totals may not add due to rounding.

to the U.S. GDP (value-added), created $1.21 billion in U.S. labor income, $593.9 million in taxes (federal, state, and local), and added 18,695 jobs.

Implied National Contribution Multipliers

Every dollar of Mexican avocados imported in 2015 generated $2.31 in gross output, $1.41 in GDP (value-added), and $0.79 in labor income (Table 3). Every million dollars of imports generated 12.3 jobs in the U.S. economy. Taxes generated by the imports amounted to 38.9% of the value of the imported avocados (Table 3). Stated in this way, these contributions measure the multiplier effect of the imports. That is, they indicate how much additional output, GDP, etc. is generated by each dollar of imports. For example, for every $100 million increase in imports of Mexican avocados, U.S. output or spending increases by $231 million while GDP increases by $141 million, labor income by $79 million, and employment by 1,230 jobs.

National Industry by Industry Breakdown of the Results

An industry breakdown of the economic contributions reveals that the wholesale/retail and service industries account for much of the contribution of imports of Mexican avocados to U.S. economic activity as might be expected (Table 4). Together those two industries account for 83% of the contribution of imports of Mexican avocados to U.S. gross output, 88% of the contribution to U.S. GDP (value-added), U.S. employment, and U.S. labor income, and 95% of the contribution to U.S. taxes. The manufacturing industry is also a major beneficiary of the avocado imports, accounting for nearly 8% of their contribution to gross output and 1% to 4% of the contribution made to GDP, labor income, employment, and taxes. Transportation and warehousing and a large number of miscellaneous services (such as advertising, insurance, accounting and legal service, repair services and more) account for much of the remaining contribution of U.S. imports of avocados to the U.S. economy.

Summary of State-Level Analysis Results

The estimated state contributions of Mexican avocado imports are summarized alphabetically in Table 5. Details of the contributions by industry within each state are provided in the appendix. For this analysis, states were divided into three categories according to the impact of Mexican avocado imports on the respective states' economies: (1) high impact, (2) medium impact, and (3)

Table 5: Summary Economic Contribution of Imports of Mexican Avocados by State, 2015

State	Total Output	Total Value Added	Total Employment	Total Labor Income	Total Taxes*
	$ million	$ million	No. of jobs	$ million	$ million
Alabama	$27.59	$16.79	164.4	$9.00	$5.05
Alaska	$10.99	$7.16	54.2	$3.35	$2.91
Arizona	$75.79	$47.08	441.7	$26.48	$13.64
Arkansas	$19.71	$12.85	106.3	$6.01	$3.84
California	$536.27	$348.31	2,714.0	$188.15	$113.91
Colorado	$85.42	$53.23	475.7	$31.67	$13.63
Connecticut	$24.99	$17.47	113.9	$9.32	$4.62
Delaware	$7.24	$4.89	36.5	$2.72	$1.27
District of Columbia	$10.70	$7.59	44.7	$4.98	$1.92
Florida	$137.99	$86.62	795.5	$46.83	$24.97
Georgia	$74.95	$48.08	413.5	$26.27	$12.68
Hawaii	$18.43	$10.85	109.8	$5.89	$3.40
Idaho	$14.97	$8.67	94.8	$4.77	$2.60
Illinois	$90.14	$59.04	466.2	$33.42	$15.66
Indiana	$35.51	$21.61	210.7	$12.15	$5.94
Iowa	$20.08	$12.32	117.6	$6.83	$3.47
Kansas	$17.50	$10.91	98.1	$5.97	$2.87
Kentucky	$19.97	$12.57	113.1	$6.31	$3.86
Louisiana	$41.38	$25.96	233.4	$13.85	$7.83
Maine	$5.68	$3.45	34.2	$1.88	$1.14
Maryland	$39.81	$26.06	207.6	$14.55	$8.17
Massachusetts	$49.72	$33.07	248.5	$20.10	$9.00
Michigan	$51.30	$32.59	285.6	$17.76	$8.71
Minnesota	$44.80	$28.17	246.3	$16.86	$7.60
Mississippi	$13.70	$8.26	81.9	$4.25	$2.84
Missouri	$37.92	$23.30	222.1	$13.38	$5.90
Montana	$10.43	$6.14	63.9	$3.24	$2.01
Nebraska	$13.78	$8.40	80.7	$4.74	$2.28
Nevada	$34.22	$21.36	196.6	$11.74	$6.63
New Hampshire	$7.45	$4.75	42.0	$2.91	$1.26
New Jersey	$57.28	$39.10	276.9	$21.96	$11.61
New Mexico	$20.47	$11.88	125.0	$5.99	$4.15
New York	$142.23	$97.19	671.9	$53.71	$30.72
North Carolina	$57.21	$35.35	338.5	$20.04	$9.89
North Dakota	$5.91	$3.81	30.1	$1.97	$1.19
Ohio	$70.43	$43.82	401.2	$24.48	$11.70
Oklahoma	$31.41	$19.26	178.4	$9.99	$5.67
Oregon	$53.84	$32.78	321.5	$19.51	$8.41
Pennsylvania	$71.85	$46.22	384.4	$26.47	$13.38
Rhode Island	$5.74	$3.75	30.9	$2.10	$1.23
South Carolina	$27.13	$16.77	160.6	$8.81	$5.49
South Dakota	$5.30	$3.24	30.4	$1.69	$0.92
Tennessee	$35.26	$22.05	201.1	$12.15	$6.30
Texas	$296.37	$191.02	1,557.5	$105.30	$47.71
Utah	$38.51	$22.86	229.9	$13.08	$6.44
Vermont	$2.88	$1.73	17.3	$0.94	$0.60
Virginia	$53.53	$34.24	287.7	$19.60	$9.90
Washington	$107.87	$69.78	543.6	$37.19	$22.32
West Virginia	$7.17	$4.38	42.4	$2.26	$1.53
Wisconsin	$34.17	$20.81	201.6	$12.00	$5.94
Wyoming	$7.80	$4.97	41.1	$2.44	$1.78

* Federal, state, and local

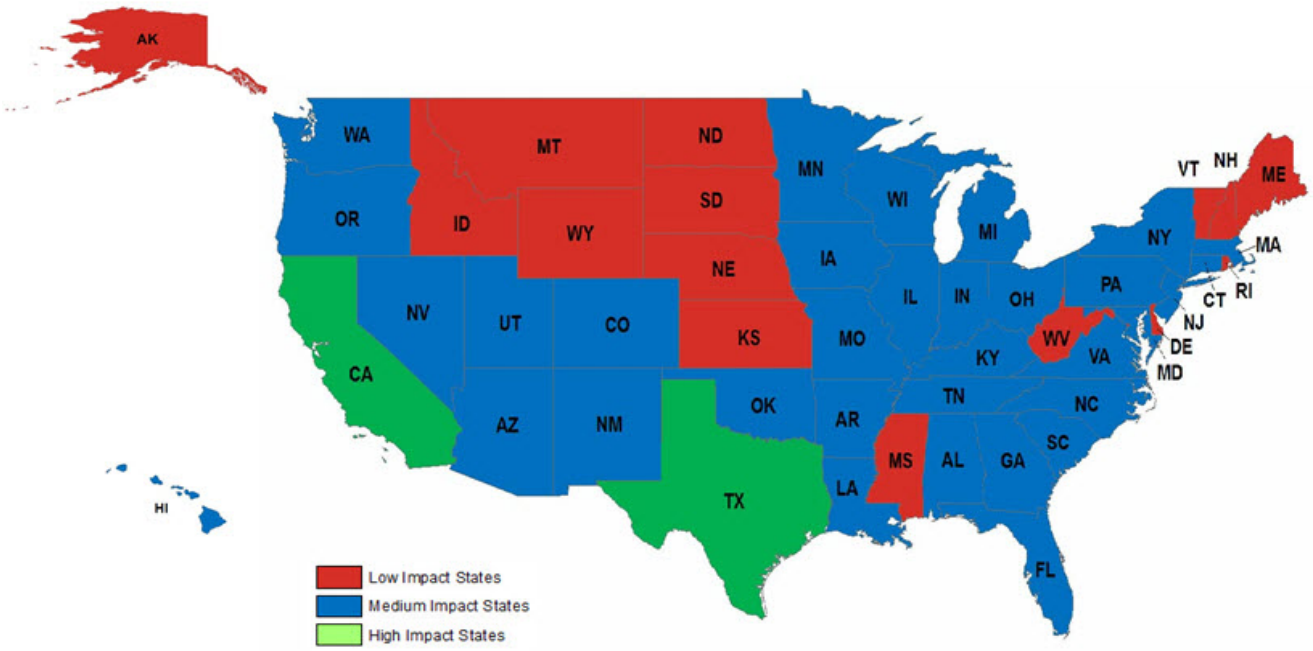
low impact. High impact states include those for which imports of Mexican avocados in 2015 generated more than 800 jobs and contributed more than $100 million to the respective state GDP. Medium impact states include those for which Mexican avocado imports in 2015 created from 100 to 800 jobs and contributed from $10 million to $100 million to the respective state GDP. Low impact states include those for which Mexican avocados generated less than 100 jobs and contributed less than $10 million to the state GDP. These impact categories and category classification criteria are similar to those used in the previous report. Figure 6 groups the states according to the impact of Mexican avocado imports on their economies.

The *highest impact states*, not surprisingly, are California and Texas (in green on the map in Figure 6). These two states have relatively high state GDPs and, interestingly, large populations of Hispanic consumers where Hispanic cuisine is highly popular. In California, Mexican avocado imports in 2015 generated 2,714 jobs and contributed $348.3 million to the California state GDP. In Texas, imports of Mexican avocados created 1,558 jobs and contributed $191.0 million to that state's GDP.

The *medium impact category* included 33 states (in blue on the map in Figure 6). Most of the medium impact states are located primarily in the West and Great Lakes regions with some states from the Northeast and some from southern regions. Florida registered the largest impact of Mexican avocado imports on its economy among the medium impact states with 796 jobs created and $86.6 million contributed to its state GDP. Florida, the state with the third largest impact of Mexican avocado imports, also has a high state GDP and where Hispanic culture heavily influences food consumption choices and cooking styles. New York and Washington were not far behind Florida with, respectively, 672 and 544 jobs created and $97.2 million and $69.8 million in GDP created. Rounding out the top ten were Colorado (476 jobs created and $53.2 million in value added), Illinois (466 jobs created and $59.0 million in valued added), Arizona (442 jobs created and $47.1 million in value added), Georgia (414 jobs created and $48.1 million in value added), and Ohio (401 jobs created and $43.8 million in value added).

The *low impact category* included 15 states and the District of Colombia (in red on the map in Figure 6) located primarily in the Plains and Northeast regions with a few of the lower population states in the West region and a few from southern regions (along with Alaska and Hawaii). Kansas experienced the largest economic impact from Mexican avocado imports among the low impact category states (98 jobs created and $10.9 million in value added).

Figure 6: State-Level Economic Contributions of Mexican Imports, 2015



High Impact States
(> 800 jobs and >$100 million)

	Jobs	VA*
California	2,714.0	$348.3
Texas	1,557.5	$191.0

Medium Impact States
(100 - 800 jobs and $10 - $100 million)

	Jobs	VA*
Florida	795.5	$86.6
New York	671.9	$97.2
Washington	543.6	$69.8
Colorado	475.7	$53.2
Illinois	466.2	$59.0
Arizona	441.7	$47.1
Georgia	413.5	$48.1
Ohio	401.2	$43.8
Pennsylvania	384.4	$46.2
North Carolina	338.5	$35.3
Oregon	321.5	$32.8
Virginia	287.7	$34.2
Michigan	285.6	$32.6
New Jersey	276.9	$39.1
Massachusetts	248.5	$33.1
Minnesota	246.3	$28.2
Louisiana	233.4	$26.0
Utah	229.9	$22.9
Missouri	222.1	$23.3
Indiana	210.7	$21.6
Maryland	207.6	$26.1
Wisconsin	201.6	$20.8
Tennessee	201.1	$22.1
Nevada	196.6	$21.4
Oklahoma	178.4	$19.3
Alabama	164.4	$16.8
South Carolina	160.6	$16.8
New Mexico	125.0	$11.9
Iowa	117.6	$12.3
Connecticut	113.9	$17.5
Kentucky	113.1	$12.6
Hawaii	109.8	$10.9
Arkansas	106.3	$12.9

Low Impact States
(< 100 jobs and < $10 million)

	Jobs	VA*
Kansas	98.1	$10.9
Idaho	94.8	$8.7
Mississippi	81.9	$8.3
Nebraska	80.7	$8.4
Montana	63.9	$6.1
Alaska	54.2	$7.2
District of Columbia	44.7	$7.6
West Virginia	42.4	$4.4
New Hampshire	42.0	$4.8
Wyoming	41.1	$5.0
Delaware	36.5	$4.9
Maine	34.2	$3.4
Rhode Island	30.9	$3.8
South Dakota	30.4	$3.2
North Dakota	30.1	$3.8
Vermont	17.3	$1.7

* Value-added in $ million

The contributions to federal, state, and local taxes by Mexican avocado imports followed generally the same pattern as jobs created and value added generated. In California and Texas, the imports generated $113.9 and $47.7 million in federal, state and local taxes (Table 5). In contrast, in the low impact states, the additional federal, state, and local taxes generated ranged from a high of $2.9 million in Alaska to a low of $600,000 in Vermont. Just one caution about comparing these state-level numbers to the aggregate national numbers generated earlier in this report. The total impacts of all of the individual states summed up do not equal the aggregate of the United States for any of the categories in Tables 3 and 4 (output, employment, labor income, value added, and taxes) because state-level estimates only capture economic activity that occurs within state boundaries whereas the national-level estimates capture both the impact within states as well as economic activity that crosses state borders, and, thus, will be larger.

Implied State-Level Impact Multipliers

When the state-by-state benefits of the Mexican avocado imports are expressed on a per dollar of imports basis, the impacts are more uniform across the states (Table 6). Thus, a high dollar value of impact divided by a high level of import value is not much different in many cases from a low dollar impact value divided by a low dollar value of imports. The ratio of the value of impact to the value of imports for each state provides a measure of the multiplier effect of the imports. For example, the ratio of value added to import value for a given state indicates the value-added generated for every dollar of Mexican avocados imported into the state.

The value-added multipliers range from highs of 1.21 in California, Colorado, and Illinois to lows of 0.93 in Mississippi and West Virginia and 0.92 in New Mexico and Wyoming. The jobs multiplier (jobs generated per $million in imports) range from highs of 11.2 in Utah, 10.9 in Florida, and 10.8 in Arizona and Colorado to lows of 5.7 in the District of Colombia, 7.3 in Alaska, 7.6 in Connecticut and Wyoming, and 7.7 in North Dakota.

Industry by Industry Breakdown of the State-Level Impacts

As with the aggregate U.S. analysis, the industry breakdown of the state-level economic impacts of Mexican avocado imports indicates that wholesale/retail and service industries account for much of the contribution of imports of Mexican avocados to state-level economic activity as might be expected. (See the appendix for the tables showing the industry breakdown of the impacts for all 50 states and the District of Colombia.) The manufacturing industry in most states is also a

Table 6: Economic Multipliers of Avocado Imports by State, 2015

State	Total Output $output/$import	Total Value Added $VA/$import	Total Employment jobs added/$million imports	Total Labor Income $Labor income/$import	Total Taxes* % of import value
Alabama	1.63	0.99	9.72	0.53	29.82%
Alaska	1.49	0.97	7.32	0.45	39.32%
Arizona	1.86	1.16	10.85	0.65	33.51%
Arkansas	1.54	1.01	8.33	0.47	30.05%
California	1.86	1.21	9.40	0.65	39.46%
Colorado	1.94	1.21	10.78	0.72	30.90%
Connecticut	1.67	1.17	7.61	0.62	30.85%
Delaware	1.66	1.12	8.35	0.62	29.03%
District of Columbia	1.36	0.97	5.69	0.63	24.45%
Florida	1.89	1.18	10.88	0.64	34.14%
Georgia	1.82	1.17	10.07	0.64	30.87%
Hawaii	1.65	0.97	9.83	0.53	30.43%
Idaho	1.64	0.95	10.37	0.52	28.46%
Illinois	1.84	1.21	9.53	0.68	32.02%
Indiana	1.67	1.02	9.92	0.57	28.00%
Iowa	1.61	0.99	9.45	0.55	27.86%
Kansas	1.66	1.03	9.29	0.57	27.15%
Kentucky	1.60	1.01	9.06	0.51	30.87%
Louisiana	1.64	1.03	9.26	0.55	31.06%
Maine	1.73	1.05	10.45	0.57	34.72%
Maryland	1.71	1.12	8.90	0.62	35.01%
Massachusetts	1.80	1.20	9.00	0.73	32.60%
Michigan	1.74	1.11	9.70	0.60	29.58%
Minnesota	1.88	1.18	10.34	0.71	31.90%
Mississippi	1.54	0.93	9.23	0.48	31.96%
Missouri	1.81	1.11	10.59	0.64	28.13%
Montana	1.62	0.95	9.93	0.50	31.19%
Nebraska	1.69	1.03	9.90	0.58	27.93%
Nevada	1.73	1.08	9.93	0.59	33.51%
New Hampshire	1.77	1.13	9.99	0.69	29.92%
New Jersey	1.74	1.19	8.42	0.67	35.30%
New Mexico	1.58	0.92	9.67	0.46	32.08%
New York	1.70	1.16	8.05	0.64	36.82%
North Carolina	1.79	1.10	10.56	0.63	30.88%
North Dakota	1.51	0.97	7.67	0.50	30.38%
Ohio	1.84	1.14	10.45	0.64	30.49%
Oklahoma	1.68	1.03	9.54	0.53	30.33%
Oregon	1.78	1.09	10.66	0.65	27.86%
Pennsylvania	1.80	1.16	9.63	0.66	33.53%
Rhode Island	1.74	1.14	9.36	0.64	37.37%
South Carolina	1.65	1.02	9.75	0.54	33.34%
South Dakota	1.59	0.97	9.11	0.51	27.66%
Tennessee	1.75	1.09	9.97	0.60	31.27%
Texas	1.80	1.16	9.48	0.64	29.04%
Utah	1.87	1.11	11.15	0.63	31.26%
Vermont	1.64	0.98	9.80	0.53	34.30%
Virginia	1.74	1.11	9.35	0.64	32.16%
Washington	1.74	1.12	8.75	0.60	35.91%
West Virginia	1.52	0.93	8.97	0.48	32.30%
Wisconsin	1.77	1.08	10.44	0.62	30.78%
Wyoming	1.44	0.92	7.59	0.45	32.85%

* Federal, state, and local

major beneficiary of state imports of Mexican avocados. Transportation and warehousing and a large number of miscellaneous services account for much of the remaining contribution of imports of Mexican avocados to state economies.

Conclusions and Implications

In general, this study provides evidence of the positive contribution of food imports on the overall U.S. economy. Specifically, the study concludes that U.S. imports of Mexican avocados contributed the following to the U.S. economy in 2015:

- $3.5 billion in output or spending;
- $2.2 billion to the U.S. GDP (value-added);
- 18,695 jobs;
- $1.2 billion in labor income; and
- $594 million in taxes.

Looked at another way, every dollar of avocado imports from Mexico generates $2.31 dollars in output, $1.41 in U.S. GDP, and $0.79 in labor income. Every million dollars of imports generates 12.3 U.S. jobs.

In the previous report for the year 2012, imports of Mexican avocados were shown to have added $1.7 billion in output, $1.2 billion in GDP, 11,248 jobs, and $344 million in taxes in that year. Thus, in only three years, the annual contribution of the rapidly growing U.S. imports of Mexican avocados to U.S. output has more than doubled, the contribution to U.S. GDP has nearly doubled, the contribution to jobs has increased by two-thirds, and the additional labor income and taxes generated have each increased by about 75%.

Given their rapid and increasing rate of growth, imports of Mexican avocados will continue to make substantial and increasing contributions to the U.S. economy. When aggregated over time, the contributions of those imports to the U.S. economy are not only impressive but economically important for the U.S. economy.

The primary conclusion from the state-level analysis is that imports of avocados from Mexico have a positive and significant effect on the economies of many U.S. states. Specifically, this study finds the following:

- California and Texas are the largest beneficiaries from the economic activity generated by imports of Mexican avocados, including 2,714 and 1,558 jobs created, and $348.3 million and $191.0 million in value added generated in the respective states.
- The other top ten beneficiary states in terms of jobs created by the imports include (in order): Florida, New York, Washington, Colorado, Illinois, Arizona, Georgia, and Ohio.
- The economic activity generated by Mexican avocado imports was relatively low in 15 states and the District of Colombia.

On a per dollar of imports basis, however, the contributions among states were more uniform. The value added generated for each dollar of imports of Mexican avocados ranged from highs of $1.21 in California, Colorado and Illinois to low of $0.93 in Mississippi and West Virginia and $0.92 in New Mexico and Wyoming, The jobs generated per million dollars of Mexican avocado imports ranged from highs of 11.2 in Utah, 10.9 in Florida, and 10.8 in Arizona and Colorado to lows of 5.7 in the District of Colombia, 7.3 in Alaska, 7.6 in Connecticut and Wyoming, and 7.7 in North Dakota. As a reminder, the sum of the state-level estimates for any of category of contribution (output, employment, labor income, value added, and taxes) will be smaller than for the corresponding national-level aggregate analysis for the entire United States because the state-level estimates only capture economic activity that occurs within state boundaries whereas the national-level estimates capture both the impact within states as well as economic activity that crosses state borders.

The primary implication of this study is straight forward. Imports of Mexican avocados are pro-growth for the U.S. economy. Given the steep predicted growth path of imports of Mexican avocados, their current positive contribution to the U.S. economy will only intensify over the years. The sequential easing of phytosanitary restrictions on avocado imports from Mexico in place since 1914 not only has supported the growth of the Mexican avocado industry over the years but also has boosted the U.S. economy as a whole. Thus, any trade policy or other actions to reduce the level of U.S. avocado imports would have a substantial and growing negative impact on the U.S. economy.

Just as is the case at the national level, imports of Mexican avocados are pro-growth for state economies. Some states benefit much more given their larger GDPs and populations and their tendencies towards cuisines that utilize avocados more intensively. As Mexican avocado imports follow their projected steep growth path over the years, the measured benefits to individual state

economies will likely grow as well. The consequence of restrictions on those imports would be lost jobs and economic growth across individual states.

Concerns about the possibility that the imports may be depressing U.S. avocado prices and production are likely unwarranted given the large and expanding demand push for avocados that is driving both the domestic and Mexican production of avocados. Previous research (Nalampang, Tantiwongampai, and Evans, 2006; Peterson, Evangelou, Orden, and Bakshi, 2004) substantiates this claim. Given the weather, water, land, and other resource limitations that challenge California avocado producers, imports continue to fill the gap for the rapidly growing domestic avocado demand. This study measures the downstream contributions of those imports to both the national and state economies.

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APPENDIX

State-by-State Industry Breakdown of the Economic Benefits of Mexican Avocado Imports

Alabama

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$18,056,089	$11,519,617	89.8	$5,941,404	$2,594,278
Manufacturing	$408,558	$106,103	0.9	$48,225	$1,975
Transportation & Warehousing	$676,228	$342,681	6.0	$242,519	$5,087
Services**	$7,316,025	$4,312,516	61.0	$2,382,892	$270,704
-Food & accommodation	$388,047	$205,732	7.1	$150,273	$28,872
-Other	$6,927,978	$4,106,784	53.9	$2,232,619	$241,832
Agriculture	$24,349	$11,865	0.3	$6,628	$339
Other	$1,113,446	$493,815	6.5	$377,903	$27,823
Total**	$27,594,695	$16,786,596	164.4	$8,999,571	$2,900,206

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Alaska

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$7,707,444	$5,206,987	34.1	$2,177,538	$2,062,959
Manufacturing	$106,925	$21,677	0.2	$8,123	$857
Transportation & Warehousing	$353,657	$205,183	2.3	$190,263	$6,772
Services**	$2,436,202	$1,522,659	16.1	$853,356	$71,820
-Food & accommodation	$121,305	$69,661	1.9	$56,187	$1,771
-Other	$2,314,896	$1,452,997	14.2	$797,169	$70,050
Agriculture	$1,579	$1,041	0.0	$646	$155
Other	$383,315	$202,418	1.5	$123,085	$22,705
Total**	$10,989,121	$7,159,965	54.2	$3,353,011	$2,165,269

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Arizona

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$44,651,884	$29,342,508	213.4	$15,912,703	$6,258,504
Manufacturing	$807,464	$243,411	2.4	$127,976	$7,674
Transportation & Warehousing	$2,489,857	$1,272,469	19.7	$927,200	$71,797
Services**	$24,958,335	$14,893,434	191.7	$8,580,531	$961,844
-Food & accommodation	$1,313,226	$748,726	20.9	$527,782	$121,115
-Other	$23,645,109	$14,144,708	170.8	$8,052,750	$840,729
Agriculture	$75,874	$45,884	0.6	$16,752	$1,848
Other	$2,802,865	$1,280,390	14.0	$915,680	$91,166
Total**	$75,786,280	$47,078,097	441.7	$26,480,843	$7,392,834

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Arkansas

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$13,569,282	$9,358,279	58.4	$4,068,181	$2,032,988
Manufacturing	$225,480	$47,784	0.6	$29,048	$2,149
Transportation & Warehousing	$427,476	$219,731	3.7	$164,211	$6,257
Services**	$4,857,122	$2,947,151	39.7	$1,540,112	$174,213
-Food & accommodation	$248,350	$129,233	4.6	$94,575	$17,326
-Other	$4,608,772	$2,817,919	35.1	$1,445,537	$156,887
Agriculture	$20,416	$9,369	0.2	$5,452	$333
Other	$614,522	$269,968	3.7	$198,073	$18,491
Total**	$19,714,299	$12,852,283	106.3	$6,005,076	$2,234,431

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

California

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$314,230,510	$215,926,403	1,371.6	$109,044,244	$56,856,558
Manufacturing	$19,595,636	$5,796,495	35.8	$2,706,518	$293,926
Transportation & Warehousing	$16,912,456	$9,538,225	117.8	$6,838,434	$353,973
Services**	$170,119,065	$108,907,173	1,104.2	$63,006,313	$5,451,191
-Food & accommodation	$8,374,178	$4,838,729	130.3	$3,624,347	$497,813
-Other	$161,744,887	$104,068,444	973.9	$59,381,966	$4,953,378
Agriculture	$1,075,093	$635,536	6.1	$410,726	$17,884
Other	$14,334,781	$7,503,676	78.4	$6,146,386	$265,709
Total**	$536,267,540	$348,307,508	2,714.0	$188,152,620	$63,239,243

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Colorado

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$48,409,297	$31,969,661	230.2	$18,933,493	$4,466,266
Manufacturing	$1,681,056	$493,229	3.8	$242,525	$18,790
Transportation & Warehousing	$2,580,873	$1,361,195	19.0	$949,624	$54,957
Services**	$29,371,567	$17,795,142	204.5	$10,274,264	$982,638
-Food & accommodation	$1,498,170	$841,102	24.3	$615,739	$99,767
-Other	$27,873,397	$16,954,040	180.2	$9,658,525	$882,871
Agriculture	$140,624	$74,454	0.9	$37,243	$3,385
Other	$3,232,512	$1,533,514	17.2	$1,233,148	$73,848
Total**	$85,415,928	$53,227,195	475.7	$31,670,297	$5,599,883

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Connecticutt

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$16,093,662	$11,725,639	61.9	$6,032,161	$1,466,949
Manufacturing	$178,598	$67,682	0.5	$41,606	$3,699
Transportation & Warehousing	$542,965	$331,516	3.9	$171,064	$10,940
Services**	$7,366,926	$4,950,465	43.4	$2,777,233	$314,560
-Food & accommodation	$316,114	$177,229	5.0	$133,184	$15,964
-Other	$7,050,812	$4,773,236	38.4	$2,644,049	$298,595
Agriculture	$5,994	$3,963	0.1	$1,740	$100
Other	$799,976	$389,804	4.0	$298,629	$31,174
Total**	$24,988,121	$17,469,069	113.9	$9,322,433	$1,827,421

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Delaware

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$4,671,511	$3,236,269	20.3	$1,819,920	$520,643
Manufacturing	$69,544	$10,369	0.1	$5,378	$785
Transportation & Warehousing	$163,651	$86,206	1.5	$67,513	$852
Services**	$2,141,776	$1,467,742	13.5	$756,295	$84,958
-Food & accommodation	$108,518	$60,372	1.8	$43,861	$7,280
-Other	$2,033,259	$1,407,370	11.7	$712,433	$77,678
Agriculture	$3,666	$1,749	0.0	$962	$23
Other	$188,375	$92,617	1.1	$73,616	$3,221
Total**	$7,238,523	$4,894,952	36.5	$2,723,683	$610,482

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

District of Columbia

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$8,000,842	$5,730,786	30.6	$3,721,887	$877,852
Manufacturing	$3,252	$1,308	0.0	$1,077	$148
Transportation & Warehousing	$136,858	$42,575	1.4	$114,718	-$685
Services**	$2,303,857	$1,657,481	11.7	$1,030,641	$66,292
-Food & accommodation	$101,100	$65,815	1.3	$47,591	$6,152
-Other	$2,202,757	$1,591,665	10.4	$983,051	$60,140
Agriculture	$0	$0	0.0	$0	$0
Other	$257,935	$153,351	1.0	$110,516	$10,837
Total**	$10,702,744	$7,585,500	44.7	$4,978,840	$954,444

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Florida

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$79,994,614	$53,815,032	368.0	$27,259,351	$11,206,932
Manufacturing	$1,870,368	$543,112	5.7	$312,740	$25,372
Transportation & Warehousing	$4,682,832	$2,329,398	37.2	$1,618,603	$98,931
Services**	$46,608,892	$27,505,706	358.8	$16,036,639	$1,982,727
-Food & accommodation	$2,304,779	$1,319,699	36.6	$948,616	$164,474
-Other	$44,304,114	$26,186,007	322.2	$15,088,023	$1,818,253
Agriculture	$149,337	$99,512	1.6	$47,668	$3,012
Other	$4,679,677	$2,323,222	24.2	$1,558,968	$240,924
Total**	$137,985,720	$86,615,982	795.5	$46,833,970	$13,557,898

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Georgia

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$44,774,661	$30,649,045	199.8	$15,921,486	$5,381,673
Manufacturing	$1,230,864	$394,195	3.4	$208,409	$17,128
Transportation & Warehousing	$2,134,129	$1,162,292	15.4	$777,408	$41,622
Services**	$24,564,244	$14,803,049	181.4	$8,583,154	$780,701
-Food & accommodation	$1,210,819	$663,525	20.8	$491,805	$80,759
-Other	$23,353,425	$14,139,524	160.5	$8,091,349	$699,942
Agriculture	$95,102	$50,535	0.6	$46,568	$955
Other	$2,146,199	$1,018,520	12.9	$737,631	$85,471
Total**	$74,945,200	$48,077,636	413.5	$26,274,656	$6,307,550

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Hawaii

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$11,892,396	$7,021,250	65.2	$3,675,492	$1,840,132
Manufacturing	$271,638	$38,485	0.6	$25,476	$1,286
Transportation & Warehousing	$583,348	$364,029	3.4	$243,085	$49,126
Services**	$5,293,986	$3,239,499	38.1	$1,784,367	$226,419
-Food & accommodation	$278,314	$162,409	4.2	$120,460	$11,485
-Other	$5,015,671	$3,077,090	33.9	$1,663,907	$214,935
Agriculture	$11,178	$6,884	0.3	$6,104	$194
Other	$375,621	$181,220	2.2	$156,027	$645
Total**	$18,428,165	$10,851,367	109.8	$5,890,551	$2,117,803

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Idaho

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$9,781,387	$5,953,675	52.2	$3,179,283	$1,264,765
Manufacturing	$139,648	$31,698	0.5	$21,268	$1,406
Transportation & Warehousing	$442,665	$212,006	3.7	$143,817	$6,384
Services**	$4,118,348	$2,269,435	35.5	$1,261,807	$134,184
-Food & accommodation	$216,459	$108,443	4.1	$82,104	$10,937
-Other	$3,901,889	$2,160,992	31.4	$1,179,703	$123,247
Agriculture	$22,475	$12,635	0.1	$8,516	$356
Other	$464,400	$187,753	2.8	$156,323	$7,369
Total**	$14,968,922	$8,667,202	94.8	$4,771,014	$1,414,464

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Illinois

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$53,166,987	$36,798,729	230.9	$20,181,225	$5,355,495
Manufacturing	$2,171,631	$686,151	4.2	$347,618	$18,065
Transportation & Warehousing	$2,597,742	$1,400,188	19.0	$1,004,070	$53,789
Services**	$29,416,288	$18,810,736	196.1	$10,767,641	$1,196,966
-Food & accommodation	$1,444,767	$820,631	23.1	$601,986	$97,859
-Other	$27,971,522	$17,990,105	173.0	$10,165,655	$1,099,106
Agriculture	$48,702	$25,770	0.4	$17,815	$206
Other	$2,739,026	$1,320,002	15.6	$1,100,651	$115,535
Total**	$90,140,377	$59,041,577	466.2	$33,419,020	$6,740,055

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Indiana

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$22,723,013	$14,378,140	115.2	$7,957,940	$2,525,420
Manufacturing	$835,322	$293,422	1.8	$117,124	$4,710
Transportation & Warehousing	$971,663	$487,608	8.6	$360,123	$16,354
Services**	$9,820,052	$5,926,308	78.5	$3,284,924	$397,140
-Food & accommodation	$573,555	$289,138	10.7	$218,518	$31,109
-Other	$9,246,497	$5,637,170	67.7	$3,066,406	$366,031
Agriculture	$30,109	$15,096	0.2	$10,145	$167
Other	$1,128,302	$507,905	6.5	$415,202	$16,540
Total**	$35,508,461	$21,608,479	210.7	$12,145,458	$2,960,332

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Iowa

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$13,296,571	$8,492,765	66.3	$4,633,635	$1,491,558
Manufacturing	$238,823	$69,538	0.8	$47,378	$2,248
Transportation & Warehousing	$477,495	$242,021	4.4	$192,767	$6,034
Services**	$5,431,283	$3,237,312	42.4	$1,732,309	$239,208
-Food & accommodation	$270,740	$131,497	5.2	$98,401	$14,724
-Other	$5,160,544	$3,105,815	37.2	$1,633,908	$224,484
Agriculture	$25,122	$12,102	0.1	$7,828	$297
Other	$613,049	$271,192	3.7	$213,009	$7,266
Total**	$20,082,344	$12,324,930	117.6	$6,826,926	$1,746,611

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Kansas

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$11,350,016	$7,499,186	53.4	$3,897,993	$1,134,918
Manufacturing	$352,342	$95,824	0.7	$50,888	$2,390
Transportation & Warehousing	$450,512	$259,164	3.7	$230,814	$7,702
Services**	$4,788,854	$2,811,291	36.8	$1,583,540	$193,926
-Food & accommodation	$251,363	$134,429	4.4	$99,971	$17,624
-Other	$4,537,492	$2,676,862	32.4	$1,483,569	$176,301
Agriculture	$15,584	$7,142	0.1	$3,429	$388
Other	$546,425	$236,261	3.4	$205,131	$4,646
Total**	$17,503,734	$10,908,868	98.1	$5,971,794	$1,343,969

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Kentucky

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$13,292,789	$8,866,954	61.4	$4,046,597	$2,085,987
Manufacturing	$299,835	$88,340	0.8	$47,284	$4,480
Transportation & Warehousing	$534,380	$300,397	4.2	$224,146	$5,808
Services**	$5,123,839	$2,991,788	42.6	$1,752,793	$186,635
-Food & accommodation	$280,085	$148,204	5.1	$112,570	$16,515
-Other	$4,843,754	$2,843,584	37.5	$1,640,223	$170,120
Agriculture	$14,547	$7,240	0.2	$2,860	$228
Other	$706,958	$311,985	3.9	$238,765	$12,501
Total**	$19,972,349	$12,566,704	113.1	$6,312,445	$2,295,640

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Louisiana

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$26,896,573	$17,819,706	125.3	$9,020,817	$4,204,082
Manufacturing	$760,291	$193,042	1.1	$64,314	$4,469
Transportation & Warehousing	$1,190,690	$644,573	8.8	$453,042	$13,648
Services**	$11,065,209	$6,590,275	90.1	$3,807,913	$438,558
-Food & accommodation	$647,679	$348,027	11.2	$259,008	$38,878
-Other	$10,417,530	$6,242,248	78.9	$3,548,905	$399,680
Agriculture	$26,678	$14,109	0.3	$12,351	$523
Other	$1,438,632	$702,346	7.8	$487,584	$20,814
Total**	$41,378,074	$25,964,052	233.4	$13,846,021	$4,682,094

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Maine

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$3,531,512	$2,238,851	17.9	$1,155,102	$600,565
Manufacturing	$51,470	$14,246	0.2	$8,770	$912
Transportation & Warehousing	$189,262	$96,319	1.6	$69,449	$3,980
Services**	$1,708,157	$1,006,697	13.3	$571,275	$74,944
-Food & accommodation	$89,652	$49,194	1.5	$36,165	$6,248
-Other	$1,618,505	$957,503	11.8	$535,110	$68,696
Agriculture	$6,523	$4,109	0.1	$2,256	$87
Other	$195,449	$88,317	1.2	$68,786	$5,415
Total**	$5,682,374	$3,448,539	34.2	$1,875,639	$685,903

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Maryland

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$25,030,982	$16,907,376	112.8	$9,233,922	$3,812,571
Manufacturing	$321,196	$99,784	0.9	$54,653	$3,429
Transportation & Warehousing	$1,177,313	$638,069	9.5	$461,826	$19,974
Services**	$12,052,498	$7,804,395	78.1	$4,310,181	$438,406
-Food & accommodation	$571,648	$330,570	9.0	$240,962	$42,913
-Other	$11,480,850	$7,473,825	69.1	$4,069,219	$395,493
Agriculture	$13,674	$6,880	0.1	$4,290	$152
Other	$1,217,961	$605,826	6.4	$488,780	$38,857
Total**	$39,813,624	$26,062,329	207.6	$14,553,654	$4,313,389

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Massachusetts

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$29,889,535	$20,620,207	130.3	$12,527,697	$3,092,572
Manufacturing	$680,036	$251,221	1.8	$140,076	$8,191
Transportation & Warehousing	$1,391,106	$780,973	10.1	$544,222	$25,542
Services**	$16,470,253	$10,732,625	98.8	$6,328,582	$517,710
-Food & accommodation	$757,765	$434,589	11.7	$320,337	$46,429
-Other	$15,712,488	$10,298,036	87.1	$6,008,245	$471,281
Agriculture	$12,087	$8,563	0.2	$4,601	$254
Other	$1,276,272	$678,240	7.3	$557,926	$11,523
Total**	$49,719,288	$33,071,830	248.5	$20,103,105	$3,655,793

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Michigan

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$31,757,808	$21,364,299	145.5	$11,220,220	$3,382,297
Manufacturing	$969,792	$263,973	2.3	$149,494	$8,054
Transportation & Warehousing	$1,403,851	$760,412	10.3	$514,664	$29,340
Services**	$15,470,708	$9,412,825	117.8	$5,271,429	$639,937
-Food & accommodation	$783,936	$398,813	14.2	$297,028	$45,610
-Other	$14,686,772	$9,014,013	103.6	$4,974,401	$594,327
Agriculture	$59,642	$34,694	0.6	$19,928	$802
Other	$1,634,618	$755,576	9.1	$584,118	$58,080
Total**	$51,296,419	$32,591,780	285.6	$17,759,853	$4,118,508

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Minnesota

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$26,101,128	$17,494,850	121.5	$10,360,072	$2,478,679
Manufacturing	$1,367,774	$417,114	3.2	$226,308	$9,845
Transportation & Warehousing	$1,103,501	$544,546	9.0	$395,732	$23,656
Services**	$14,466,110	$8,934,174	102.9	$5,281,255	$594,947
-Food & accommodation	$698,917	$371,042	12.1	$265,182	$55,783
-Other	$13,767,192	$8,563,132	90.9	$5,016,073	$539,163
Agriculture	$82,605	$39,942	0.5	$36,211	$563
Other	$1,679,953	$742,859	9.3	$559,872	$26,400
Total**	$44,801,072	$28,173,485	246.3	$16,859,450	$3,134,089

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Mississippi

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$9,388,928	$5,953,383	46.9	$2,888,021	$1,660,944
Manufacturing	$188,858	$33,846	0.4	$17,571	$1,179
Transportation & Warehousing	$358,052	$178,496	3.3	$133,955	$4,536
Services**	$3,265,384	$1,869,184	28.5	$1,045,025	$155,607
-Food & accommodation	$185,111	$96,264	3.4	$70,762	$13,082
-Other	$3,080,274	$1,772,920	25.2	$974,262	$142,525
Agriculture	$15,469	$7,602	0.1	$5,598	$206
Other	$482,092	$221,565	2.7	$156,980	$10,016
Total**	$13,698,783	$8,264,076	81.9	$4,247,149	$1,832,488

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Missouri

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$22,797,358	$14,636,604	113.6	$8,118,386	$2,249,452
Manufacturing	$572,580	$180,775	1.6	$94,387	$7,213
Transportation & Warehousing	$1,043,715	$533,048	8.8	$387,248	$18,481
Services**	$12,096,112	$7,297,715	90.6	$4,288,360	$408,739
-Food & accommodation	$625,512	$325,734	11.3	$247,100	$33,535
-Other	$11,470,600	$6,971,981	79.4	$4,041,260	$375,204
Agriculture	$30,759	$15,579	0.4	$5,445	$426
Other	$1,381,137	$635,494	7.2	$482,204	$32,363
Total**	$37,921,661	$23,299,215	222.1	$13,376,029	$2,716,673

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Montana

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$6,883,235	$4,291,072	35.5	$2,181,372	$1,048,129
Manufacturing	$169,382	$26,649	0.3	$11,941	$941
Transportation & Warehousing	$266,653	$131,321	2.3	$91,676	$5,222
Services**	$2,727,026	$1,529,375	23.7	$827,951	$91,628
-Food & accommodation	$160,800	$78,058	3.0	$62,461	$2,379
-Other	$2,566,227	$1,451,318	20.7	$765,491	$89,249
Agriculture	$8,362	$4,672	0.1	$3,179	$135
Other	$373,714	$153,046	2.0	$124,188	$4,396
Total**	$10,428,372	$6,136,136	63.9	$3,240,308	$1,150,450

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Nebraska

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$8,762,555	$5,574,523	44.0	$3,045,027	$966,703
Manufacturing	$146,312	$46,172	0.5	$29,410	$1,157
Transportation & Warehousing	$300,188	$148,566	2.8	$112,050	$4,267
Services**	$4,098,895	$2,393,148	30.9	$1,380,029	$146,345
-Food & accommodation	$203,637	$101,901	3.8	$74,975	$12,580
-Other	$3,895,258	$2,291,247	27.1	$1,305,054	$133,766
Agriculture	$20,502	$10,002	0.1	$6,562	$506
Other	$452,632	$224,593	2.5	$169,114	-$7,467
Total**	$13,781,083	$8,397,004	80.7	$4,742,192	$1,111,512

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Nevada

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$21,323,376	$13,707,988	105.0	$7,496,159	$3,362,360
Manufacturing	$175,586	$54,773	0.7	$38,129	$1,697
Transportation & Warehousing	$1,218,436	$740,341	8.1	$470,263	$51,649
Services**	$10,498,647	$6,354,030	78.2	$3,390,872	$488,158
-Food & accommodation	$702,274	$442,116	9.2	$286,424	$78,688
-Other	$9,796,373	$5,911,914	69.0	$3,104,448	$409,470
Agriculture	$5,571	$3,773	0.0	$2,012	$100
Other	$998,111	$495,093	4.6	$340,211	$33,697
Total**	$34,219,728	$21,355,999	196.6	$11,737,645	$3,937,661

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

New Hampshire

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$4,595,817	$3,035,206	22.1	$1,897,471	$432,992
Manufacturing	$49,644	$15,718	0.2	$10,956	$1,063
Transportation & Warehousing	$190,302	$102,297	1.6	$75,369	$3,571
Services**	$2,381,845	$1,488,044	16.8	$839,648	$100,328
-Food & accommodation	$124,010	$66,869	2.1	$52,953	$4,056
-Other	$2,257,835	$1,421,175	14.6	$786,694	$96,273
Agriculture	$2,757	$1,690	0.1	$864	$52
Other	$230,185	$108,518	1.4	$86,826	$10,233
Total**	$7,450,549	$4,751,474	42.0	$2,911,133	$548,240

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

New Jersey

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$35,622,741	$25,421,551	144.1	$13,761,264	$4,772,662
Manufacturing	$937,860	$268,955	1.7	$154,739	$12,253
Transportation & Warehousing	$1,649,545	$928,839	11.9	$659,269	$39,939
Services**	$17,609,651	$11,683,130	110.2	$6,741,013	$759,838
-Food & accommodation	$729,349	$398,863	11.6	$315,952	$17,461
-Other	$16,880,302	$11,284,267	98.5	$6,425,061	$742,377
Agriculture	$12,675	$9,249	0.2	$5,894	$219
Other	$1,448,442	$790,167	8.7	$634,695	$48,235
Total**	$57,280,914	$39,101,891	276.9	$21,956,874	$5,633,146

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

New Mexico

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$13,689,892	$8,104,390	75.4	$3,985,928	$2,443,251
Manufacturing	$255,069	$43,500	0.4	$17,807	$1,187
Transportation & Warehousing	$570,206	$314,225	4.4	$205,270	$9,023
Services**	$5,085,841	$3,025,525	40.3	$1,504,745	$256,288
-Food & accommodation	$298,392	$157,529	5.3	$119,714	$15,942
-Other	$4,787,449	$2,867,997	35.0	$1,385,032	$240,346
Agriculture	$11,415	$6,978	0.1	$6,002	$224
Other	$859,551	$381,664	4.4	$272,117	$28,352
Total**	$20,471,974	$11,876,281	125.0	$5,991,870	$2,738,325

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

New York

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$89,519,851	$62,741,844	372.6	$33,140,860	$13,423,503
Manufacturing	$1,474,103	$509,973	3.8	$258,691	$66,191
Transportation & Warehousing	$3,601,325	$1,962,590	26.7	$1,494,295	$82,845
Services**	$43,391,605	$29,907,598	247.6	$17,153,728	$1,872,761
-Food & accommodation	$1,965,861	$1,196,272	27.9	$833,457	$182,059
-Other	$41,425,743	$28,711,327	219.7	$16,320,271	$1,690,702
Agriculture	$74,844	$43,222	0.7	$22,597	$972
Other	$4,169,069	$2,025,101	20.5	$1,644,347	$90,293
Total**	$142,230,797	$97,190,327	671.9	$53,714,518	$15,536,565

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

North Carolina

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$34,783,254	$22,298,288	173.6	$12,513,265	$4,199,291
Manufacturing	$1,227,883	$455,114	2.9	$174,885	$33,809
Transportation & Warehousing	$1,687,541	$884,866	13.4	$590,575	$42,104
Services**	$17,798,335	$10,839,339	136.9	$6,112,654	$656,237
-Food & accommodation	$926,667	$480,576	16.9	$375,231	$34,355
-Other	$16,871,668	$10,358,762	120.0	$5,737,423	$621,883
Agriculture	$81,666	$44,838	0.5	$27,836	$934
Other	$1,631,781	$823,777	11.1	$624,813	$44,628
Total**	$57,210,459	$35,346,222	338.5	$20,044,027	$4,977,004

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

North Dakota

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$4,175,477	$2,858,120	18.1	$1,429,406	$620,880
Manufacturing	$57,991	$9,034	0.1	$5,004	$122
Transportation & Warehousing	$109,276	$70,546	0.7	$34,191	$1,211
Services**	$1,352,108	$790,650	10.1	$433,690	$47,374
-Food & accommodation	$74,364	$38,357	1.3	$27,577	$4,878
-Other	$1,277,745	$752,293	8.8	$406,113	$42,496
Agriculture	$4,119	$2,341	0.0	$3,173	$32
Other	$206,578	$83,205	1.0	$62,324	-$9,430
Total**	$5,905,550	$3,813,896	30.1	$1,967,787	$660,188

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Ohio

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$41,740,693	$27,204,080	203.0	$14,799,283	$4,660,228
Manufacturing	$1,792,579	$563,960	3.7	$236,777	$25,857
Transportation & Warehousing	$2,032,433	$1,101,141	15.9	$726,466	$38,199
Services**	$22,445,579	$13,766,706	164.7	$7,857,129	$830,526
-Food & accommodation	$1,123,661	$579,927	20.5	$450,761	$48,496
-Other	$21,321,918	$13,186,779	144.2	$7,406,368	$782,030
Agriculture	$65,021	$31,962	0.7	$18,080	$320
Other	$2,350,742	$1,156,139	13.1	$839,378	$60,713
Total**	$70,427,047	$43,823,987	401.2	$24,477,113	$5,615,844

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Oklahoma

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$20,006,331	$12,948,849	96.8	$6,324,946	$2,825,856
Manufacturing	$505,443	$109,382	0.9	$59,347	$3,383
Transportation & Warehousing	$779,439	$455,117	5.4	$236,546	$9,715
Services**	$8,605,184	$5,050,935	67.6	$2,884,704	$288,789
-Food & accommodation	$434,020	$230,411	7.8	$178,490	$21,859
-Other	$8,171,164	$4,820,525	59.9	$2,706,214	$266,930
Agriculture	$19,088	$10,323	0.2	$4,921	$343
Other	$1,489,572	$688,749	7.4	$479,721	$21,874
Total**	$31,405,057	$19,263,355	178.4	$9,990,186	$3,149,961

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Oregon

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$32,597,806	$20,534,901	167.4	$12,153,156	$2,768,173
Manufacturing	$808,382	$243,282	2.6	$142,070	$10,186
Transportation & Warehousing	$1,716,775	$895,782	13.4	$648,063	$41,138
Services**	$16,860,649	$10,208,438	127.9	$5,922,031	$515,469
-Food & accommodation	$896,790	$470,275	15.6	$379,331	$13,892
-Other	$15,963,859	$9,738,163	112.3	$5,542,700	$501,577
Agriculture	$77,288	$48,106	0.7	$21,893	$1,861
Other	$1,781,621	$852,918	9.4	$625,636	$24,635
Total**	$53,842,520	$32,783,427	321.5	$19,512,849	$3,361,461

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Pennsylvania

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$43,250,543	$29,142,484	198.6	$15,985,650	$5,646,078
Manufacturing	$1,547,771	$388,071	3.3	$215,243	$10,296
Transportation & Warehousing	$2,096,777	$1,125,639	16.9	$815,369	$24,805
Services**	$22,522,046	$14,370,044	151.1	$8,500,144	$918,936
-Food & accommodation	$1,045,544	$548,369	18.0	$413,107	$54,199
-Other	$21,476,503	$13,821,675	133.1	$8,087,037	$864,737
Agriculture	$68,614	$36,275	0.7	$17,979	$793
Other	$2,365,415	$1,162,232	13.8	$935,752	$66,220
Total**	$71,851,166	$46,224,746	384.4	$26,470,137	$6,667,128

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Rhodel Island

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$3,568,971	$2,381,483	16.5	$1,319,263	$617,639
Manufacturing	$34,347	$10,318	0.1	$7,921	$466
Transportation & Warehousing	$146,433	$82,396	1.2	$54,372	$2,978
Services**	$1,838,131	$1,194,939	12.2	$659,953	$80,012
-Food & accommodation	$88,820	$49,102	1.4	$34,696	$6,908
-Other	$1,749,311	$1,145,838	10.8	$625,257	$73,104
Agriculture	$770	$482	0.0	$233	$12
Other	$153,278	$80,440	0.9	$60,154	$6,530
Total**	$5,741,930	$3,750,058	30.9	$2,101,896	$707,638

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

South Carolina

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$17,644,072	$11,501,468	85.2	$5,679,964	$3,095,544
Manufacturing	$300,912	$88,566	0.9	$50,651	$4,596
Transportation & Warehousing	$743,774	$368,632	6.8	$286,646	$9,152
Services**	$7,507,897	$4,366,689	62.1	$2,465,694	$288,332
-Food & accommodation	$441,920	$233,422	7.8	$173,059	$26,289
-Other	$7,065,977	$4,133,267	54.2	$2,292,635	$262,044
Agriculture	$18,437	$10,145	0.2	$5,743	$245
Other	$915,962	$430,506	5.4	$323,985	$21,381
Total**	$27,131,053	$16,766,005	160.6	$8,812,683	$3,419,250

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

South Dakota

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$3,573,155	$2,298,397	17.5	$1,154,229	$469,852
Manufacturing	$46,459	$14,141	0.2	$12,401	$358
Transportation & Warehousing	$124,086	$61,865	1.1	$43,186	$1,438
Services**	$1,376,426	$799,497	10.5	$423,224	$56,824
-Food & accommodation	$72,829	$35,005	1.4	$25,861	$3,750
-Other	$1,303,596	$764,493	9.1	$397,363	$53,074
Agriculture	$5,384	$2,725	0.0	$2,125	$156
Other	$171,370	$62,002	1.1	$55,629	-$5,806
Total**	$5,296,879	$3,238,627	30.4	$1,690,793	$522,822

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Tennessee

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$21,828,339	$14,326,959	104.4	$7,305,775	$3,045,843
Manufacturing	$530,940	$160,847	1.4	$80,962	$4,922
Transportation & Warehousing	$1,029,326	$573,796	7.7	$414,675	$20,013
Services**	$10,463,467	$6,379,945	79.5	$3,872,130	$481,345
-Food & accommodation	$551,371	$301,880	9.6	$220,609	$41,821
-Other	$9,912,097	$6,078,066	69.9	$3,651,521	$439,524
Agriculture	$19,969	$10,466	0.4	$3,208	$353
Other	$1,387,158	$598,578	7.7	$474,376	$14,680
Total**	$35,259,199	$22,050,591	201.1	$12,151,126	$3,567,156

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Texas

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$178,485,673	$124,305,207	762.8	$65,484,308	$18,417,499
Manufacturing	$9,089,330	$2,593,191	16.6	$1,096,994	$65,878
Transportation & Warehousing	$7,953,980	$4,234,025	58.4	$2,798,309	$163,616
Services**	$88,834,723	$53,529,986	660.0	$31,956,575	$3,911,752
-Food & accommodation	$4,703,415	$2,614,193	77.5	$1,876,902	$376,163
-Other	$84,131,308	$50,915,794	582.4	$30,079,673	$3,535,589
Agriculture	$457,012	$216,890	5.2	$110,827	$7,880
Other	$11,551,026	$6,137,066	54.5	$3,848,514	$335,507
Total**	$296,371,743	$191,016,365	1,557.5	$105,295,527	$22,902,133

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Utah

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$22,470,589	$14,234,356	114.3	$8,045,064	$2,792,877
Manufacturing	$1,170,704	$292,643	2.2	$127,293	$7,067
Transportation & Warehousing	$1,099,675	$541,796	9.1	$554,772	$30,734
Services**	$12,417,965	$7,152,312	97.0	$3,847,112	$400,836
-Food & accommodation	$566,101	$296,027	10.2	$228,094	$29,636
-Other	$11,851,864	$6,856,286	86.8	$3,619,019	$371,201
Agriculture	$36,370	$20,746	0.3	$5,774	$881
Other	$1,316,703	$619,553	6.9	$499,930	$46,813
Total**	$38,512,007	$22,861,407	229.9	$13,079,946	$3,279,208

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Vermont

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$1,868,055	$1,155,596	9.7	$609,862	$332,606
Manufacturing	$20,412	$4,784	0.1	$3,931	$288
Transportation & Warehousing	$85,671	$45,132	0.7	$33,711	$1,242
Services**	$816,669	$486,529	6.1	$255,570	$37,267
-Food & accommodation	$41,687	$22,179	0.7	$16,703	$2,260
-Other	$774,982	$464,350	5.4	$238,867	$35,007
Agriculture	$2,044	$1,089	0.0	$500	$31
Other	$88,164	$39,707	0.5	$34,264	$2,583
Total**	$2,881,014	$1,732,837	17.3	$937,839	$374,017

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Virginia

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$33,068,139	$21,933,506	155.0	$12,351,162	$4,280,066
Manufacturing	$576,458	$205,287	1.7	$93,011	$24,228
Transportation & Warehousing	$1,438,341	$787,416	11.1	$492,924	$28,065
Services**	$16,376,088	$10,325,773	108.7	$5,919,994	$557,801
-Food & accommodation	$766,891	$419,977	13.3	$317,333	$40,430
-Other	$15,609,197	$9,905,796	95.4	$5,602,661	$517,371
Agriculture	$35,109	$18,443	0.4	$7,542	$693
Other	$2,035,234	$973,157	10.9	$734,226	$56,780
Total**	$53,529,369	$34,243,582	287.7	$19,598,858	$4,947,632

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Washington

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$67,209,353	$45,975,025	295.3	$23,573,984	$11,748,493
Manufacturing	$2,542,098	$602,606	4.6	$286,135	$23,603
Transportation & Warehousing	$3,154,371	$1,822,739	20.7	$1,270,723	$70,046
Services**	$31,079,002	$19,493,170	202.6	$10,623,554	$1,519,344
-Food & accommodation	$1,624,226	$967,768	23.9	$672,474	$163,484
-Other	$29,454,777	$18,525,402	178.7	$9,951,079	$1,355,860
Agriculture	$165,180	$97,262	1.3	$54,777	$2,356
Other	$3,715,193	$1,787,394	19.1	$1,376,678	$95,637
Total**	$107,865,197	$69,778,197	543.6	$37,185,850	$13,459,479

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

West Virginia

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$5,011,673	$3,162,052	25.2	$1,529,991	$901,871
Manufacturing	$39,992	$9,044	0.1	$6,243	$147
Transportation & Warehousing	$168,285	$84,636	1.5	$63,518	$1,738
Services**	$1,712,268	$1,013,520	14.0	$576,016	$69,876
-Food & accommodation	$97,433	$50,522	1.8	$37,059	$6,838
-Other	$1,614,835	$962,998	12.2	$538,957	$63,037
Agriculture	$2,512	$1,207	0.0	$88	$28
Other	$238,139	$107,645	1.5	$88,788	$5,608
Total**	$7,172,868	$4,378,105	42.4	$2,264,644	$979,268

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Wisconsin

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$20,862,702	$13,189,235	106.5	$7,544,004	$2,408,881
Manufacturing	$756,964	$251,170	2.6	$168,000	$7,018
Transportation & Warehousing	$949,408	$509,768	7.8	$366,469	$17,630
Services**	$10,391,209	$6,293,458	77.6	$3,485,589	$454,099
-Food & accommodation	$531,609	$260,416	9.9	$198,011	$24,729
-Other	$9,859,600	$6,033,043	67.7	$3,287,578	$429,370
Agriculture	$52,220	$28,901	0.4	$14,701	$755
Other	$1,160,157	$536,587	6.6	$421,119	$29,162
Total**	$34,172,660	$20,809,118	201.6	$11,999,881	$2,917,545

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding

Wyoming

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	$5,690,336	$3,812,711	25.6	$1,825,067	$1,014,897
Manufacturing	$77,913	$9,955	0.1	$3,851	$342
Transportation & Warehousing	$190,629	$98,549	1.5	$64,689	$3,599
Services**	$1,587,155	$939,089	12.7	$470,252	$65,451
-Food & accommodation	$101,974	$53,093	1.8	$39,855	$5,311
-Other	$1,485,181	$885,996	10.9	$430,397	$60,140
Agriculture	$1,361	$940	0.0	$378	$46
Other	$248,582	$112,116	1.2	$80,288	$11,487
Total**	$7,795,976	$4,973,360	41.1	$2,444,525	$1,095,823

*Indirect Business Taxes **Services (Total) and Total may not add due to rounding