

# 2018 Update: The U.S. National and State-Level Economic Benefits of Avocado Imports from Mexico



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September 2018



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





## **2018 UPDATE: THE U.S. NATIONAL AND STATE-LEVEL ECONOMIC BENEFITS OF AVOCADO IMPORTS FROM MEXICO**

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### **Abstract:**

Avocado imports have grown dramatically in recent years. If international trade theory holds true, the rapidly growing imports of avocados should also be contributing positively to the broader U.S. economy. This report is an update of two previous reports that measure the benefits to the U.S. overall economy and the economies of individual U.S. states from the rapidly growing imports of Hass avocados from Mexico (Williams, Capps, and Hanselka, 2014 and 2016). The analysis updates the answers to two questions addressed in the previous reports: (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? The general conclusion of the report is that Hass avocado imports from Mexico have a positive and economically important effect on the U.S. and state economies. More specifically, the report concludes that: (1) the \$2.33 billion of U.S. imports of Mexican avocados in 2017 added \$5.5 billion in U.S. economic output, \$3.4 billion in U.S. GDP, \$1.9 billion in U.S. labor income, \$932 million in U.S. taxes, and 28,251 jobs to the U.S. economy in that year; (2) California and Texas were the largest state beneficiaries from the economic activity generated by the imports; (3) much of the economic benefits accrued to the wholesale/retail and service industries at both the state and national levels; (4) the positive impact will only intensify in the future if U.S. imports of Mexican avocado imports continue their steep expected growth path; and (5) concerns that imports are depressing U.S. avocado prices and production are likely unwarranted given the large and expanding demand push for avocados that is driving both the U.S. and Mexican avocado production and the resource limitations that continue to challenge California producers, including water, land, and climate conditions.

### **Acknowledgements:**

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## Executive Summary

Avocados have been of growing interest in recent years for various reasons. Avocado imports have grown dramatically and now represent nearly 90% of domestic use. At the same time, avocados represent a rapidly growing healthy, nutritional food source that has been embraced by U.S. consumers. Between 1989/90 and 2016/17, U.S. avocado consumption grew by over 760%, increasing U.S. annual per capita consumption from about 1.1 lb to 7.1 lb over that period. Avocado imports now account for about 86% of U.S. avocado consumption compared to 11% in 1989/90. Mexico now accounts for about 88% of those imports. The volume of U.S. imports from Mexico declined in 2016 and 2017 for the first time since 2010 when weather damaged the Mexican avocado crop. The disruption of imports, however, boosted avocado prices so that, despite the volume decline, the value of U.S. imports from Mexico jumped by 53.1% from \$1.52 billion to \$2.33 billion between 2015 and 2017.

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. In the process, jobs are created in both countries and both enjoy higher standards of living. If the theory holds true, then the rapidly growing imports of avocados from Mexico should be contributing positively to the broader U.S. economy.

This report is an update of two previous reports that measure the benefits of the rapidly growing U.S. imports of Hass avocados from Mexico to the overall U.S. economy and the economies of individual U.S. states. The analysis updates the answers to two questions addressed in the previous reports: (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?

Imported avocados are packed in the country of origin and shipped to U.S. markets to various buyers. Avocados from Michoacán are trucked to the United States primarily through Texas border crossings (Figure 6). The imported avocados may be transported to wholesalers (shippers) who distribute them to processors, supermarkets, restaurants, and various other retail establishments. Some imports may be shipped directly to end users. As avocados move from U.S. ports of entry to wholesalers, distributors, processors, 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.

The general methodology employed in this study 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 as it circulates through the economy. The well-known, widely used, and heavily documented IMPLAN (IMPact analysis for PLANning) input-output system is used to estimate the national and state-level economic contribution of the sale of imported avocados from Mexico through the avocado import supply chain. IMPLAN captures the relationships between industries in the U.S. and state economies 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.

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. The input-output analysis using IMPLAN in this study 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. The same measurements are done for each state. The principal output from the analysis are aggregate measures of the contribution of avocado imports from Mexico in 2017 to the value of output, value-added (GDP), employment, labor income, and taxes paid (federal, local, and state-level) at both the national and state-level in that year.

The analysis concludes that U.S. imports of Mexican Hass avocados contributed the following to the U.S. economy in 2017:

- \$5.5 billion in output or spending;
- \$3.4 billion to the U.S. GDP (value-added);
- 28,251 jobs;
- \$1.9 billion in labor income; and
- \$932 million in taxes.

Every dollar of Mexican avocado imports in 2017 generated \$2.34 dollars in output, \$1.45 in U.S. GDP, and \$0.81 in labor income. Every million dollars of those imports generated 12.1 U.S. jobs. California and Texas were the largest state beneficiaries from the economic activity



generated by the imports. Much of the economic benefits accrued to the wholesale/retail and service industries at both the state and national levels.

Comparing the economic contribution in this study to what was reported in the two previous studies reveals a rapidly growing importance of Mexican avocado imports to the U.S. economy. The import value of Mexican avocados increased by 135% between 2012 and 2017 while their contribution to U.S. output increased by over 200% and their contribution to U.S. GDP increased by nearly 180% and by 175% to U.S. labor income, 464% to U.S. tax revenues, and 151% to U.S. employment.

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 lifting of phytosanitary restrictions on avocado imports from Mexico 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 and those of individual U.S. states as well. Any trade policy or other actions to reduce the level of U.S. avocado imports would have a substantial and lasting negative impact on the U.S. economy.

Concerns that the rapidly growing imports of avocados may be negatively impacting U.S. avocado prices and the California Hass avocado industry are likely unwarranted given the large and expanding demand push for avocados that is driving both the domestic and Mexican production of avocados. Given the specific growing season for avocados in California and the weather, water, land, climate, and other resource limitations that challenge California avocado producers, imports are primarily filling the gap in rapidly growing demand for avocados that California has been unable to meet.





## Table of Contents

Executive Summary .....	ii
Introduction.....	1
Economic Dimensions of U.S. Avocado Imports.....	2
State-Level Avocado Consumption .....	7
Avocado Import Supply Chain .....	7
Methodology .....	9
Procedures Followed in the National Aggregate Analysis .....	11
Procedures Followed in the State-Level Analysis .....	13
Analysis of the U.S. Economic Benefits from Imports of Avocados from Mexico .....	15
National Aggregate Analysis Results .....	16
State-Level Analysis Results .....	19
Industry by Industry Breakdown of the State-level Impacts .....	24
Conclusions and Implications .....	24
References.....	28
Appendix.....	31

## Tables

Table 1: Estimates of State Value of Avocado Imports from Mexico, 2017.....	16
Table 2: National Economic Contribution of 2017 Avocado Imports from Mexico.....	18
Table 3: Implied National Contribution Multipliers of 2017 Avocado Imports from Mexico.	18
Table 4: National Economic Impact of 2017 Avocado Imports from Mexico by Industry.....	18
Table 5: State-Level Economic Contribution of 2017 Mexican Avocado Imports .....	20
Table 6: Implied State-Level Economic Multipliers of 2017 Avocado Imports from Mexico	23

## Figures

Figure 1: U.S. Domestic Utilization of Avocados, Total and Per Capita, 1980/81-2016/17.....	2
Figure 2: Volume of U.S. Imports of Mexican Avocados by Country of Origin, 1989-2017....	3
Figure 3: Value of U.S. Imports of Mexican Avocados by Country of Origin, 1989-2017 .....	4
Figure 4: Weekly Avocado Shipment Volume into U.S. Market from All Suppliers, 2004 through 2017.....	6
Figure 5: Estimated Shares of U.S. Avocado Consumption Volume by Region (%), 2017 .....	8
Figure 6: Economic Multiplier Effects of U.S. Avocado Imports through the Supply Chain....	8
Figure 7: Overview of Community Economic System.....	12
Figure 8: State-Level Absolute Economic Contributions of 2017 Mexican Avocado Imports	21
Figure 9: State-Level Relative Economic Contributions of 2017 Mexican Avocado Imports.	23
Figure 10: Growth of the Economic Contribution of Mexican Avocado Imports, 2012 to 2017	27



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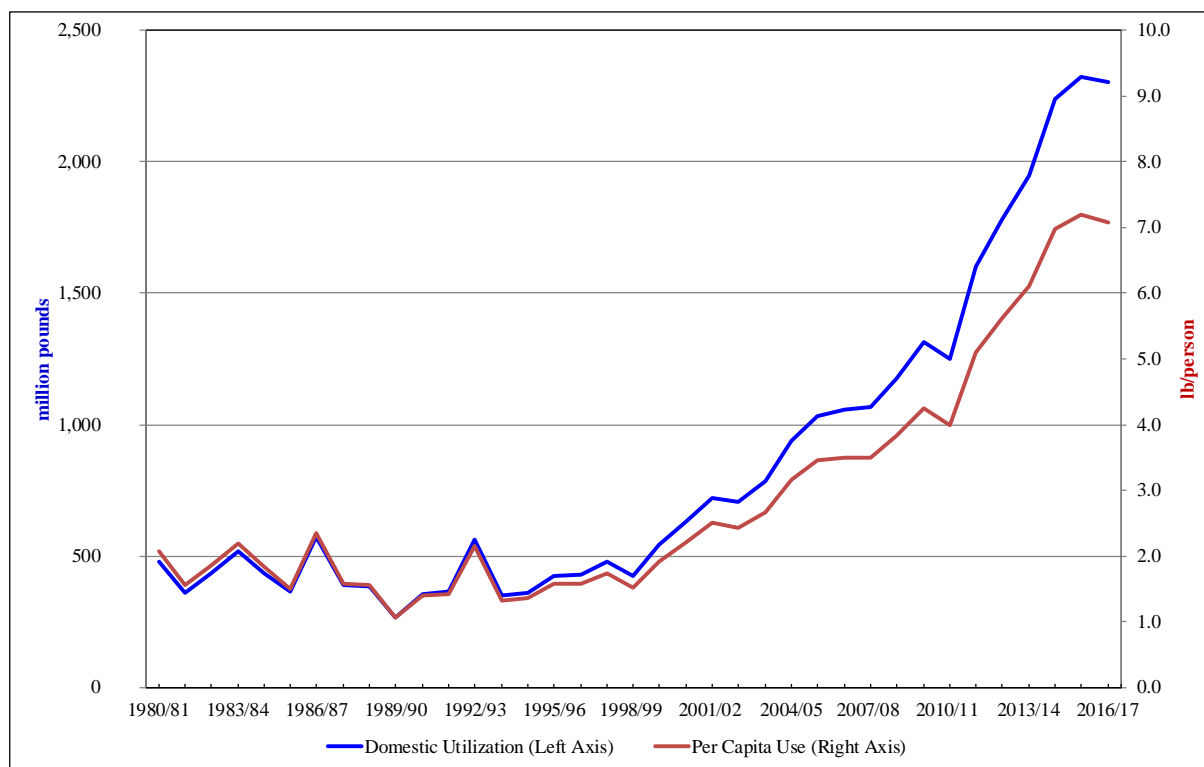
Avocados have been of growing interest in recent years for various reasons. Avocado imports have grown dramatically and now represent nearly 90% of domestic use. At the same time, avocados represent a rapidly growing source of healthy, nutritional foods that have been embraced by U.S. consumers. Between 1989/90 and 2016/17, U.S. avocado consumption grew by over 760%, increasing U.S. annual per capita consumption from 1.07 lbs to 7.08 lbs over that period (Figure 1). Avocado imports now account for about 86% of U.S. avocado consumption compared to 11% in 1989/90 (Figure 1). Mexico now accounts for about 88% of those imports.

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 of food and many other products in expanding consumer food availability and choices as well as potentially contributing positively to the economy of the importing country as they stimulate economic activity all along their respective supply chains is often ignored.

If international trade theory holds true, then the rapidly growing imports of avocados should also be contributing positively to the broader U.S. economy. This report is an update of two previous reports that measure the benefits of the rapidly growing U.S. imports of Hass avocados from Mexico to the overall U.S. economy and the economies of individual U.S. states (Williams, Capps, and Hanselka, 2014 and 2016). The analysis updates the answers to two questions addressed in the previous reports: (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? 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 the industry breakdown of those impacts. The state-level impacts are then discussed. Salient conclusions and implications of the analysis are then high-lighted,



**Figure 1: U.S. Domestic Utilization of Avocados, Total and Per Capita, 1980/81-2016/17**



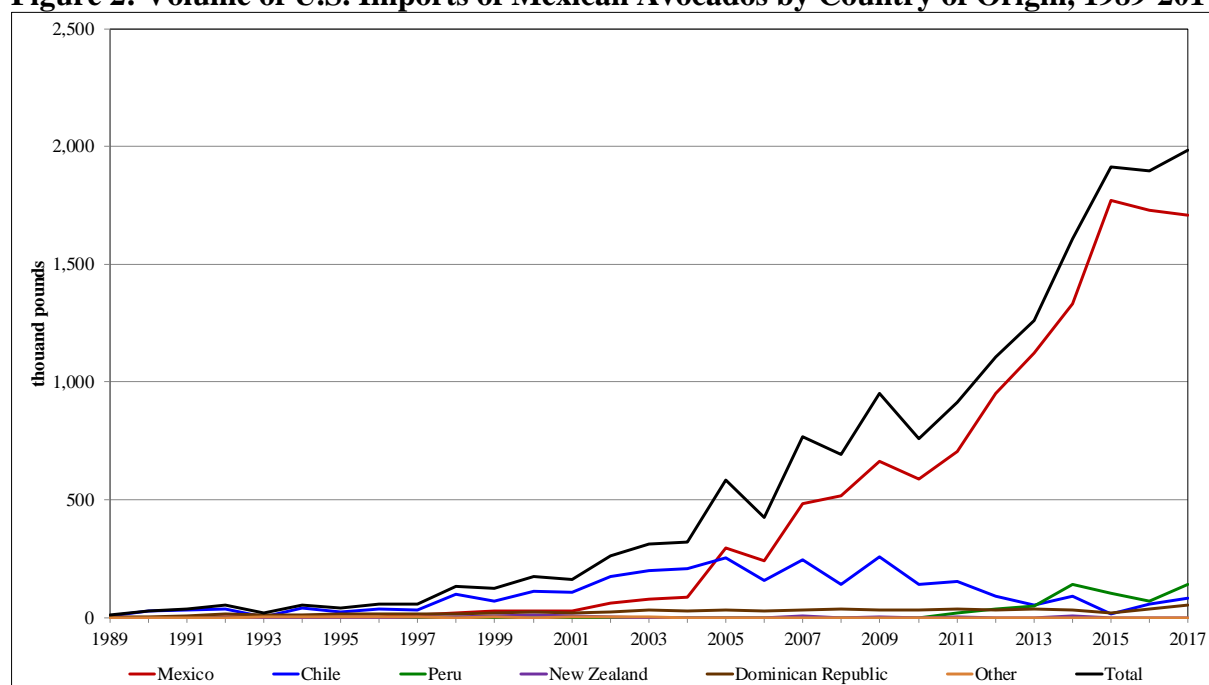
Source: Graphic by authors using data from USDA (2017).

including an assessment of the implications for California. Comparisons of the national impacts for 2017 found in this report are compared with the results for 2012 and 2015 from the two previous reports to provide an historical perspective on the contribution that avocado imports make to the U.S. economy.

### **Economic Dimensions of U.S. Avocado Imports**

Between 1989 and 1996, U.S. imports of avocados increased slowly but steadily from 10.3 million lb to 56.0 million lb. Mexico’s share of U.S. avocado imports reached only 7% by the end of that period (Figure 2). In those years, Chile accounted for up to 87% of U.S. avocado imports. In 1997, however, Mexico’s share of U.S. avocado imports doubled in one year to 15.4% and has continued a rapid upward trajectory along with total U.S. avocado imports. By 2015, U.S. imports of avocados had jumped to 1.91 billion lb, almost 93% of which came from

**Figure 2: Volume of U.S. Imports of Mexican Avocados by Country of Origin, 1989-2017**

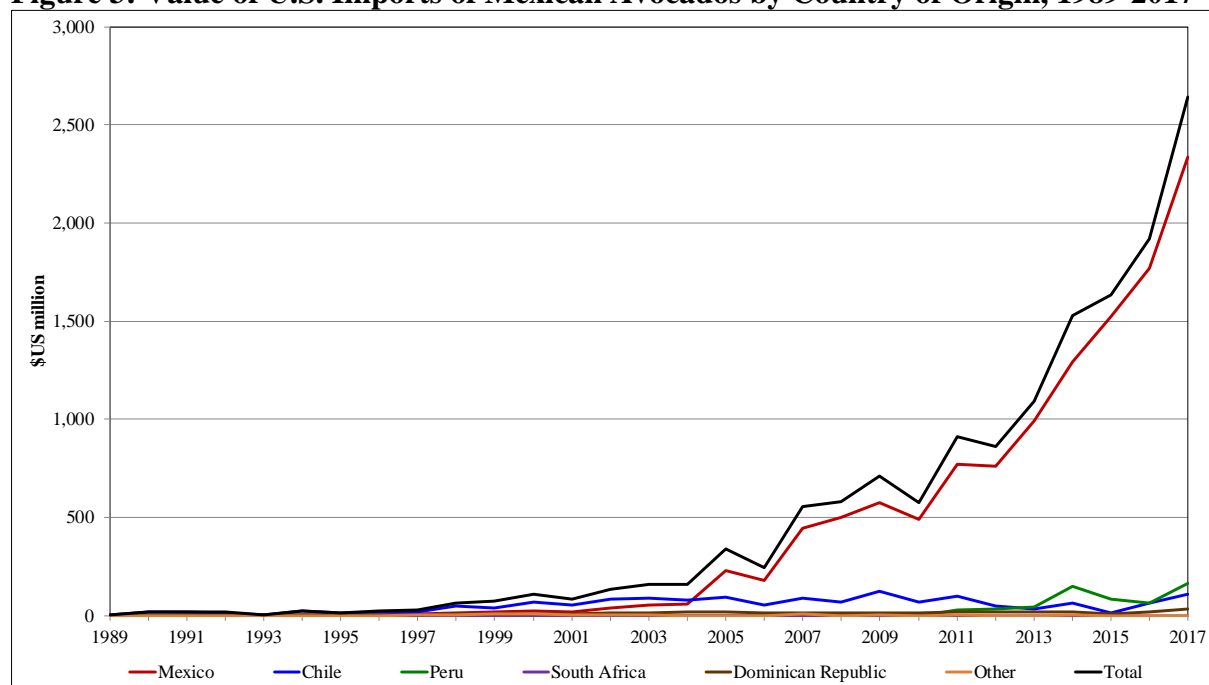


Source: Graphics by authors using data from USDA (2018).

Mexico. In 2016 and 2017, the volume of U.S. avocado imports from Mexico declined due to a confluence of events including two strikes by Mexican avocado producers in July and October of 2016 and a drought that reduced production. When avocados ripen, their stems do not weaken through the process of abscission as occurs with most other fruits. As a consequence, mature avocados do not separate from the tree like other mature fruits so that they can be stored on the tree for as long as 8 months to a year. Dissatisfied with the prices they were receiving for their avocados, Mexican producers delayed their harvesting of avocados twice in 2016 (July and October) to boost market prices. The consequence was lower exports of Mexican avocados to the U.S. market from 1.77 billion lb in 2015 to 1.71 billion lb in 2017. Total U.S. imports of avocados continued to increase to 1.98 billion lb that year, however, as the growing U.S. demand for avocados attracted more avocados from Peru, Chile, and the Dominican Republic to fill the gap left by the Mexican producer strike. The disruption of imports from Mexico boosted avocado prices so that, despite the volume decline, the value of U.S. imports from Mexico jumped by 53.1% between from \$1.52 billion to \$2.33 billion between 2015 and 2017 (Figure 3).

The growing U.S. demand for avocados is the result of various forces. For one, the growth of the U.S. Hispanic and Caribbean population over the years has spurred the demand for avocados

**Figure 3: Value of U.S. Imports of Mexican Avocados by Country of Origin, 1989-2017**



as ingredients in their own traditional dishes. Traditionally in the United States, avocados were consumed fresh in salads, as a side dish, or as guacamole. An explosion of fusion foods featuring Hispanic and Caribbean cuisine in recent years, however, 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). Another key factor in the growing U.S. demand for avocados has been the rapidly spreading consumer trend towards ethnic as well as health-promoting foods along with the designation of avocados as a super food and a consequent growing “obsession” of millennials with avocados (Khazan, 2015 and Wolf, 2017). The U.S. demand for avocados also has been pushed by the highly effective promotion efforts of the U.S. avocado industry under the Hass Avocado Promotion, Research and Information Order established in 2002 (Carman, Saitone, & Sexton, 2013).

These favorable demand conditions joined forces at about the same time that the U.S. Department of Agriculture (USDA) issued rules in 1997 and 2001 to lift a long-standing phytosanitary ban on avocado imports from Mexico which facilitated the sharp influx of imports to meet the growing U.S. demand (Roberts & Perez, 2006; Carman & Sexton, 2011; Carman,

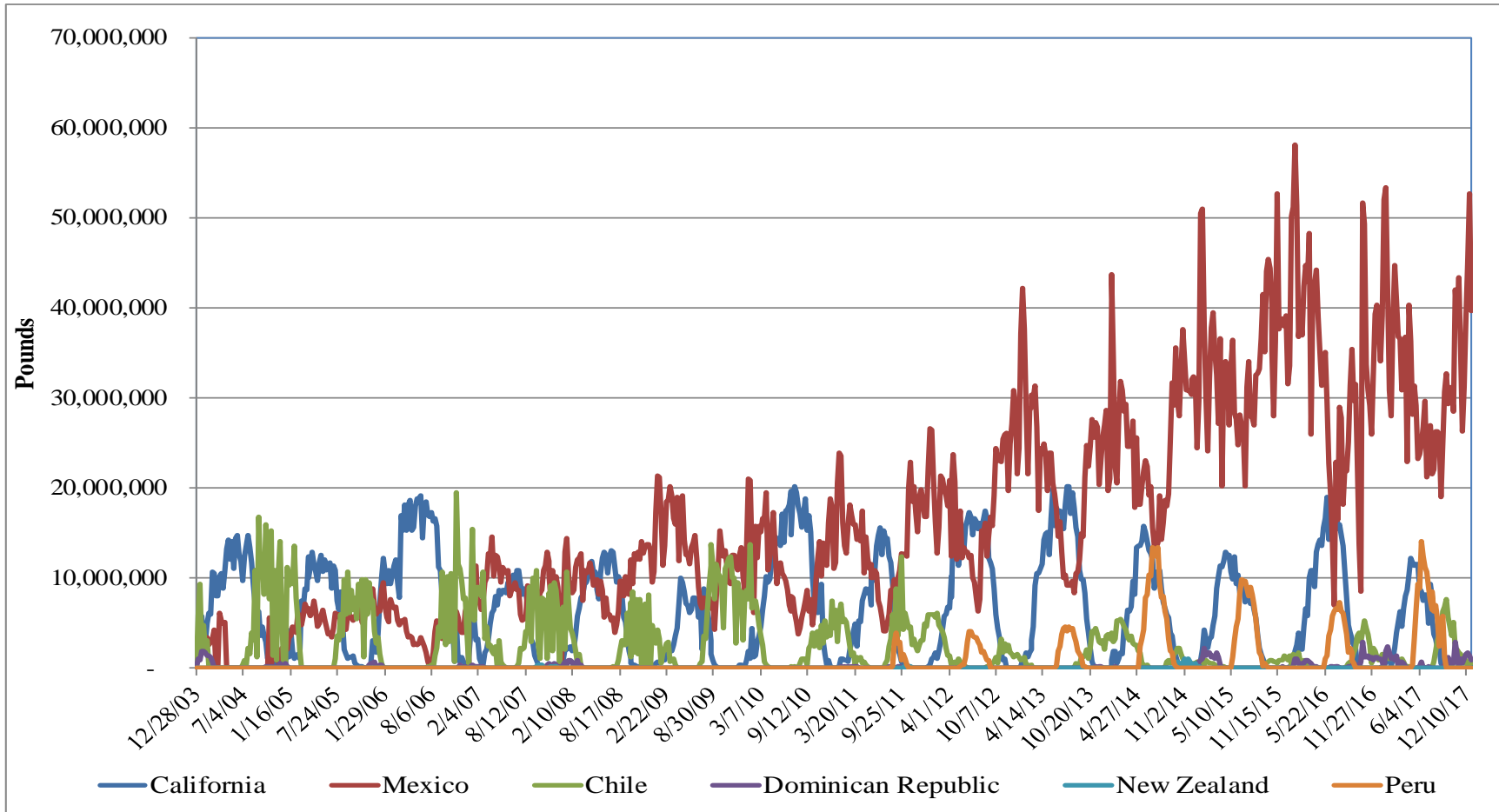
Saitone, & Sexton, R.J., 2013; Huang, 2013). The ban was implemented in 1914 to prevent entry of avocado seed weevils into the United States. After a series of appeals, the state of Michoacán was allowed to begin exporting Hass avocados to the United States in 1997. Michoacán produces 85% of Mexican 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 has yet been allowed access of their avocados to the United States. Effective June 27, 2016, however, Hass avocados from any Mexico state are now allowed into the continental United States, Hawaii, and Puerto Rico provided those states meet certain requirements. The state of Jalisco, the second largest Mexican avocado producing state with 9.5% of the area planted to avocados in Mexico, is working towards meeting the certification requirements to be able to export to the U.S. market (McLeod and Flores, 2017).

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 4. 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 about 80% in the mid-1990s before the ban on Mexican avocado imports was lifted to about 12% in 2015/16 (based on data in USDA, 2017 and 2018).

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 & 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 consumption and 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

**Figure 4: Weekly Avocado Shipment Volume into U.S. Market from All Suppliers, 2004 through 2017**



Weekly Descriptive Statistics (pounds)						
	Mexico	California	Chile	Dominican Republic	New Zealand	Peru
mean	16,656,809	6,408,876	2,528,996	170,024	14,905	770,762
std dev	12,196,858	5,849,586	3,413,460	389,530	85,059	2,246,521
min	0	0	0	0	0	0
max	58,151,125	20,183,825	19,503,350	2,930,000	1,020,000	14,174,908

Source: Graphic and table by authors using data from Hass Avocado Board (2018).



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**

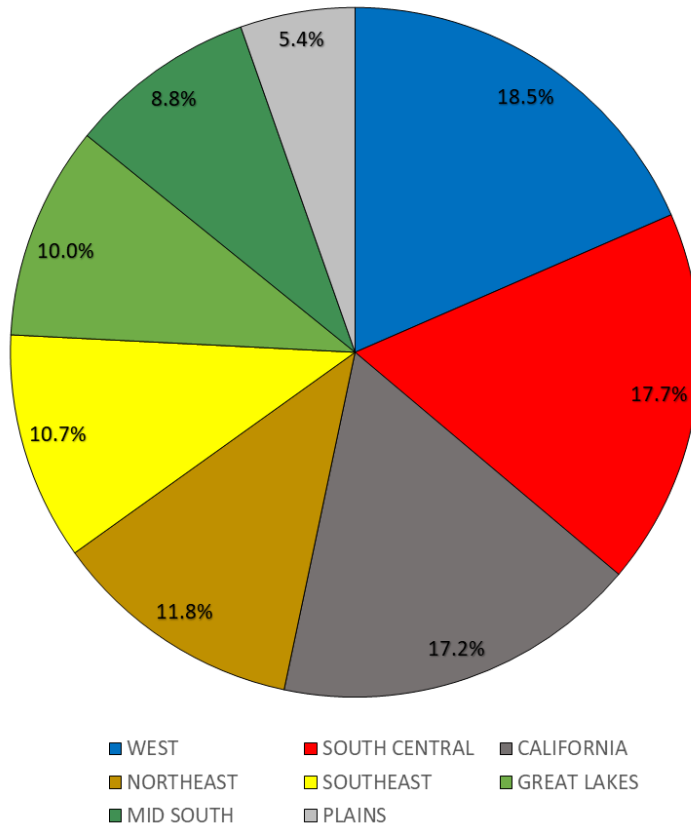
Avocados are consumed in every state of the union. The largest share is consumed in western states and the least in southern and plains states. Based on the most recently available quarterly avocado sales data from Information Resources, Inc. (IRI) on the retail volume of avocados sold across the eight IRI regions in 2017 (Hass Avocado Board, 2017), the West region (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming) accounted for the largest share of regional avocado consumption (18.5%) followed closely by the South Central region (Arkansas, Louisiana, Oklahoma, and Texas) (17.7%), California (17.2%), the Northeast region (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island) (11.8%), the Southeast region (Alabama, Florida, Georgia, Mississippi, South Carolina) (10.7%), the Great Lakes region (Illinois, Indiana, Michigan, Ohio, and Wisconsin) (10.0%), the Mid-South region (Delaware, District of Columbia, Kentucky, Maryland, North Carolina, Tennessee, and West Virginia) (8.8%), and the Plains region (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota) (5.4%) (Figure 5).

### **Avocado Import Supply Chain**

Imported avocados are packed in the country of origin and shipped to U.S. markets to various buyers. Avocados from Michoacán are trucked to the United States primarily through Texas border crossings (Figure 6). The imported avocados may be transported to wholesalers (shippers) who distribute them to processors, supermarkets, restaurants, and various other retail establishments. Alternatively, imports may be shipped directly to end users. As avocados move

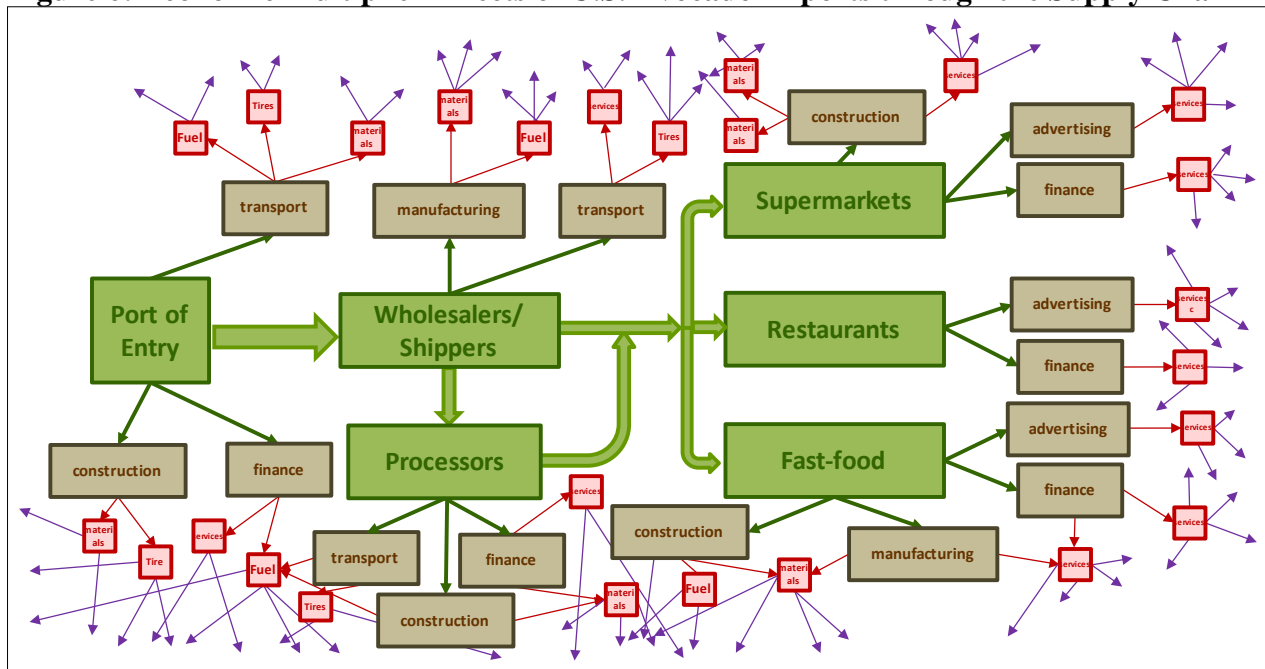


**Figure 5: Estimated Shares of U.S. Avocado Consumption Volume by Region (%), 2017**



Source: Calculations by authors using data available from the Hass Avocado Board (2017).

**Figure 6: Economic Multiplier Effects of U.S. Avocado Imports through the Supply Chain**



from U.S. ports of entry to wholesalers, distributors, processors, 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 (Figure 6).

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/processing, 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 (Figure 6). For example, the transport of avocados requires fuel. That demand for fuel 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 2017 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 Group, 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 Group, 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 system 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 from 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 businesses. 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 represent separate measures of economic contribution 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 considered to be a "basic industry" (Figure 7). The flows of products out of, and dollars into, a community are represented by the two arrows in the upper right portion of Figure 7. To produce these goods and services for "export" outside the community, the basic industry purchases inputs from outside of 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. As depicted in Figure 7, 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).

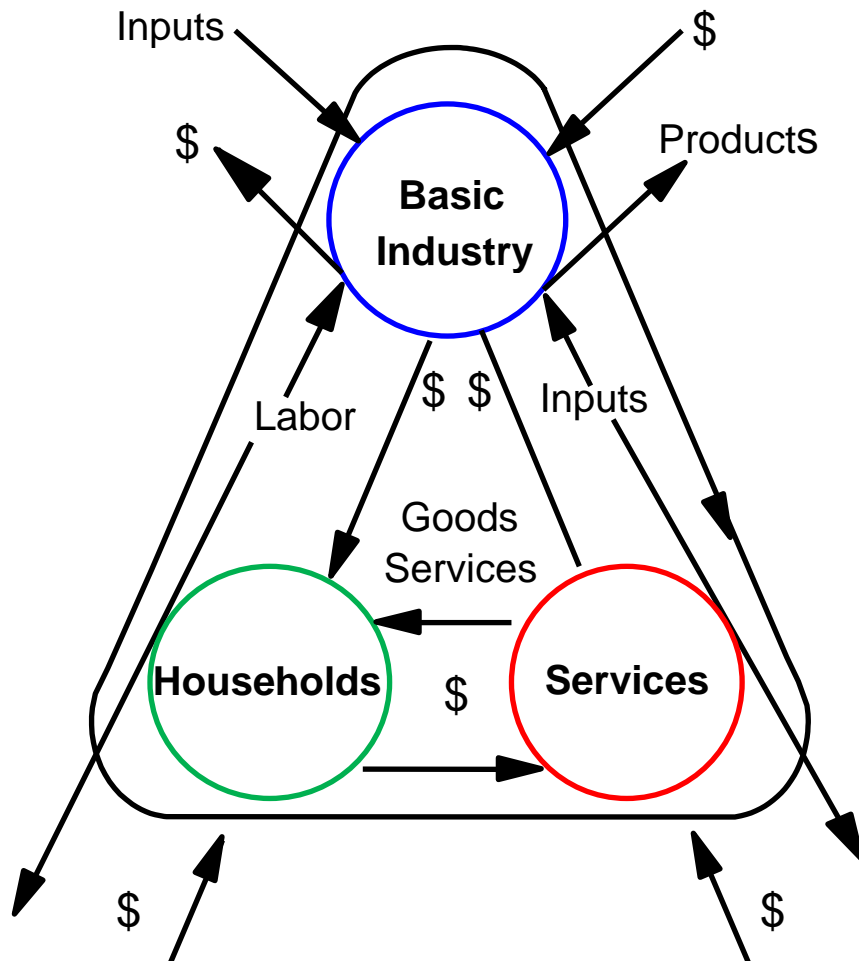
### **Procedures Followed in the National Aggregate Analysis**

The national economic contribution analysis of avocado imports from Mexico to the United States was conducted using an IMPLAN input-output model of the U.S. economy. 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 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 Group, 2013b).

With the U.S. model constructed, the next step was to determine the IMPLAN sector to use for the analysis of the economic contribution of 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 direct 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

**Figure 7: Overview of Community Economic System**



Source: Woods, McCorkle, & Niemeyer (2007)

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 of 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 Group, 2013a). The value of avocado imports from Mexico to the United States for 2017 was 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 should 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 Group, 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 calculated 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 2017 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 2017 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 on USDA data (USDA, 2017). The *national* value of avocado consumption was calculated as the national value





of utilized U.S. production of avocados in 2017 (USDA, 2017) plus the 2017 value of avocado imports (USDA, 2018).

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 2017 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 (2017). 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 2017 were: (1) California (17.3%), (2) West (16.3%), (3) Northeast (14.8%), (4) South Central (13.7%), (5) Southeast (11.6%), (6) Great Lakes (10.7%), (7) Mid-South (19.6%),

and (8) Plains (5.7%). While not identical, these estimated shares of the regional value of avocado consumption are similar to the shares by volume as shown in Figure 5.

For each of the eight regions, the state values of avocado consumption in 2017 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 2017 were reduced by the value of California avocados consumed in the corresponding state in 2017 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 2017 as published by the California Avocado Commission (2017) 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 2017 (\$2.334 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 2017 are exhibited in Table 1. Not surprisingly, the two top states were California at \$415.9 million and Texas at \$247.3 million. These state figures then formed the inputs into the IMPLAN model as described above.

### **Analysis of the U.S. 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, this section discusses the economic contributions of Mexican avocado imports to the economy of individual states. In both cases, the emphasis is on the contribution of avocado imports to the value of U.S. output, U.S. value-added, U.S. employment, U.S. labor income, and U.S. taxes paid (federal, state, and local). Avocado import contribution multipliers are also presented. The multipliers demonstrate the dollar value of the contribution of imports of Mexican avocados to U.S. output, U.S. value added, and U.S. labor income per dollar of avocado imports. An employment multiplier is also presented which reflects the number of U.S. 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

**Table 1: Estimates of State Value of Avocado Imports from Mexico, 2017**

State	Import Value	State	Import Value
Alabama	\$28,163,109	Montana	\$9,104,205
Alaska	\$9,992,138	Nebraska	\$12,959,297
Arizona	\$60,542,640	Nevada	\$29,587,625
Arkansas	\$18,218,595	New Hampshire	\$6,690,794
California	\$415,953,322	New Jersey	\$49,173,217
Colorado	\$64,876,876	New Mexico	\$18,377,630
Connecticut	\$21,674,448	New York	\$128,563,703
Delaware	\$7,035,267	North Carolina	\$51,495,365
District of Columbia	\$12,533,012	North Dakota	\$5,905,614
Florida	\$129,142,926	Ohio	\$58,267,894
Georgia	\$73,996,881	Oklahoma	\$27,587,934
Hawaii	\$16,682,777	Oregon	\$44,712,590
Idaho	\$13,606,904	Pennsylvania	\$62,496,305
Illinois	\$73,638,542	Rhode Island	\$4,940,897
Indiana	\$32,236,038	South Carolina	\$29,249,694
Iowa	\$20,240,295	South Dakota	\$5,313,382
Kansas	\$16,792,897	Tennessee	\$33,025,124
Kentucky	\$19,372,741	Texas	\$247,382,210
Louisiana	\$35,916,235	Utah	\$31,331,503
Maine	\$5,102,607	Vermont	\$2,675,537
Maryland	\$37,656,627	Virginia	\$48,660,920
Massachusetts	\$43,830,953	Washington	\$95,844,763
Michigan	\$45,327,592	West Virginia	\$7,346,463
Minnesota	\$37,365,758	Wisconsin	\$29,088,841
Mississippi	\$14,913,281	Wyoming	\$7,625,514
Missouri	\$32,447,516	<b>Total</b>	<b>\$2,334,667,000</b>

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 provide some indication of the industry distribution of the contribution of avocado imports from Mexico to the United States and state-level economies.

### National Aggregate Analysis Results

The analysis demonstrates that avocado imports from Mexico have made a substantial contribution to the U.S. economy as they have moved along the avocado import supply chain generating multiplier effects along intersecting supply chains and adding to U.S. output, value-

added, income, jobs and taxes as a result. The total of all the direct, indirect, and induced effects of the \$2.33 billion of U.S. imports of Mexican avocados in 2017 on U.S. output or total spending amounted to \$5.48 billion (Table 2). That is, the \$2.33 billion of imported Mexican avocados in 2017 stimulated U.S. economic activity that generated a total of \$5.48 billion in output or total spending. At the same time, the total economic activity stimulated by those imports added \$3.39 billion in 2017 to the U.S. GDP (about 0.0175% of the U.S. GDP), created \$1.89 billion in U.S. labor income, \$932.07 million in taxes (federal, state, and local), and added 28,251 jobs (0.018% of U.S. employment). The jobs added by avocado imports from Mexico amounted 3.7% of the reduction in U.S. unemployment that occurred between 2016 and 2017.

### ***Implied National Contribution Multipliers***

Every dollar of Mexican avocados imported in 2017 generated \$2.34 in gross output, \$1.45 in GDP (value-added), and \$0.81 in labor income (Table 3). Every million dollars of imports generated 12.1 jobs in the U.S. economy. Taxes generated by the imports amounted to 39.9% 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 \$234 million while GDP increases by \$145 million, labor income by \$81 million, and employment by 1,210 jobs.

### ***Industry by Industry Breakdown of the National Results***

An industry breakdown of the economic contributions reveals that the wholesale/retail and service industries account for most of the contribution of imports of Mexican imports 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 the 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 U.S. imports of Mexican avocados, 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,



**Table 2: National Economic Contribution of 2017 Avocado Imports from Mexico**

<b>Output</b> (\$ million)	<b>Value-added</b> (\$ million)	<b>Employment</b> (no. of jobs)	<b>Labor Income</b> (\$ million)	<b>Taxes*</b> (\$ million)
\$5,482.1	\$3,392.0 (0.0175% of U.S. GDP)	28,250.9 (0.018% of U.S. employment)	\$1,893.4	\$932.1

\* federal, state, local.

**Table 3: Implied National Contribution Multipliers of 2017 Avocado Imports from Mexico**

<b>Output Multiplier</b> (\$output/\$imports)	<b>Value-added Multiplier</b> (\$VA/\$imports)	<b>Employment Multiplier</b> (jobs added/ \$million imports)	<b>Labor Income Multiplier</b> (\$income/\$imports)	<b>Tax Multiplier</b> (% of import value)
2.34	1.45	12.1	0.81	39.9%

**Table 4: National Economic Impact of 2017 Avocado Imports from Mexico by Industry**

<b>Industry</b>	<b>Output</b> (\$ million)	<b>Value-added</b> (\$ million)	<b>Employment</b> (no. of jobs)	<b>Labor Income</b> (\$ million)	<b>Taxes*</b> (\$ million)
<b>Wholesale/Retail</b>	<b>\$2,614.6</b>	<b>\$1,805.7</b>	<b>11,985.7</b>	<b>\$962.5</b>	<b>\$353.6</b>
<b>Manufacturing</b>	\$435.1	\$127.0	799.3	\$59.7	\$5.3
<b>Transportation &amp; Warehousing</b>	\$190.9	\$102.9	1,287.9	\$72.6	\$4.4
<b>Services</b>	<b>\$1,947.8</b>	<b>\$1,208.1</b>	<b>12,802.6</b>	<b>\$702.0</b>	<b>\$72.3</b>
- Food & accommodation	\$106.8	\$59.9	1,583.5	\$42.7	\$7.5
- Other	\$1,841.0	\$1,148.2	11,219.1	\$659.3	\$64.8
<b>Agriculture</b>	\$31.1	\$16.0	237.5	\$9.9	\$0.3
<b>Other</b>	\$262.6	\$132.3	1,137.9	\$86.7	\$10.1
<b>Total**</b>	<b>\$5,482.1</b>	<b>\$3,392.0</b>	<b>28,250.9</b>	<b>\$1,893.4</b>	<b>\$446.0</b>

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

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.

### **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) low impact. Similar criteria for the three categories from the previous report were used in this report. High impact states include those for which imports of Mexican avocados in 2017 generated more than 1,400 jobs and contributed more than \$200 million to the respective state GDP. Low impact states include those for which Mexican avocados generated less than 100 jobs and contributed less than \$13 million to the state GDP. Medium impact states are those for which the impacts are between the high and low level impacts. Figure 8 illustrates the state-level impacts of Mexican avocado imports by level of absolute impact on jobs and value added.

The highest impact states, not surprisingly, are California and Texas (in green on the map in Figure 8). 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 2017 generated 3,856 jobs and contributed \$514.0 million to the California state GDP. In Texas, imports of Mexican avocados created 2,313 jobs and contributed \$294.6 million to that state's GDP. The medium impact category included 37 states (in blue on the map in Figure 8.)

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 1,385 jobs created and \$156.7 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 1,021 and 827 jobs created and \$153.4 million and \$110.2 million, respectively, in GDP created. Rounding out the top ten were Georgia (735 jobs created and \$88.7 million in value added), Illinois (692 jobs created and \$91.1 million in value



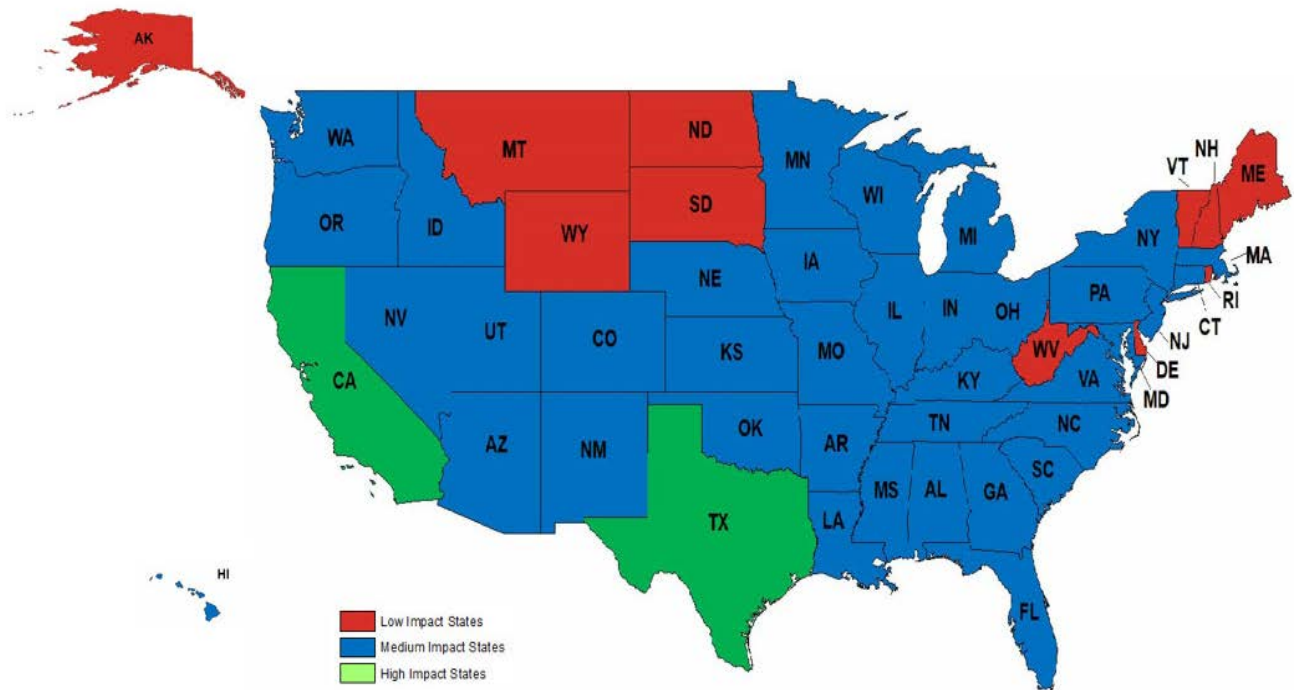


**Table 5: State-Level Economic Contribution of 2017 Mexican Avocado Imports**

State	Total Output \$ million	Total Value Added \$ million	Total Employment No. of jobs	Total Labor Income \$ million	Total Taxes* \$ million
Alabama	\$46.44	\$28.62	269.9	\$15.34	\$8.60
Alaska	\$14.99	\$9.91	72.2	\$4.64	\$4.02
Arizona	\$114.27	\$71.72	648.0	\$40.34	\$20.78
Arkansas	\$28.43	\$18.80	149.6	\$8.78	\$5.61
California	\$782.75	\$514.04	3,856.4	\$277.68	\$168.11
Colorado	\$127.39	\$80.19	690.0	\$47.71	\$20.54
Connecticut	\$36.61	\$25.91	162.6	\$13.83	\$6.85
Delaware	\$11.80	\$8.08	57.9	\$4.49	\$2.09
District of Columbia	\$17.21	\$12.39	70.3	\$8.13	\$3.14
Florida	\$247.03	\$156.65	1,385.3	\$84.70	\$45.16
Georgia	\$136.78	\$88.72	734.7	\$48.49	\$23.40
Hawaii	\$27.85	\$16.60	161.7	\$9.01	\$5.20
Idaho	\$22.54	\$13.22	139.1	\$7.28	\$3.97
Illinois	\$137.52	\$91.05	692.3	\$51.54	\$24.15
Indiana	\$54.54	\$33.61	315.5	\$18.89	\$9.25
Iowa	\$33.03	\$20.53	188.7	\$11.37	\$5.78
Kansas	\$28.14	\$17.77	153.9	\$9.73	\$4.67
Kentucky	\$31.32	\$19.97	173.1	\$10.03	\$6.13
Louisiana	\$59.65	\$37.90	328.1	\$20.21	\$11.43
Maine	\$8.96	\$5.50	52.6	\$2.99	\$1.81
Maryland	\$65.01	\$43.07	330.4	\$24.05	\$13.50
Massachusetts	\$80.01	\$53.79	389.1	\$32.69	\$14.64
Michigan	\$79.95	\$51.39	433.7	\$28.01	\$13.73
Minnesota	\$71.20	\$45.27	381.1	\$27.09	\$12.21
Mississippi	\$23.25	\$14.23	135.8	\$7.31	\$4.88
Missouri	\$59.44	\$36.93	339.0	\$21.20	\$9.35
Montana	\$14.91	\$8.89	89.2	\$4.70	\$2.91
Nebraska	\$22.19	\$13.68	126.6	\$7.73	\$3.71
Nevada	\$51.81	\$32.70	289.9	\$17.97	\$10.16
New Hampshire	\$12.02	\$7.75	65.9	\$4.75	\$2.05
New Jersey	\$86.68	\$59.86	408.2	\$33.62	\$17.78
New Mexico	\$29.44	\$17.30	175.4	\$8.73	\$6.04
New York	\$221.86	\$153.39	1,021.0	\$84.77	\$48.49
North Carolina	\$93.12	\$58.19	536.5	\$33.00	\$16.29
North Dakota	\$8.98	\$5.89	44.7	\$3.04	\$1.84
Ohio	\$108.34	\$68.15	600.8	\$38.07	\$18.20
Oklahoma	\$46.91	\$29.13	259.7	\$15.11	\$8.57
Oregon	\$80.86	\$49.78	470.0	\$29.63	\$12.76
Pennsylvania	\$113.98	\$74.15	593.6	\$42.46	\$21.47
Rhode Island	\$8.70	\$5.75	45.6	\$3.22	\$1.89
South Carolina	\$48.76	\$30.51	281.4	\$16.04	\$9.99
South Dakota	\$8.53	\$5.28	47.7	\$2.76	\$1.51
Tennessee	\$58.50	\$37.01	324.9	\$20.39	\$10.58
Texas	\$451.72	\$294.58	2,312.6	\$162.38	\$73.58
Utah	\$59.33	\$35.60	344.7	\$20.37	\$10.03
Vermont	\$4.43	\$2.70	25.9	\$1.46	\$0.94
Virginia	\$85.70	\$55.45	448.6	\$31.74	\$16.03
Washington	\$168.36	\$110.22	826.8	\$58.74	\$35.26
West Virginia	\$11.25	\$6.96	65.0	\$3.60	\$2.43
Wisconsin	\$52.17	\$32.13	299.6	\$18.53	\$9.17
Wyoming	\$11.08	\$7.18	57.1	\$3.53	\$2.57

\* Federal, state, and local

**Figure 8: State-Level Absolute Economic Contributions of 2017 Mexican Avocado Imports**



**High Impact States**  
(> 1,400 jobs and >\$200 million)

	<u>Jobs</u>	<u>VA*</u>
California	3,856.4	\$514.0
Texas	2,312.6	\$294.6

**Medium Impact States**  
(100 - 1,400 jobs and \$13 - \$200 million)

	<u>Jobs</u>	<u>VA*</u>
Florida	1,385.3	\$156.7
New York	1,021.0	\$153.4
Washington	826.8	\$110.2
Georgia	734.7	\$88.7
Illinois	692.3	\$91.1
Colorado	690.0	\$80.2
Arizona	648.0	\$71.7
Ohio	600.8	\$68.2
Pennsylvania	593.6	\$74.1
North Carolina	536.5	\$58.2
Oregon	470.0	\$49.8
Virginia	448.6	\$55.4
Michigan	433.7	\$51.4
New Jersey	408.2	\$59.9
Massachusetts	389.1	\$53.8
Minnesota	381.1	\$45.3
Utah	344.7	\$35.6
Missouri	339.0	\$36.9
Maryland	330.4	\$43.1
Louisiana	328.1	\$37.9
Tennessee	324.9	\$37.0
Indiana	315.5	\$33.6
Wisconsin	299.6	\$32.1
Nevada	289.9	\$32.7
South Carolina	281.4	\$30.5
Alabama	269.9	\$28.6
Oklahoma	259.7	\$29.1
Iowa	188.7	\$20.5
New Mexico	175.4	\$17.3
Kentucky	173.1	\$20.0
Connecticut	162.6	\$25.9
Hawaii	161.7	\$16.6
Kansas	153.9	\$17.8
Arkansas	149.6	\$18.8
Idaho	139.1	\$13.2
Mississippi	135.8	\$14.2
Nebraska	126.6	\$13.7

**Low Impact States**  
(< 100 jobs and < \$13 million)

	<u>Jobs</u>	<u>VA*</u>
Montana	89.2	\$8.9
Alaska	72.2	\$9.9
District of Columbia	70.3	\$12.4
New Hampshire	65.9	\$7.7
West Virginia	65.0	\$7.0
Delaware	57.9	\$8.1
Wyoming	57.1	\$7.2
Maine	52.6	\$5.5
South Dakota	47.7	\$5.3
Rhode Island	45.6	\$5.7
North Dakota	44.7	\$5.9
Vermont	25.9	\$2.7

\*Value added in \$ million

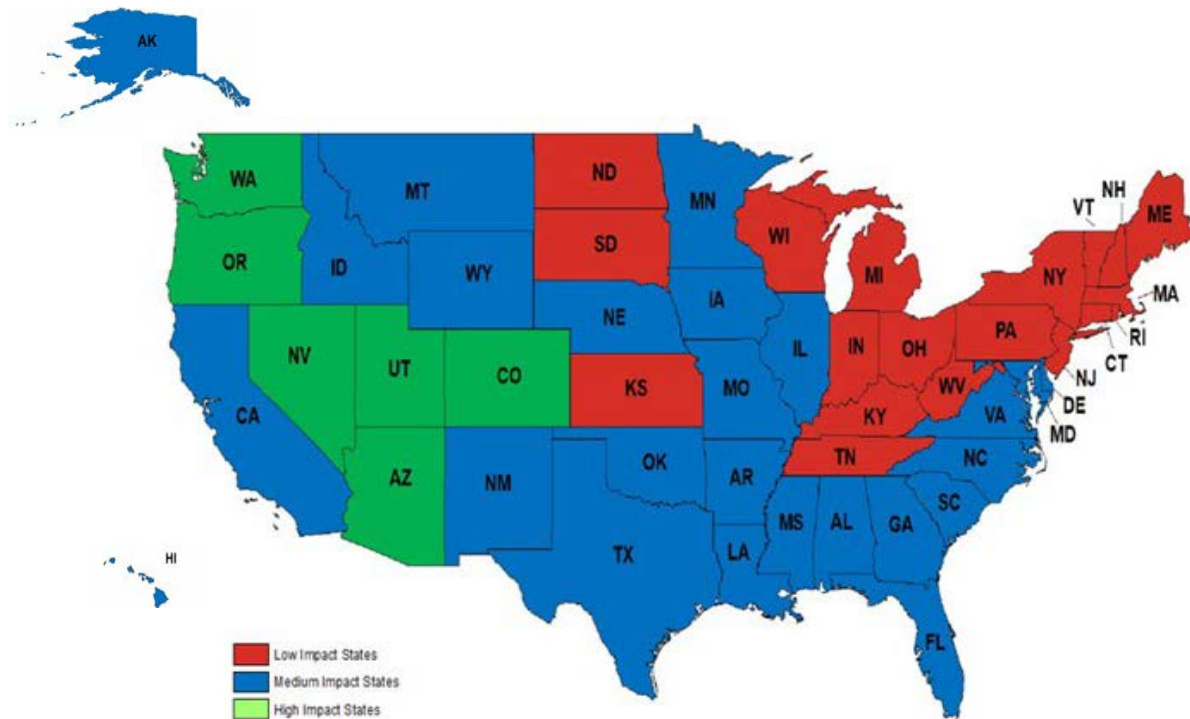
added), Colorado (690 jobs created and \$80.2 million in value added), Arizona (648 jobs created and \$71.7 million in value added), and Ohio (601 jobs created and \$68.2 million in value added).

The low impact category included 11 states and the District of Colombia (in red on the map in Figure 8) located primarily in the Plains and Northeast regions (along with Alaska). Montana experienced the largest economic impact from Mexican avocado imports among the low impact category states (89 jobs created and \$8.9 million in value added).

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 \$168.1 and \$73.5 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 \$4.0 million in Alaska to a low of \$940,000 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 Table 5 (output, employment, labor income, value added, and taxes). The reason is that state-level estimates only capture economic activity that occurs within state boundaries whereas the national-level estimates captures both the impact within states as well as economic activity that crosses state borders, and, thus, will be larger.

The state-by-state categorization of the level of impacts as shown in Figure 8 applies a standard of impact based on the *absolute* size of the value-added and jobs created. The fact that California and Texas are thus categorized as the highest impact states is not surprising given that those two states are also the two largest states in the levels of GDP and employment. Alternatively, the states can be categorized based on the *relative* contribution of avocado imports to each state's GDP and employment levels. When categorized in this way, the clustering of states within each category is more distinct (Figure 9). Those states for which the relative contribution of avocado imports to their GDP and employment levels are the highest include states in the western part of the country including Washington, Oregon, Nevada, Utah, Arizona, and Colorado. California is the highest "Medium Impact" state. The lowest impact states are primarily those along the Appalachian and Alleghany Mountain ranges northward to the Canadian border and northeast through New England. Medium impact states include states in the south and southeast, the Midwest, and north. The implication of this method of categorizing the state-level impacts is that avocado imports make a relatively higher contribution to the economies of the western states and a relatively lower contribution to the central and northeast quadrant of the country.

**Figure 9: State-Level Relative Economic Contributions of 2017 Mexican Avocado Imports**



<i>High Impact States*</i>		<i>Medium Impact States**</i>		<i>Low Impact States***</i>	
	<u>Sum of GDP &amp; Employ Shares</u>		<u>Sum of GDP &amp; Employ Shares</u>		<u>Sum of GDP &amp; Employ Shares</u>
Colorado	0.0439%	California	0.0368%	Kansas	0.0195%
Washington	0.0424%	Hawaii	0.0361%	Ohio	0.0195%
Oregon	0.0417%	New Mexico	0.0340%	Tennessee	0.0194%
Arizona	0.0414%	Idaho	0.0337%	Massachusetts	0.0191%
Utah	0.0413%	Alaska	0.0335%	South Dakota	0.0188%
Nevada	0.0395%	Montana	0.0325%	New York	0.0187%
		Wyoming	0.0324%	North Dakota	0.0184%
		Texas	0.0324%	Wisconsin	0.0184%
		Georgia	0.0294%	District of Columbia	0.0183%
		Florida	0.0293%	Michigan	0.0183%
		Louisiana	0.0279%	New Jersey	0.0181%
		Oklahoma	0.0270%	Pennsylvania	0.0179%
		South Carolina	0.0252%	Indiana	0.0179%
		Arkansas	0.0245%	New Hampshire	0.0174%
		Alabama	0.0242%	Rhode Island	0.0172%
		Minnesota	0.0235%	Connecticut	0.0171%
		Mississippi	0.0216%	Kentucky	0.0170%
		Delaware	0.0216%	West Virginia	0.0162%
		Missouri	0.0216%	Maine	0.0154%
		Nebraska	0.0213%	Vermont	0.0145%
		North Carolina	0.0206%		
		Maryland	0.0205%		
		Illinois	0.0202%		
		Virginia	0.0201%		
		Iowa	0.0201%		

\*  $\geq 0.04\%$  sum of the corresponding state's GDP + Employment Shares

\*\*  $0.02\% - 0.039\%$  sum of the corresponding state's GDP + Employment Shares

\*\*\*  $< 0.02\%$  sum of the corresponding state's GDP + Employment Shares

### ***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 1.24 in California, Colorado, and Illinois to lows of 0.95 in Mississippi and West Virginia and 0.94 in New Mexico and Wyoming. The jobs multiplier (jobs generated per \$million in imports) ranged from highs of 11.0 in Utah, 10.7 in Florida and Arizona, and 10.6 in Colorado to lows of 5.6 in the District of Columbia, 7.2 in Alaska, 7.5 in Connecticut and Wyoming, and 7.6 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 the wholesale/retail and service industries account for much of the contribution of imports of Mexican imports 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 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 contribution of food imports on the overall U.S. economy. Specifically, the study concludes that U.S. imports of Mexican Hass avocados contributed the following to the U.S. economy in 2017:

- \$5.5 billion in output or spending;
- \$3.4 billion to the U.S. GDP (value-added);



**Table 6: Implied State-Level Economic Multipliers of 2017 Avocado Imports from Mexico**

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	1.65	1.02	9.6	0.54	30.55%
Alaska	1.50	0.99	7.2	0.46	40.28%
Arizona	1.89	1.18	10.7	0.67	34.33%
Arkansas	1.56	1.03	8.2	0.48	30.78%
California	1.88	1.24	9.3	0.67	40.42%
Colorado	1.96	1.24	10.6	0.74	31.65%
Connecticut	1.69	1.20	7.5	0.64	31.60%
Delaware	1.68	1.15	8.2	0.64	29.73%
District of Columbia	1.37	0.99	5.6	0.65	25.04%
Florida	1.91	1.21	10.7	0.66	34.97%
Georgia	1.85	1.20	9.9	0.66	31.62%
Hawaii	1.67	1.00	9.7	0.54	31.17%
Idaho	1.66	0.97	10.2	0.53	29.15%
Illinois	1.87	1.24	9.4	0.70	32.80%
Indiana	1.69	1.04	9.8	0.59	28.68%
Iowa	1.63	1.01	9.3	0.56	28.54%
Kansas	1.68	1.06	9.2	0.58	27.81%
Kentucky	1.62	1.03	8.9	0.52	31.62%
Louisiana	1.66	1.06	9.1	0.56	31.81%
Maine	1.76	1.08	10.3	0.59	35.57%
Maryland	1.73	1.14	8.8	0.64	35.86%
Massachusetts	1.83	1.23	8.9	0.75	33.40%
Michigan	1.76	1.13	9.6	0.62	30.30%
Minnesota	1.91	1.21	10.2	0.73	32.68%
Mississippi	1.56	0.95	9.1	0.49	32.74%
Missouri	1.83	1.14	10.4	0.65	28.81%
Montana	1.64	0.98	9.8	0.52	31.95%
Nebraska	1.71	1.06	9.8	0.60	28.61%
Nevada	1.75	1.11	9.8	0.61	34.33%
New Hampshire	1.80	1.16	9.9	0.71	30.65%
New Jersey	1.76	1.22	8.3	0.68	36.16%
New Mexico	1.60	0.94	9.5	0.48	32.87%
New York	1.73	1.19	7.9	0.66	37.72%
North Carolina	1.81	1.13	10.4	0.64	31.63%
North Dakota	1.52	1.00	7.6	0.51	31.11%
Ohio	1.86	1.17	10.3	0.65	31.24%
Oklahoma	1.70	1.06	9.4	0.55	31.07%
Oregon	1.81	1.11	10.5	0.66	28.54%
Pennsylvania	1.82	1.19	9.5	0.68	34.35%
Rhode Island	1.76	1.16	9.2	0.65	38.28%
South Carolina	1.67	1.04	9.6	0.55	34.15%
South Dakota	1.60	0.99	9.0	0.52	28.33%
Tennessee	1.77	1.12	9.8	0.62	32.03%
Texas	1.83	1.19	9.3	0.66	29.74%
Utah	1.89	1.14	11.0	0.65	32.03%
Vermont	1.66	1.01	9.7	0.55	35.14%
Virginia	1.76	1.14	9.2	0.65	32.95%
Washington	1.76	1.15	8.6	0.61	36.79%
West Virginia	1.53	0.95	8.8	0.49	33.08%
Wisconsin	1.79	1.10	10.3	0.64	31.53%
Wyoming	1.45	0.94	7.5	0.46	33.65%

\* Federal, State, and Local

- 28,251 jobs;
- \$1.9 billion in labor income; and
- \$932 million in taxes.

Looked at another way, every dollar of avocado imports from Mexico in 2017 generated \$2.34 dollars in output, \$1.45 in U.S. GDP, and \$0.81 in labor income. Every million dollars of those imports generated 12.1 U.S. jobs.

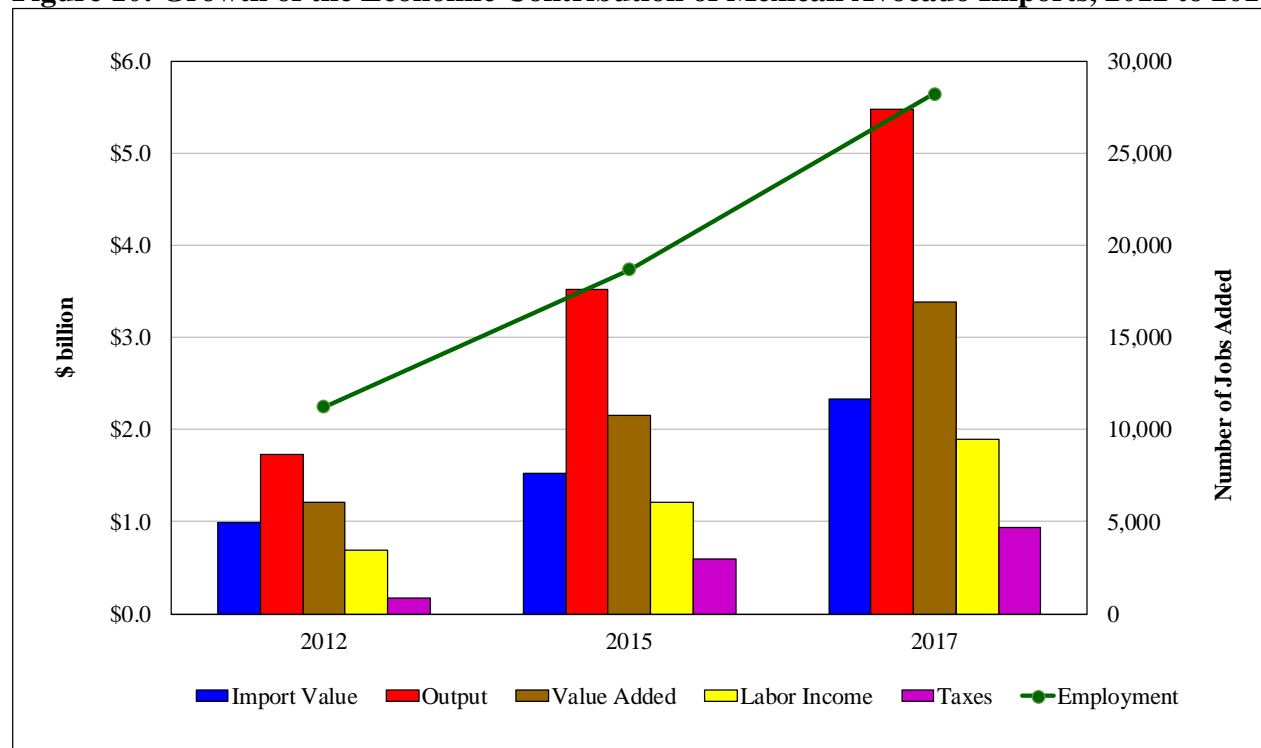
Comparing the economic contribution of Mexican avocado imports in this report for 2017 to the contribution of those imports in 2012 and 2015 as reported in the two previous reports (Williams, Capps, and Hanselka, 2014 and 2016) reveals the rapidly growing importance of Mexican avocado imports to the U.S. economy (Figure 10). While the value of U.S. imports of Mexican avocados increased by 135% from \$991.9 million in 2012 to \$2.33 billion in 2017, the contribution of those imports to U.S. output has increased by over 200% from \$1.7 billion to \$5.5 billion. At the same time, the contribution of those imports to U.S. GDP (value added) has increased by nearly 180% from \$1.2 billion to \$3.4 billion. The contributions to U.S. labor income, U.S. tax revenues, and employment have also registered dramatic increases (174%, 464%, and 151%, respectively). Given their continuing rapid and increasing rate of growth, imports of Mexican avocados will continue to make substantial and increasing contributions to the U.S. economy for the foreseeable future. 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 *absolute* beneficiaries from the economic activity generated by imports of Mexican avocados, including 3,856 and 2,313 jobs created and \$514.0 million and \$294.6 million in value added generated in the respective states. In terms of absolute contributions to value added and jobs, the other top ten beneficiary states include (in order): Florida, New York, Washington, Georgia, Illinois, Colorado, Arizona, and Ohio.
- In terms of the *relative* contribution of imports to each state's GDP and employment, however, the top beneficiary states are all in the west, including Colorado, Washington,



**Figure 10: Growth of the Economic Contribution of Mexican Avocado Imports, 2012 to 2017**



Oregon, Arizona, Utah, Nevada, and California. The least benefits on a relative basis accrued primarily to states in the Appalachian and Alleghany mountain areas up to the northeast into New England.

- 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 \$1.24 in California, Colorado and Illinois to low of 0.95 in Mississippi and West Virginia and 0.94 in New Mexico and Wyoming. The jobs generated per million dollars of Mexican avocado imports ranged from highs of 11.0 in Utah, 10.7 in Florida, and Arizona to lows of 5.6 in the District of Columbia, 7.2 in Alaska, 7.5 in Connecticut and Wyoming, and 7.6 in North Dakota.

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 expected steep growth path over the next several 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 slower economic growth across individual states.

What about concerns that the rapidly growing imports of avocados may be negatively impacting U.S. avocado prices and the California Hass avocado industry (see, Peterson et al., 2004 and Nalampang, Tantiwongampai, & Evans, 2006, for example)? Such concerns 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 et al., 2004) substantiates this claim. Given the specific growing season for avocados in California and the weather, water, land, climate, and other resource limitations that challenge California avocado producers, imports are primarily filling the gap in rapidly growing demand for avocados that California has been unable to meet. The primary consequence for California is that the growing demand continues to boost U.S. avocado prices despite imports. In 1995/96, before Mexico was granted access to the U.S. avocado market, California growers received about \$0.65/lb for their avocados. In 2015/16, the price had increased to about \$0.945/lb, an increase of 45%. 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	\$30,054,481	\$19,638,954	147.4	\$10,129,067	\$4,422,796
Manufacturing	\$680,644	\$180,887	1.5	\$82,215	\$3,366
Transportation & Warehousing	\$1,154,558	\$584,211	9.9	\$413,453	\$8,673
Services**	\$12,596,562	\$7,352,093	100.1	\$4,062,419	\$461,503
-Food & accommodation	\$665,311	\$350,737	11.6	\$256,190	\$49,222
-Other	\$11,931,251	\$7,001,356	88.5	\$3,806,229	\$412,281
Agriculture	\$39,850	\$20,229	0.4	\$11,299	\$578
Other	\$1,913,053	\$841,870	10.7	\$644,259	\$47,433
Total**	\$46,439,148	\$28,618,244	269.9	\$15,342,711	\$4,944,349

\*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	\$10,412,013	\$7,204,776	45.4	\$3,013,005	\$2,854,465
Manufacturing	\$143,475	\$29,995	0.3	\$11,240	\$1,185
Transportation & Warehousing	\$491,990	\$283,906	3.0	\$263,261	\$9,371
Services**	\$3,403,424	\$2,106,864	21.4	\$1,180,767	\$99,376
-Food & accommodation	\$168,877	\$96,389	2.5	\$77,745	\$2,450
-Other	\$3,234,547	\$2,010,476	19.0	\$1,103,022	\$96,926
Agriculture	\$2,129	\$1,441	0.0	\$894	\$215
Other	\$537,739	\$280,080	1.9	\$170,309	\$31,417
Total**	\$14,990,770	\$9,907,063	72.2	\$4,639,477	\$2,996,028

\*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	\$66,420,243	\$44,703,165	313.0	\$24,242,924	\$9,534,800
Manufacturing	\$1,218,070	\$370,836	3.5	\$194,971	\$11,692
Transportation & Warehousing	\$3,804,008	\$1,938,601	28.9	\$1,412,584	\$109,382
Services**	\$38,405,069	\$22,690,072	281.2	\$13,072,396	\$1,465,364
-Food & accommodation	\$2,012,447	\$1,140,680	30.7	\$804,073	\$184,517
-Other	\$36,392,621	\$21,549,392	250.5	\$12,268,324	\$1,280,847
Agriculture	\$111,635	\$69,904	0.8	\$25,522	\$2,816
Other	\$4,306,050	\$1,950,667	20.6	\$1,395,034	\$138,892
Total**	\$114,265,076	\$71,723,244	648.0	\$40,343,431	\$11,262,945

\*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	\$19,374,451	\$13,685,782	82.3	\$5,949,410	\$2,973,094
Manufacturing	\$324,450	\$69,881	0.8	\$42,480	\$3,143
Transportation & Warehousing	\$626,129	\$321,341	5.2	\$240,146	\$9,151
Services**	\$7,171,061	\$4,309,988	56.0	\$2,252,298	\$254,773
-Food & accommodation	\$365,260	\$188,993	6.5	\$138,309	\$25,338
-Other	\$6,805,801	\$4,120,995	49.4	\$2,113,990	\$229,435
Agriculture	\$28,679	\$13,702	0.2	\$7,974	\$487
Other	\$905,851	\$394,809	5.1	\$289,667	\$27,041
Total**	\$28,430,620	\$18,795,502	149.6	\$8,781,974	\$3,267,688

\*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	\$452,786,435	\$318,668,906	1,949.1	\$160,929,879	\$83,910,152
Manufacturing	\$28,365,564	\$8,554,594	50.8	\$3,994,338	\$433,783
Transportation & Warehousing	\$25,029,939	\$14,076,721	167.4	\$10,092,310	\$522,401
Services**	\$253,591,050	\$160,727,587	1,569.0	\$92,986,095	\$8,044,987
-Food & accommodation	\$12,435,111	\$7,141,102	185.2	\$5,348,890	\$734,684
-Other	\$241,155,939	\$153,586,486	1,383.9	\$87,637,204	\$7,310,303
Agriculture	\$1,532,408	\$937,938	8.7	\$606,159	\$26,394
Other	\$21,447,030	\$11,074,089	111.4	\$9,070,971	\$392,140
Total**	\$782,752,427	\$514,039,835	3,856.4	\$277,679,751	\$93,329,857

\*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	\$71,209,212	\$48,164,610	333.9	\$28,524,679	\$6,728,753
Manufacturing	\$2,498,441	\$743,086	5.5	\$365,382	\$28,308
Transportation & Warehousing	\$3,895,927	\$2,050,739	27.6	\$1,430,677	\$82,796
Services**	\$44,661,597	\$26,809,671	296.7	\$15,478,924	\$1,480,415
-Food & accommodation	\$2,270,369	\$1,267,181	35.3	\$927,655	\$150,306
-Other	\$42,391,228	\$25,542,490	261.4	\$14,551,268	\$1,330,109
Agriculture	\$203,759	\$112,170	1.4	\$56,109	\$5,100
Other	\$4,917,684	\$2,310,350	25.0	\$1,857,827	\$111,257
Total**	\$127,386,620	\$80,190,626	690.0	\$47,713,597	\$8,436,630

\*Indirect Business Taxes

\*\*Services (Total) and Total may not add due to rounding

### Connecticut

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	\$23,302,518	\$17,389,180	88.4	\$8,945,725	\$2,175,492
Manufacturing	\$263,958	\$100,373	0.7	\$61,701	\$5,486
Transportation & Warehousing	\$806,875	\$491,640	5.6	\$253,689	\$16,225
Services**	\$11,034,494	\$7,341,564	62.0	\$4,118,650	\$466,494
-Food & accommodation	\$471,455	\$262,831	7.1	\$197,513	\$23,675
-Other	\$10,563,038	\$7,078,733	54.9	\$3,921,138	\$442,818
Agriculture	\$8,591	\$5,877	0.1	\$2,580	\$148
Other	\$1,194,897	\$578,082	5.7	\$442,869	\$46,231
Total**	\$36,611,332	\$25,906,715	162.6	\$13,825,214	\$2,710,075

\*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	\$7,526,338	\$5,340,264	32.2	\$3,003,104	\$859,128
Manufacturing	\$111,351	\$17,110	0.1	\$8,875	\$1,296
Transportation & Warehousing	\$270,742	\$142,250	2.3	\$111,405	\$1,406
Services**	\$3,572,347	\$2,421,965	21.5	\$1,247,984	\$140,192
-Food & accommodation	\$180,072	\$99,622	2.9	\$72,377	\$12,013
-Other	\$3,392,275	\$2,322,343	18.6	\$1,175,608	\$128,179
Agriculture	\$5,810	\$2,886	0.0	\$1,587	\$38
Other	\$312,168	\$152,831	1.8	\$121,476	\$5,315
Total**	\$11,798,756	\$8,077,306	57.9	\$4,494,431	\$1,007,375

\*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	\$12,758,295	\$9,360,472	48.1	\$6,079,204	\$1,433,854
Manufacturing	\$5,286	\$2,136	0.0	\$1,760	\$242
Transportation & Warehousing	\$225,689	\$69,540	2.2	\$187,377	-\$1,119
Services**	\$3,800,512	\$2,707,273	18.4	\$1,683,415	\$108,279
-Food & accommodation	\$166,176	\$107,501	2.0	\$77,733	\$10,048
-Other	\$3,634,336	\$2,599,772	16.4	\$1,605,682	\$98,231
Agriculture	\$0	\$0	0.0	\$0	\$0
Other	\$423,452	\$250,478	1.6	\$180,513	\$17,701
Total**	\$17,213,234	\$12,389,899	70.3	\$8,132,269	\$1,558,957

\*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	\$141,258,934	\$97,329,116	640.8	\$49,300,883	\$20,268,702
Manufacturing	\$3,352,014	\$982,266	10.0	\$565,617	\$45,888
Transportation & Warehousing	\$8,497,018	\$4,212,917	64.9	\$2,927,382	\$178,925
Services**	\$85,132,842	\$49,746,437	624.8	\$29,003,642	\$3,585,932
-Food & accommodation	\$4,194,505	\$2,386,789	63.7	\$1,715,654	\$297,466
-Other	\$80,938,337	\$47,359,648	561.1	\$27,287,988	\$3,288,467
Agriculture	\$262,205	\$179,976	2.7	\$86,213	\$5,447
Other	\$8,522,976	\$4,201,747	42.2	\$2,819,528	\$435,732
Total**	\$247,025,988	\$156,652,458	1,385.3	\$84,703,266	\$24,520,626

\*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	\$80,676,704	\$56,561,079	355.0	\$29,382,201	\$9,931,574
Manufacturing	\$2,251,085	\$727,465	6.1	\$384,608	\$31,609
Transportation & Warehousing	\$3,944,318	\$2,144,945	27.4	\$1,434,662	\$76,810
Services**	\$45,759,697	\$27,318,190	322.2	\$15,839,725	\$1,440,740
-Food & accommodation	\$2,247,384	\$1,224,498	37.0	\$907,599	\$149,036
-Other	\$43,512,314	\$26,093,691	285.3	\$14,932,127	\$1,291,703
Agriculture	\$169,125	\$93,259	1.1	\$85,939	\$1,762
Other	\$3,977,862	\$1,879,621	22.8	\$1,361,256	\$157,732
Total**	\$136,778,792	\$88,724,558	734.7	\$48,488,391	\$11,640,226

\*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	\$17,761,348	\$10,740,431	96.1	\$5,622,414	\$2,814,856
Manufacturing	\$405,183	\$58,871	0.8	\$38,971	\$1,967
Transportation & Warehousing	\$899,033	\$556,856	5.0	\$371,848	\$75,148
Services**	\$8,188,067	\$4,955,473	56.2	\$2,729,552	\$346,354
-Food & accommodation	\$428,682	\$248,438	6.2	\$184,268	\$17,568
-Other	\$7,759,385	\$4,707,035	50.0	\$2,545,284	\$328,786
Agriculture	\$16,560	\$10,530	0.5	\$9,338	\$297
Other	\$579,367	\$277,213	3.2	\$238,674	\$987
Total**	\$27,849,558	\$16,599,374	161.7	\$9,010,797	\$3,239,611

\*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	\$14,563,991	\$9,079,451	76.7	\$4,848,458	\$1,928,786
Manufacturing	\$210,506	\$48,340	0.7	\$32,434	\$2,144
Transportation & Warehousing	\$676,887	\$323,313	5.4	\$219,323	\$9,736
Services**	\$6,344,694	\$3,460,925	52.1	\$1,924,276	\$204,633
-Food & accommodation	\$332,002	\$165,377	6.0	\$125,210	\$16,679
-Other	\$6,012,692	\$3,295,548	46.1	\$1,799,066	\$187,954
Agriculture	\$33,016	\$19,268	0.2	\$12,987	\$543
Other	\$712,591	\$286,326	4.1	\$238,396	\$11,237
Total**	\$22,541,686	\$13,217,623	139.1	\$7,275,873	\$2,157,080

\*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	\$80,053,937	\$56,749,310	342.9	\$31,122,558	\$8,258,998
Manufacturing	\$3,298,522	\$1,058,151	6.3	\$536,081	\$27,859
Transportation & Warehousing	\$4,017,788	\$2,159,306	28.2	\$1,548,431	\$82,951
Services**	\$45,829,449	\$29,009,054	291.2	\$16,605,361	\$1,845,905
-Food & accommodation	\$2,241,039	\$1,265,540	34.3	\$928,355	\$150,914
-Other	\$43,588,410	\$27,743,514	256.9	\$15,677,006	\$1,694,991
Agriculture	\$72,478	\$39,741	0.5	\$27,473	\$318
Other	\$4,245,590	\$2,035,647	23.2	\$1,697,374	\$178,173
Total**	\$137,517,764	\$91,051,209	692.3	\$51,537,278	\$10,394,203

\*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	\$34,504,459	\$22,361,575	172.5	\$12,376,572	\$3,927,655
Manufacturing	\$1,281,392	\$456,343	2.7	\$182,156	\$7,325
Transportation & Warehousing	\$1,512,274	\$758,351	12.8	\$560,080	\$25,435
Services**	\$15,432,260	\$9,216,879	117.5	\$5,108,872	\$617,652
-Food & accommodation	\$897,085	\$449,681	16.1	\$339,850	\$48,382
-Other	\$14,535,176	\$8,767,197	101.4	\$4,769,022	\$569,270
Agriculture	\$44,971	\$23,479	0.3	\$15,779	\$260
Other	\$1,763,147	\$789,918	9.7	\$645,743	\$25,724
Total**	\$54,538,503	\$33,606,545	315.5	\$18,889,201	\$4,604,051

\*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	\$21,629,408	\$14,149,767	106.4	\$7,720,083	\$2,485,079
Manufacturing	\$394,038	\$115,857	1.2	\$78,937	\$3,745
Transportation & Warehousing	\$797,447	\$403,231	7.0	\$321,169	\$10,053
Services**	\$9,142,593	\$5,393,675	68.0	\$2,886,193	\$398,544
-Food & accommodation	\$453,714	\$219,086	8.4	\$163,945	\$24,532
-Other	\$8,688,879	\$5,174,588	59.6	\$2,722,248	\$374,012
Agriculture	\$40,137	\$20,163	0.2	\$13,043	\$495
Other	\$1,026,520	\$451,833	5.9	\$354,894	\$12,106
Total**	\$33,030,143	\$20,534,524	188.7	\$11,374,318	\$2,910,022

\*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	\$18,048,791	\$12,213,995	83.7	\$6,348,698	\$1,848,451
Manufacturing	\$561,368	\$156,070	1.1	\$82,882	\$3,892
Transportation & Warehousing	\$735,251	\$422,103	5.8	\$375,928	\$12,544
Services**	\$7,871,659	\$4,578,777	57.8	\$2,579,126	\$315,848
-Food & accommodation	\$411,715	\$218,946	6.9	\$162,823	\$28,705
-Other	\$7,459,944	\$4,359,832	50.9	\$2,416,303	\$287,144
Agriculture	\$24,385	\$11,632	0.1	\$5,585	\$631
Other	\$898,519	\$384,800	5.3	\$334,098	\$7,567
Total**	\$28,139,973	\$17,767,378	153.9	\$9,726,318	\$2,188,934

\*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	\$20,623,862	\$14,090,500	93.9	\$6,430,457	\$3,314,847
Manufacturing	\$468,189	\$140,381	1.3	\$75,139	\$7,120
Transportation & Warehousing	\$850,274	\$477,362	6.5	\$356,191	\$9,230
Services**	\$8,226,844	\$4,754,259	65.1	\$2,785,368	\$296,583
-Food & accommodation	\$447,619	\$235,511	7.8	\$178,886	\$26,245
-Other	\$7,779,224	\$4,518,747	57.3	\$2,606,482	\$270,338
Agriculture	\$22,167	\$11,504	0.3	\$4,545	\$362
Other	\$1,131,218	\$495,775	6.0	\$379,422	\$19,865
Total**	\$31,322,554	\$19,969,781	173.1	\$10,031,122	\$3,648,007

\*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	\$38,336,660	\$26,014,353	176.1	\$13,169,169	\$6,137,390
Manufacturing	\$1,081,899	\$281,816	1.6	\$93,890	\$6,525
Transportation & Warehousing	\$1,745,102	\$940,989	12.3	\$661,380	\$19,924
Services**	\$16,325,573	\$9,620,907	126.7	\$5,559,036	\$640,235
-Food & accommodation	\$951,101	\$508,072	15.7	\$378,116	\$56,757
-Other	\$15,374,472	\$9,112,836	111.0	\$5,180,920	\$583,478
Agriculture	\$37,575	\$20,598	0.4	\$18,031	\$763
Other	\$2,119,693	\$1,025,330	11.0	\$711,806	\$30,385
Total**	\$59,646,503	\$37,903,993	328.1	\$20,213,312	\$6,835,222

\*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	\$5,498,660	\$3,570,340	27.5	\$1,842,065	\$957,734
Manufacturing	\$81,551	\$22,718	0.3	\$13,985	\$1,455
Transportation & Warehousing	\$302,979	\$153,602	2.4	\$110,752	\$6,346
Services**	\$2,754,053	\$1,605,400	20.4	\$911,024	\$119,515
-Food & accommodation	\$143,798	\$78,451	2.4	\$57,673	\$9,964
-Other	\$2,610,255	\$1,526,949	18.1	\$853,351	\$109,551
Agriculture	\$10,077	\$6,553	0.1	\$3,598	\$139
Other	\$313,530	\$140,841	1.8	\$109,694	\$8,635
Total**	\$8,960,850	\$5,499,455	52.6	\$2,991,120	\$1,093,824

\*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	\$40,383,883	\$27,938,357	179.4	\$15,258,466	\$6,300,029
Manufacturing	\$524,896	\$164,887	1.4	\$90,311	\$5,666
Transportation & Warehousing	\$1,951,771	\$1,054,367	15.0	\$763,139	\$33,005
Services**	\$20,102,974	\$12,896,264	124.2	\$7,122,299	\$724,438
-Food & accommodation	\$950,043	\$546,246	14.3	\$398,174	\$70,911
-Other	\$19,152,931	\$12,350,018	109.9	\$6,724,125	\$653,527
Agriculture	\$21,783	\$11,368	0.2	\$7,090	\$252
Other	\$2,023,571	\$1,001,088	10.1	\$807,678	\$64,209
Total**	\$65,008,878	\$43,066,332	330.4	\$24,048,982	\$7,127,599

\*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	\$47,460,448	\$33,535,011	204.1	\$20,374,018	\$5,029,504
Manufacturing	\$1,095,628	\$408,566	2.9	\$227,809	\$13,322
Transportation & Warehousing	\$2,269,580	\$1,270,110	15.8	\$885,078	\$41,540
Services**	\$27,073,201	\$17,454,660	154.7	\$10,292,286	\$841,962
-Food & accommodation	\$1,239,601	\$706,780	18.3	\$520,970	\$75,509
-Other	\$25,833,600	\$16,747,881	136.3	\$9,771,316	\$766,453
Agriculture	\$19,135	\$13,927	0.4	\$7,483	\$414
Other	\$2,089,489	\$1,103,035	11.4	\$907,365	\$18,740
Total**	\$80,007,481	\$53,785,309	389.1	\$32,694,039	\$5,945,482

\*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	\$48,895,451	\$33,689,482	221.0	\$17,693,228	\$5,333,562
Manufacturing	\$1,504,717	\$416,260	3.5	\$235,738	\$12,700
Transportation & Warehousing	\$2,217,629	\$1,199,099	15.7	\$811,576	\$46,267
Services**	\$24,648,558	\$14,843,137	178.8	\$8,312,546	\$1,009,120
-Food & accommodation	\$1,243,359	\$628,890	21.6	\$468,384	\$71,923
-Other	\$23,405,199	\$14,214,247	157.2	\$7,844,162	\$937,197
Agriculture	\$90,826	\$54,709	0.9	\$31,424	\$1,264
Other	\$2,592,185	\$1,191,473	13.8	\$921,100	\$91,587
Total**	\$79,949,365	\$51,394,160	433.7	\$28,005,612	\$6,494,499

\*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	\$40,949,356	\$28,111,325	188.0	\$16,646,918	\$3,982,827
Manufacturing	\$2,154,497	\$670,234	4.9	\$363,639	\$15,819
Transportation & Warehousing	\$1,772,349	\$874,995	13.9	\$635,876	\$38,011
Services**	\$23,479,819	\$14,355,737	159.2	\$8,486,102	\$955,981
-Food & accommodation	\$1,129,500	\$596,203	18.7	\$426,103	\$89,635
-Other	\$22,350,319	\$13,759,534	140.6	\$8,059,998	\$866,346
Agriculture	\$127,650	\$64,180	0.7	\$58,185	\$904
Other	\$2,714,569	\$1,193,652	14.3	\$899,622	\$42,421
Total**	\$71,198,240	\$45,270,122	381.1	\$27,090,342	\$5,035,962

\*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	\$15,780,845	\$10,248,904	77.7	\$4,971,804	\$2,859,358
Manufacturing	\$317,075	\$58,267	0.6	\$30,249	\$2,029
Transportation & Warehousing	\$617,439	\$307,286	5.4	\$230,607	\$7,809
Services**	\$5,676,954	\$3,217,849	47.3	\$1,799,037	\$267,881
-Food & accommodation	\$320,632	\$165,721	5.6	\$121,819	\$22,521
-Other	\$5,356,322	\$3,052,127	41.7	\$1,677,218	\$245,360
Agriculture	\$25,570	\$13,087	0.2	\$9,636	\$355
Other	\$834,944	\$381,431	4.6	\$270,245	\$17,244
Total**	\$23,252,827	\$14,226,823	135.8	\$7,311,578	\$3,154,676

\*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	\$35,281,053	\$23,199,779	173.3	\$12,868,064	\$3,565,498
Manufacturing	\$897,799	\$286,538	2.4	\$149,608	\$11,433
Transportation & Warehousing	\$1,657,199	\$844,909	13.4	\$613,809	\$29,293
Services**	\$19,357,339	\$11,567,257	138.3	\$6,797,274	\$647,873
-Food & accommodation	\$997,154	\$516,305	17.2	\$391,667	\$53,154
-Other	\$18,360,185	\$11,050,952	121.1	\$6,405,607	\$594,719
Agriculture	\$46,854	\$24,693	0.5	\$8,630	\$675
Other	\$2,202,426	\$1,007,291	11.0	\$764,318	\$51,297
Total**	\$59,442,669	\$36,930,467	339.0	\$21,201,702	\$4,306,068

\*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	\$9,739,888	\$6,219,070	49.6	\$3,161,473	\$1,519,058
Manufacturing	\$238,271	\$38,623	0.4	\$17,305	\$1,363
Transportation & Warehousing	\$385,900	\$190,324	3.2	\$132,867	\$7,568
Services**	\$3,990,967	\$2,216,531	33.1	\$1,199,954	\$132,797
-Food & accommodation	\$234,428	\$113,129	4.2	\$90,525	\$3,449
-Other	\$3,756,539	\$2,103,401	28.9	\$1,109,429	\$129,348
Agriculture	\$11,715	\$6,771	0.1	\$4,607	\$195
Other	\$545,357	\$221,811	2.8	\$179,987	\$6,371
Total**	\$14,912,097	\$8,893,129	89.2	\$4,696,193	\$1,667,353

\*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	\$13,938,360	\$9,082,000	69.0	\$4,960,952	\$1,574,951
Manufacturing	\$237,388	\$75,223	0.7	\$47,914	\$1,884
Transportation & Warehousing	\$489,409	\$242,044	4.3	\$182,552	\$6,952
Services**	\$6,748,044	\$3,898,911	48.5	\$2,248,340	\$238,426
-Food & accommodation	\$333,649	\$166,017	5.9	\$122,148	\$20,495
-Other	\$6,414,395	\$3,732,894	42.6	\$2,126,191	\$217,931
Agriculture	\$32,061	\$16,295	0.1	\$10,691	\$824
Other	\$745,463	\$365,907	3.9	\$275,520	-\$12,165
Total**	\$22,190,725	\$13,680,380	126.6	\$7,725,969	\$1,810,873

\*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	\$31,881,080	\$20,991,304	154.8	\$11,479,010	\$5,148,845
Manufacturing	\$265,780	\$83,875	1.0	\$58,387	\$2,598
Transportation & Warehousing	\$1,873,906	\$1,133,698	12.0	\$720,123	\$79,092
Services**	\$16,238,666	\$9,730,047	115.3	\$5,192,507	\$747,525
-Food & accommodation	\$1,084,452	\$677,021	13.6	\$438,606	\$120,496
-Other	\$15,154,214	\$9,053,026	101.7	\$4,753,901	\$627,029
Agriculture	\$8,261	\$5,778	0.1	\$3,081	\$154
Other	\$1,539,600	\$758,146	6.7	\$520,972	\$51,600
Total**	\$51,807,294	\$32,702,847	289.9	\$17,974,080	\$6,029,815

\*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	\$7,317,994	\$4,949,937	34.6	\$3,094,472	\$706,141
Manufacturing	\$80,167	\$25,634	0.3	\$17,867	\$1,734
Transportation & Warehousing	\$311,563	\$166,831	2.5	\$122,914	\$5,824
Services**	\$3,925,103	\$2,426,763	26.3	\$1,369,331	\$163,620
-Food & accommodation	\$203,413	\$109,052	3.3	\$86,358	\$6,614
-Other	\$3,721,690	\$2,317,710	23.0	\$1,282,973	\$157,005
Agriculture	\$4,358	\$2,756	0.1	\$1,410	\$84
Other	\$377,432	\$176,975	2.1	\$141,599	\$16,689
Total**	\$12,016,616	\$7,748,896	65.9	\$4,747,594	\$894,092

\*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	\$53,248,540	\$38,919,986	212.5	\$21,068,273	\$7,306,869
Manufacturing	\$1,415,710	\$411,766	2.6	\$236,903	\$18,759
Transportation & Warehousing	\$2,530,908	\$1,422,038	17.6	\$1,009,331	\$61,146
Services**	\$27,235,553	\$17,886,685	162.4	\$10,320,382	\$1,163,299
-Food & accommodation	\$1,123,249	\$610,654	17.2	\$483,717	\$26,733
-Other	\$26,112,304	\$17,276,031	145.3	\$9,836,665	\$1,136,567
Agriculture	\$18,933	\$14,160	0.3	\$9,024	\$336
Other	\$2,233,119	\$1,209,732	12.8	\$971,707	\$73,847
Total**	\$86,682,762	\$59,864,366	408.2	\$33,615,622	\$8,624,256

\*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	\$19,473,977	\$11,807,972	105.7	\$5,807,436	\$3,559,779
Manufacturing	\$360,310	\$63,378	0.5	\$25,945	\$1,730
Transportation & Warehousing	\$831,596	\$457,820	6.2	\$299,075	\$13,147
Services**	\$7,485,311	\$4,408,144	56.6	\$2,192,391	\$373,408
-Food & accommodation	\$437,282	\$229,517	7.5	\$174,421	\$23,228
-Other	\$7,048,029	\$4,178,628	49.1	\$2,017,970	\$350,180
Agriculture	\$16,055	\$10,167	0.1	\$8,745	\$327
Other	\$1,268,320	\$556,078	6.2	\$396,471	\$41,308
Total**	\$29,435,569	\$17,303,561	175.4	\$8,730,063	\$3,989,698

\*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	\$137,938,116	\$99,019,244	566.1	\$52,302,940	\$21,184,986
Manufacturing	\$2,306,867	\$804,839	5.8	\$408,266	\$104,463
Transportation & Warehousing	\$5,702,866	\$3,097,362	40.6	\$2,358,299	\$130,746
Services**	\$69,182,850	\$47,200,203	376.2	\$27,072,031	\$2,955,594
-Food & accommodation	\$3,121,398	\$1,887,957	42.3	\$1,315,363	\$287,326
-Other	\$66,061,452	\$45,312,246	333.9	\$25,756,668	\$2,668,268
Agriculture	\$113,951	\$68,213	1.0	\$35,663	\$1,534
Other	\$6,618,002	\$3,196,016	31.2	\$2,595,111	\$142,501
Total**	\$221,862,653	\$153,385,877	1,021.0	\$84,772,310	\$24,519,824

\*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	\$55,906,049	\$36,706,938	275.2	\$20,599,054	\$6,912,779
Manufacturing	\$2,007,354	\$749,199	4.6	\$287,891	\$55,655
Transportation & Warehousing	\$2,782,946	\$1,456,647	21.3	\$972,191	\$69,311
Services**	\$29,589,173	\$17,843,475	217.1	\$10,062,513	\$1,080,283
-Food & accommodation	\$1,534,219	\$791,114	26.8	\$617,697	\$56,554
-Other	\$28,054,954	\$17,052,361	190.2	\$9,444,816	\$1,023,729
Agriculture	\$129,359	\$73,811	0.7	\$45,822	\$1,537
Other	\$2,703,147	\$1,356,083	17.6	\$1,028,553	\$73,466
Total**	\$93,118,028	\$58,186,153	536.5	\$32,996,024	\$8,193,032

\*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	\$6,292,710	\$4,411,810	27.0	\$2,206,439	\$958,393
Manufacturing	\$87,037	\$13,946	0.1	\$7,724	\$188
Transportation & Warehousing	\$168,063	\$108,895	1.0	\$52,777	\$1,870
Services**	\$2,107,237	\$1,220,452	15.0	\$669,446	\$73,127
-Food & accommodation	\$115,459	\$59,209	1.9	\$42,567	\$7,530
-Other	\$1,991,778	\$1,161,244	13.1	\$626,878	\$65,597
Agriculture	\$6,162	\$3,614	0.0	\$4,898	\$50
Other	\$322,556	\$128,436	1.5	\$96,204	-\$14,557
Total**	\$8,983,765	\$5,887,153	44.7	\$3,037,488	\$1,019,071

\*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	\$63,379,823	\$42,306,797	304.0	\$23,015,308	\$7,247,418
Manufacturing	\$2,737,581	\$877,050	5.6	\$368,226	\$40,212
Transportation & Warehousing	\$3,164,459	\$1,712,455	23.8	\$1,129,774	\$59,406
Services**	\$35,283,987	\$21,409,481	246.7	\$12,219,122	\$1,291,604
-Food & accommodation	\$1,757,386	\$901,881	30.8	\$701,008	\$75,419
-Other	\$33,526,601	\$20,507,600	215.9	\$11,518,114	\$1,216,185
Agriculture	\$97,311	\$49,705	1.0	\$28,117	\$498
Other	\$3,680,367	\$1,797,986	19.7	\$1,305,369	\$94,419
Total**	\$108,343,528	\$68,153,473	600.8	\$38,065,917	\$8,733,556

\*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	\$29,538,368	\$19,581,581	141.0	\$9,564,746	\$4,273,332
Manufacturing	\$745,395	\$165,410	1.3	\$89,746	\$5,116
Transportation & Warehousing	\$1,177,411	\$688,240	7.9	\$357,711	\$14,692
Services**	\$13,139,419	\$7,638,154	98.5	\$4,362,323	\$436,714
-Food & accommodation	\$660,057	\$348,433	11.3	\$269,918	\$33,056
-Other	\$12,479,361	\$7,289,721	87.2	\$4,092,406	\$403,658
Agriculture	\$27,718	\$15,611	0.3	\$7,441	\$519
Other	\$2,282,134	\$1,041,543	10.7	\$725,447	\$33,079
Total**	\$46,910,444	\$29,130,540	259.7	\$15,107,415	\$4,763,452

\*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	\$48,324,274	\$31,178,721	244.8	\$18,452,481	\$4,202,996
Manufacturing	\$1,212,176	\$369,381	3.8	\$215,709	\$15,465
Transportation & Warehousing	\$2,613,485	\$1,360,091	19.6	\$983,972	\$62,461
Services**	\$25,873,910	\$15,499,760	187.0	\$8,991,588	\$782,651
-Food & accommodation	\$1,369,462	\$714,031	22.8	\$575,950	\$21,093
-Other	\$24,504,447	\$14,785,729	164.1	\$8,415,638	\$761,558
Agriculture	\$113,668	\$73,040	1.0	\$33,240	\$2,825
Other	\$2,725,450	\$1,295,010	13.8	\$949,920	\$37,404
Total**	\$80,862,962	\$49,776,004	470.0	\$29,626,910	\$5,103,802

\*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	\$67,738,868	\$46,747,834	306.7	\$25,642,787	\$9,056,946
Manufacturing	\$2,448,032	\$622,510	5.1	\$345,274	\$16,517
Transportation & Warehousing	\$3,369,430	\$1,805,653	26.1	\$1,307,944	\$39,789
Services**	\$36,492,458	\$23,051,173	233.4	\$13,635,190	\$1,474,077
-Food & accommodation	\$1,686,980	\$879,646	27.8	\$662,670	\$86,941
-Other	\$34,805,478	\$22,171,527	205.6	\$12,972,520	\$1,387,135
Agriculture	\$105,889	\$58,189	1.0	\$28,840	\$1,272
Other	\$3,827,201	\$1,864,352	21.3	\$1,501,052	\$106,225
Total**	\$113,981,878	\$74,149,711	593.6	\$42,461,088	\$10,694,826

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

Rhode Island

Industry	Output	Value-added	Employment (no. of jobs)	Labor Income	Taxes*
Wholesale/Retail	\$5,338,458	\$3,648,497	24.3	\$2,021,148	\$946,240
Manufacturing	\$52,525	\$15,808	0.2	\$12,135	\$714
Transportation & Warehousing	\$224,837	\$126,233	1.7	\$83,299	\$4,563
Services**	\$2,843,866	\$1,830,680	18.1	\$1,011,066	\$122,581
-Food & accommodation	\$136,857	\$75,225	2.1	\$53,156	\$10,583
-Other	\$2,707,009	\$1,755,455	15.9	\$957,910	\$111,998
Agriculture	\$1,148	\$738	0.0	\$357	\$18
Other	\$236,221	\$123,237	1.3	\$92,158	\$10,004
Total**	\$8,697,056	\$5,745,192	45.6	\$3,220,163	\$1,084,121

\*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	\$31,349,442	\$20,930,327	149.3	\$10,336,378	\$5,633,258
Manufacturing	\$541,734	\$161,171	1.6	\$92,174	\$8,365
Transportation & Warehousing	\$1,357,650	\$670,834	11.8	\$521,637	\$16,655
Services**	\$13,800,275	\$7,946,484	108.8	\$4,487,060	\$524,706
-Food & accommodation	\$808,910	\$424,781	13.7	\$314,931	\$47,840
-Other	\$12,991,366	\$7,521,703	95.0	\$4,172,129	\$476,866
Agriculture	\$32,372	\$18,462	0.4	\$10,452	\$445
Other	\$1,678,690	\$783,433	9.5	\$589,586	\$38,909
Total**	\$48,760,162	\$30,510,712	281.4	\$16,037,287	\$6,222,338

\*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	\$5,691,656	\$3,749,822	27.5	\$1,883,118	\$766,561
Manufacturing	\$74,886	\$23,070	0.4	\$20,232	\$585
Transportation & Warehousing	\$202,522	\$100,933	1.7	\$70,457	\$2,346
Services**	\$2,265,995	\$1,304,376	16.5	\$690,487	\$92,708
-Food & accommodation	\$119,522	\$57,110	2.2	\$42,192	\$6,119
-Other	\$2,146,473	\$1,247,265	14.3	\$648,296	\$86,590
Agriculture	\$8,429	\$4,446	0.0	\$3,467	\$254
Other	\$281,526	\$101,155	1.7	\$90,758	-\$9,472
Total**	\$8,525,014	\$5,283,802	47.7	\$2,758,519	\$852,981

\*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	\$35,767,088	\$24,043,870	168.7	\$12,260,739	\$5,111,612
Manufacturing	\$879,618	\$269,937	2.2	\$135,872	\$8,260
Transportation & Warehousing	\$1,730,261	\$962,960	12.4	\$695,919	\$33,587
Services**	\$17,736,048	\$10,706,988	128.5	\$6,498,307	\$807,805
-Food & accommodation	\$930,682	\$506,622	15.5	\$370,231	\$70,185
-Other	\$16,805,366	\$10,200,365	113.0	\$6,128,076	\$737,620
Agriculture	\$32,300	\$17,564	0.6	\$5,384	\$592
Other	\$2,351,262	\$1,004,549	12.4	\$796,109	\$24,637
Total**	\$58,496,578	\$37,005,867	324.9	\$20,392,331	\$5,986,493

\*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	\$268,747,909	\$191,699,336	1,132.6	\$100,987,712	\$28,402,852
Manufacturing	\$13,714,007	\$3,999,132	24.6	\$1,691,747	\$101,596
Transportation & Warehousing	\$12,285,054	\$6,529,572	86.7	\$4,315,458	\$252,323
Services**	\$138,257,178	\$82,552,156	980.0	\$49,282,363	\$6,032,573
-Food & accommodation	\$7,296,374	\$4,031,520	115.1	\$2,894,496	\$580,107
-Other	\$130,960,804	\$78,520,636	864.8	\$46,387,867	\$5,452,467
Agriculture	\$677,530	\$334,481	7.7	\$170,914	\$12,153
Other	\$18,033,861	\$9,464,378	81.0	\$5,935,050	\$517,408
Total**	\$451,715,540	\$294,579,055	2,312.6	\$162,383,244	\$35,318,904

\*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	\$34,167,766	\$22,167,931	171.4	\$12,529,013	\$4,349,499
Manufacturing	\$1,791,183	\$455,749	3.4	\$198,241	\$11,006
Transportation & Warehousing	\$1,719,745	\$843,768	13.6	\$863,976	\$47,863
Services**	\$19,531,740	\$11,138,682	145.4	\$5,991,316	\$624,244
-Food & accommodation	\$86,780	\$461,018	15.3	\$355,223	\$46,153
-Other	\$18,644,960	\$10,677,664	130.1	\$5,636,093	\$578,091
Agriculture	\$54,467	\$32,309	0.5	\$8,992	\$1,372
Other	\$2,068,902	\$964,864	10.4	\$778,568	\$72,904
Total**	\$59,333,803	\$35,603,304	344.7	\$20,370,106	\$5,106,888

\*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	\$2,839,389	\$1,799,028	14.6	\$949,432	\$517,800
Manufacturing	\$31,539	\$7,447	0.1	\$6,120	\$448
Transportation & Warehousing	\$133,791	\$70,262	1.1	\$52,481	\$1,933
Services**	\$1,284,957	\$757,427	9.2	\$397,871	\$58,017
-Food & accommodation	\$65,313	\$34,528	1.1	\$26,004	\$3,518
-Other	\$1,219,644	\$722,900	8.2	\$371,867	\$54,499
Agriculture	\$3,058	\$1,695	0.0	\$779	\$48
Other	\$137,941	\$61,816	0.8	\$53,342	\$4,022
Total**	\$4,430,676	\$2,697,676	25.9	\$1,460,025	\$582,269

\*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	\$52,279,395	\$35,515,638	241.6	\$19,999,512	\$6,930,459
Manufacturing	\$925,428	\$332,409	2.6	\$150,608	\$39,230
Transportation & Warehousing	\$2,332,935	\$1,275,016	17.3	\$798,162	\$45,444
Services**	\$26,790,656	\$16,719,918	169.5	\$9,585,898	\$903,215
-Food & accommodation	\$1,248,996	\$680,043	20.7	\$513,838	\$65,466
-Other	\$25,541,660	\$16,039,875	148.8	\$9,072,060	\$837,749
Agriculture	\$54,727	\$29,864	0.7	\$12,212	\$1,121
Other	\$3,319,827	\$1,575,777	17.0	\$1,188,888	\$91,941
Total**	\$85,702,969	\$55,448,622	448.6	\$31,735,280	\$8,011,411

\*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	\$103,656,000	\$72,623,570	449.1	\$37,238,194	\$18,558,283
Manufacturing	\$3,925,645	\$951,895	7.0	\$451,987	\$37,285
Transportation & Warehousing	\$4,998,809	\$2,879,255	31.5	\$2,007,273	\$110,646
Services**	\$49,606,093	\$30,792,014	308.1	\$16,781,294	\$2,400,003
-Food & accommodation	\$2,580,516	\$1,528,717	36.4	\$1,062,261	\$258,245
-Other	\$47,025,577	\$29,263,297	271.7	\$15,719,033	\$2,141,758
Agriculture	\$252,514	\$153,639	2.0	\$86,527	\$3,722
Other	\$5,921,221	\$2,823,423	29.1	\$2,174,643	\$151,071
Total**	\$168,360,282	\$110,223,797	826.8	\$58,739,918	\$21,261,009

\*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	\$7,783,086	\$5,029,653	38.6	\$2,433,648	\$1,434,543
Manufacturing	\$62,882	\$14,386	0.2	\$9,930	\$233
Transportation & Warehousing	\$267,820	\$134,625	2.4	\$101,033	\$2,764
Services**	\$2,752,770	\$1,612,134	21.4	\$916,228	\$111,146
-Food & accommodation	\$155,905	\$80,362	2.8	\$58,947	\$10,877
-Other	\$2,596,865	\$1,531,772	18.7	\$857,281	\$100,269
Agriculture	\$3,829	\$1,920	0.1	\$140	\$45
Other	\$381,540	\$171,224	2.3	\$141,229	\$8,921
Total**	\$11,251,927	\$6,963,942	65.0	\$3,602,209	\$1,557,653

\*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	\$31,448,923	\$20,363,097	158.3	\$11,647,323	\$3,719,115
Manufacturing	\$1,160,907	\$387,785	3.9	\$259,378	\$10,835
Transportation & Warehousing	\$1,468,020	\$787,039	11.6	\$565,798	\$27,219
Services**	\$16,211,943	\$9,716,584	115.3	\$5,381,464	\$701,091
-Food & accommodation	\$825,495	\$402,060	14.7	\$305,713	\$38,179
-Other	\$15,386,448	\$9,314,524	100.6	\$5,075,751	\$662,912
Agriculture	\$77,557	\$44,621	0.6	\$22,697	\$1,165
Other	\$1,801,773	\$828,446	9.9	\$650,173	\$45,024
Total**	\$52,169,125	\$32,127,574	299.6	\$18,526,834	\$4,504,450

\*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	\$8,020,180	\$5,504,123	35.5	\$2,634,711	\$1,465,130
Manufacturing	\$108,624	\$14,371	0.1	\$5,560	\$494
Transportation & Warehousing	\$275,136	\$142,268	2.1	\$93,386	\$5,196
Services**	\$2,313,132	\$1,355,692	17.7	\$678,867	\$94,487
-Food & accommodation	\$148,143	\$76,646	2.5	\$57,536	\$7,667
-Other	\$2,164,990	\$1,279,045	15.2	\$621,332	\$86,820
Agriculture	\$1,900	\$1,357	0.0	\$546	\$67
Other	\$361,804	\$161,853	1.7	\$115,906	\$16,583
Total**	\$11,080,776	\$7,179,664	57.1	\$3,528,977	\$1,581,957

\*Indirect Business Taxes

\*\*Services (Total) and Total may not add due to rounding