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THE GROWING CONTRIBUTION OF THE TENNESSEE ALCOHOL PRODUCTS DISTILLING INDUSTRY TO THE TENNESSEE ECONOMY

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Introduction

Estimates regarding the growth, structure (such as location) and contribution of Tennessee distilleries (alcoholic spirts producers) to the Tennessee economy are provided in this report. Covered in the analysis are the industry's size and growth with respect to other states and national trends and its location in Tennessee. The contribution of the industry in terms of tax revenues, tourism and foreign trade are discussed. Also discussed is the use of a distillery producer survey and an IMPLAN-based (IMPLAN Group LLC, 2015) input-output model of the 2019 Tennessee economy in arriving at model estimates. Estimation results with respect to the total (direct and multiplier-based) impact of the industry are then provided, followed by summary and conclusions.

Size of and growth in Tennessee distilling industry and other element

The Tennessee and national distilling industries have experienced strong growth in recent years as demonstrated in the number of reported establishments, employment and wages. As shown in Figure 1, the number of US establishments increased from 964 in 2018 to 1,549 in the first quarter of 2022 (a 60.7 percent increase), while the number of establishments in Tennessee increased from 37 in 2018 to 59 over the same period (an increase of 59.5 percent) (Figure 2). Nationally, distillery employment increased from 15,839 jobs in 2018 to 21,701 jobs in 2021 (US Department of Labor, 2022), while employment in the Tennessee industry grew from 1,492 to 2,060 over the same period (Figure 3 and Figure 4). By March of 2022, employment in the Tennessee industry had grown to 2,227 jobs. Nominal dollar earned annual income (wages and salaries) followed a similar trend, growing from $1.053 billion in 2018 to $1.429 billion in 2021 nationally (a 35.7 percent increase) and from $78.572 million in 2018 to $110.209 million in 2021 in Tennessee (a 40.3 percent increase) (Figure 5 and Figure 6).

This growth is further confirmed by the optimism shown by survey respondents. As shown in Figure 7, over 84 percent of survey respondents expected growth in sales of at least 5 percent in 2022 with only one respondent indicating a decline in sales. The average across all respondents is a 14.6 percent expected increase in sales.

The growth in the number of establishments across 53 states, including the District of Columbia and US territories from 2018 through the first quarter (q1) of 2022 (US Department of Labor) was compared. As shown in Table 1, Tennessee ranked 11th in the number of establishments in 2022 and 26th in growth in the number of establishments from 2018 through q1 2022. Accordingly, the Tennessee industry showed a growth pattern consistent with the national average.

A comparison in terms of employment and wages showed an even more prominent national presence for the Tennessee distilling industry (US Department of Labor). Across all 53 states, territories and DC, Tennessee ranked second in both employment and wages in 2021 (Table 2, Table 3). In terms of growth, Tennessee ranked 19th in the level of job growth and 24th in the level of wage growth from 2018 through 2021.

Location

Twenty-three of the 95 Tennessee counties had at least one reporting distillery in q1 2022 (Table 4). In terms of number of operations, the industry is concentrated in Davidson and Sevier Counties with 13 and 12 establishments, respectively, together accounting for 42.8 percent of the 59 reporting establishments in the first quarter of 2022. As of March 2022, distilleries in Sevier County were responsible for 47.8 percent of reported employment for the state (1,064 out of 2,227 jobs) and 30.6 percent of total quarterly wages ($8.630 million out of $28.258 million) (US Department of Labor). Other counties with larger than average

number of establishments included Cocke (4), Hamilton (3), and Williamson (3). Davidson County has experienced a growth spurt in the number of establishments from six in 2020 to 10 in 2021 to 13 in the first quarter of 2022. In 2021 and 2022, Davidson County was responsible for most of the growth in the Tennessee distilling industry in terms of number establishments. However, because of Jack Daniel, production remains concentrated in Moore County.

Tax revenue contribution

Distilled spirits make a substantial contribution to tax revenue in Tennessee. As shown in Figure 8, revenues from the mix drink tax have grown from over $55 million in fiscal year 2010 to over $108 million in fiscal year 2021, while revenues from the alcoholic beverage tax have grown from over $46 million to over $85 million in the same period. If we remove the effects of general inflation, the former has increased by 58.98 percent in real terms ($88.128 million in real or inflation-removed dollars), while the latter has increased by 49.63 percent in real terms ($69.340 million real dollars). While these tax revenues are generated regardless of where the spirits are produced, the data still demonstrates a strong contribution by the Tennessee industry to state tax revenues. Likewise, federal tax revenues from the sale of distilled spirits at the national level have also increased from $3.1 billion in 2003 to $4.8 billion in 2021 (Figure 9). If we remove the effect of general inflation, federal spirits tax revenues are $3.4 billion in real dollar terms, an increase of 7.92 percent over the 2003 level. These impact analysis results provide an estimate of the contribution (direct and indirect) of the Tennessee distilling industry on federal and state-local tax revenues.

Tourism and tours

All distilleries that responded to the survey indicated that out-of-state tourists making visits to their facilities were an important market segment to capture. As discussed in the location section, 13 establishments in Davidson County and 12 in Sevier County reinforces this point. In response to the question, "the primary reason out of state visitors came to Tennessee was to visit this facility," 14.3 percent of respondents strongly disagreed and 35.7 percent disagreed with the statement, while 21.4 percent were unsure, 28.6 percent agreed and none strongly agreed (Figure 10). The largely negative response to the statement implies that respondents suspect out-of-state visitors are, in general, not drawn to Tennessee because of the distilling industry, but rather see visiting, touring and making direct purchases at a Tennessee distillery as something fun and interesting to do. These results indicate that the Tennessee Department of Tourist Development and regional and local tourism promotion groups should involve the industry in their tourism promotion efforts.

All of the 11 distilleries responding to the question provide tours. The average number of visitors was 134,818 and the median was 25,000. Among 12 respondents, 11 distilleries indicated they provided paid for product samples, and one provided free product samples.

Foreign trade

The contribution of the Tennessee distilling industry to US foreign exports for 2022 through June 2022 is provided in Figure 11. The industry makes a major contribution to US distilled spirits exports, in fact the largest among all states at $614.1 million in 2021 (US Census Bureau, 2022). The level of exports showed a general growth trend from 2002 through 2014 where exports were valued at $721.25 million. US trade policy had a detrimental impact in subsequent years (with reaction tariffs imposed by European and the Chinese markets on US distilled spirits shipments), but exports in 2021 and to date in 2022 have returned to levels consistent with earlier values.

An analysis of where Tennessee spirits were shipped in 2021 is provided in Figure 12 and Figure 13. The Netherlands ($92.006 million), France ($67.525 million), Germany, Latvia and Japan were the most important markets (Figure 12). The importance of the European market is also shown in Figure 13, where 68 percent of Tennessee spirits exports were shipped in 2021.

Input-output model

Input-output models "examine the market flow of products between industries, sales by industries to households and other final users, and industry use of factors of production (labor and capital). Such models can be very detailed, containing several hundred industries" (Hughes, 2003). An IMPLAN-based model of the Tennessee economy in 2019 was used as the starting point of our work. (IMPLAN is a so-called "ready-made I-O modeling system, where a basic knowledge of personal computers is sufficient for generating models, multipliers, and impacts" (Hughes, 2003)).

Model coefficients were modified based on a survey of Tennessee distillers and the author's knowledge of such models and the Tennessee economy. For example, the level of and source (in state or out of state) of grain used by the industry was modified based on the survey data, as was level of industry output and employment. Survey estimates were also used in determining levels of industry activity in restaurant, bar, retail sales and impact of distillers' grains provided to farmers as animal feed based on profitability analysis conducted by Best (2019) and transportation estimates from Hart (2007). In some cases, outside information was used to confirm model coefficients and estimates. For example, the analysis of proprietary distillery business data provided by the firm Industrius CFO (2022) indicates that the typical distillery is a relatively profitable business venture (at least in the top 20 percent across the various types of US businesses). The distilling industry profit estimates developed from this model are in line with those provided by Industrius.

Industry spending patterns as provided in Table 7 show that other property income is the largest "cost" item at 21.98 percent of total revenue, followed by taxes on production and imports at 12.46 percent, distilleries at 3.83 percent, various forms of wholesale

activities and grain purchases at 4.03 percent. Based on survey results, an estimated 28.65% of grain is purchased from Tennessee farmers. These spending patterns determine the degree to which spending by the industry multiplies throughout the state economy (the more in-state spending, the greater the multiplier in this case).

Input-output models are most widely used in estimating economic multiplier-based impact analysis for industries or for a given economic event. In this case, we estimate the contribution of the Tennessee Distilling Industry (North American Industry Classification System (NAICS) 312140) to the state economy. A contribution study such as this one is based on the assumptions tied to an industry shutdown scenario (i.e., disappearance) without subsequently freed resources finding alternative in-state uses (for example, a situation where displaced distillery workers would leave the state for employment elsewhere). Also, the model is based on "the fixed relative prices" assumption (Miller and Blair, 2222), which means, for example, if distillery workers lost their jobs, wage rates in the state would not be affected.

Economic impact results

Direct industry spending and revenue estimates are used in our Tennessee input-output model to generate contribution analysis for the Tennessee distilling industry (total economic impact direct and multiplier based). Based on industry survey data, the original input-output model and a variety of other sources of information, the industry is directly responsible for an estimated 2,990 jobs, $2.01 billion in sales, $180.838 million in personal income and $864.556 million in gross state product (Figure 14 through Figure 17). By applying those values in the model, the total (direct and multiplier effect) estimated contribution to the state economy is $3.135 billion dollars in output, 8,635 jobs, almost $524 million in personal income and $1.456 billion in gross state product. A dollar in industry sales generates $1.56 in state economic activity, and a dollar in industry gross regional product generates $1.68 in gross regional product throughout the state; an industry job leads to 2.89 jobs in the state. These results demonstrate that the Tennessee distilling industry is a major contributor to the state economy.

The Tennessee distilling industry also makes a major contribution to local and state governments tax revenues and to federal tax revenue. Based on the analysis, economic activity generated by Tennessee distilleries lead to an estimated $284.866 million in state and local tax revenue and $155.933 million in federal tax revenues.

Detailed selected sectors regarding the economic impact show that this impact is spread throughout numerous industries and all parts of the state (Figure 18 through Figure 21). In terms of employment impacts, other impacts were concentrated in wholesale activities (other nondurable goods at 601 jobs and machinery, equipment and supplies wholesale at 221 jobs), truck transportation (299 jobs), grain farming (246 jobs), real estate (244 jobs) and management of companies and enterprises (183), among others (Figure 18). Labor income was concentrated in wholesale activities (nondurable goods at $48.605 million and machinery, etc., at $19.727 million), trucking ($19.783 million), health care (reflecting spending by workers) at over $14 million for hospitals and over $9 million for physicians, and insurance ($8.527 million) (Figure 19). Likewise, major impacts in terms of gross regional product included wholesale (nondurable goods at $109.740 million and machinery, etc., at $37.678 million), housing (owner-occupied dwellings at $27.290 million) and banking (monetary authorities and depository credit intermediaries at $11.968 million) (Figure 20). In terms of output, relatively large amounts of activity were seen in the two wholesale sectors, housing, real estate (at $50.713 million), trucking ($47.701 million) and insurance ($31.070 million) (Figure 21).

Summary and conclusions

This report provided an analysis of the contribution of the Tennessee distilling industry to the state economy. The recent dramatic growth in the industry is documented and evaluated. The economic contribution is seen in various locations and economic sectors spread throughout Tennessee. The direct and total economic impact is substantial in terms of output, employment, labor income and gross regional product, as well as in terms of state-local and federal tax revenue that is generated by the industry.

[1]Other property income consists of payments for rents, royalties, dividends and corporate profits. Although it is generally a measure of profitability, it is included in cost items to account for all industry outlays (MIG, 1999).[2] Gross regional product (GRP) is activity generated by the Tennessee economy as measured by returns to factors of production (labor and capital). It is analogous to gross domestic product (GDP) for the US economy.[3]Activities by distilleries was primarily assigned to the distillery sector but also — to a much lesser extent — to general retail merchandising (gift shops), promoters of performing arts (tours), full-service restaurants and all other food and drinking places (bars), based on survey data regarding share of employment and sales in these non-distillery sectors. Hence the totals for the distilling industry (in Figure 14 and Figure 15) are greater than the values presented in Figure 18 through Figure 21. Direct activity was also assigned to truck transportation and to farm income as positive impacts and to reductions in animal feed sector activities as a negative impact to account for the economic impact of farmer use of distillers' grains.

References

Best, S. 2019. Estimating Production of Brewery and Distillery Spent Grains in Tennessee and Identifying Sustainable Uses. Unpublished Master's Thesis. University of Tennessee.

Hart, C. E. 2007. Ethanol-Livestock Integration. Iowa Ag Review 13(1). CARD (Center for Agricultural and Rural Development), Iowa State University.

Hughes, D. 2003. Policy Uses of Economic Multiplier and Impact Analysis. Choices 2nd Quarter:25-30. www.choicesmagazine.org

IMPLAN Group LLC. 2015. "IMPLAN System (data and software)." Huntersville, NC.

Industrius CFO. 2022. Industry Report Categories. http://secure.industriuscfo.com/industry-metrics/naics/

Miller, R. E., and P. D. Blair. 2022. Input-Output Analysis: Foundations and Extensions. 3rd ed. Prentice-Hall: Englewood Cliffs, NJ.

Minnesota IMPLAN Group (MIG), Inc. 1999. User's Guide: IMPLAN Pro, Version 2.0. Minneapolis, MN.

Tennessee Department of Revenue. N.d. Annual Report. Nashville.

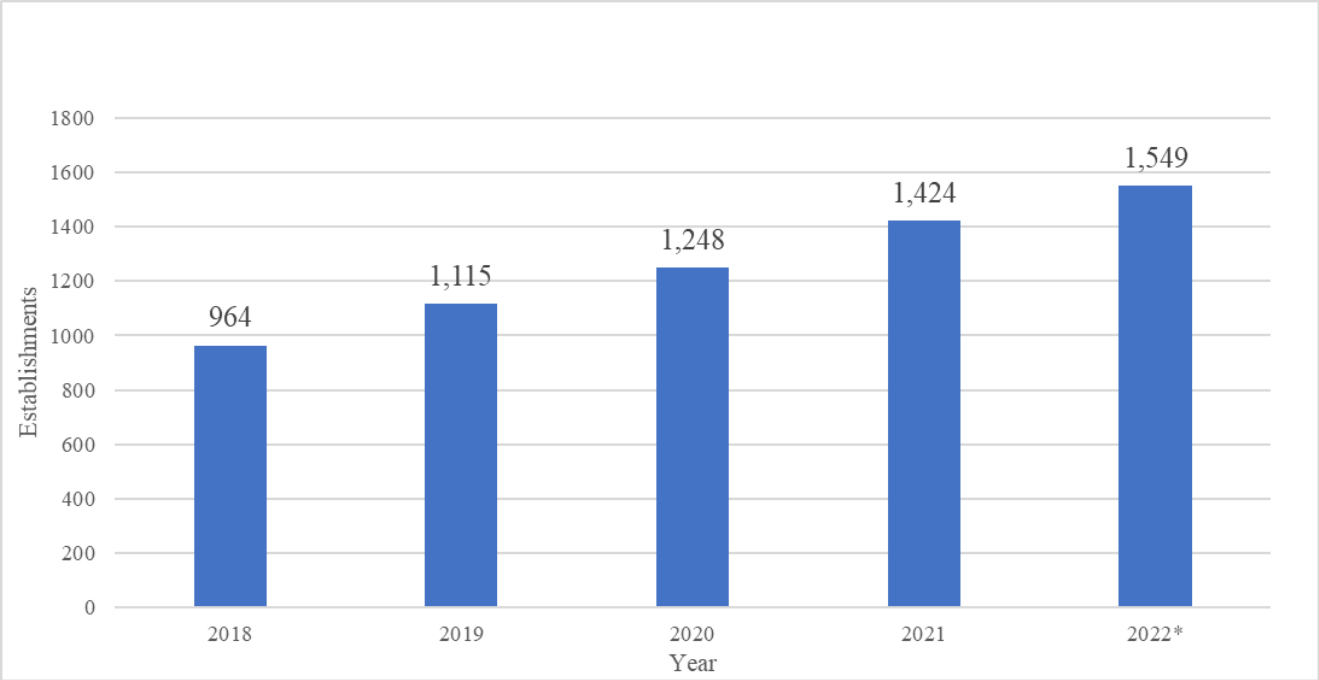
US Census Bureau. 2022. "US Import and Export Merchandise trade statistics." Economic Indicators Division USA Trade Online. https://usatrade.census.gov/

US Department of Labor. 2022. Quarterly Covered Employment and Wages, 2018-2022 1st Quarter. Bureau of Labor Statistics. Washington, DC. https://www.bls.gov/cew/downloadable-data-files.htm

US Department of the Treasury. 2022. Tax Collections. Alcohol and Tobacco Tax and Trade Bureau. Washington, DC. https://www.ttb.gov/tax-audit/tax-collections

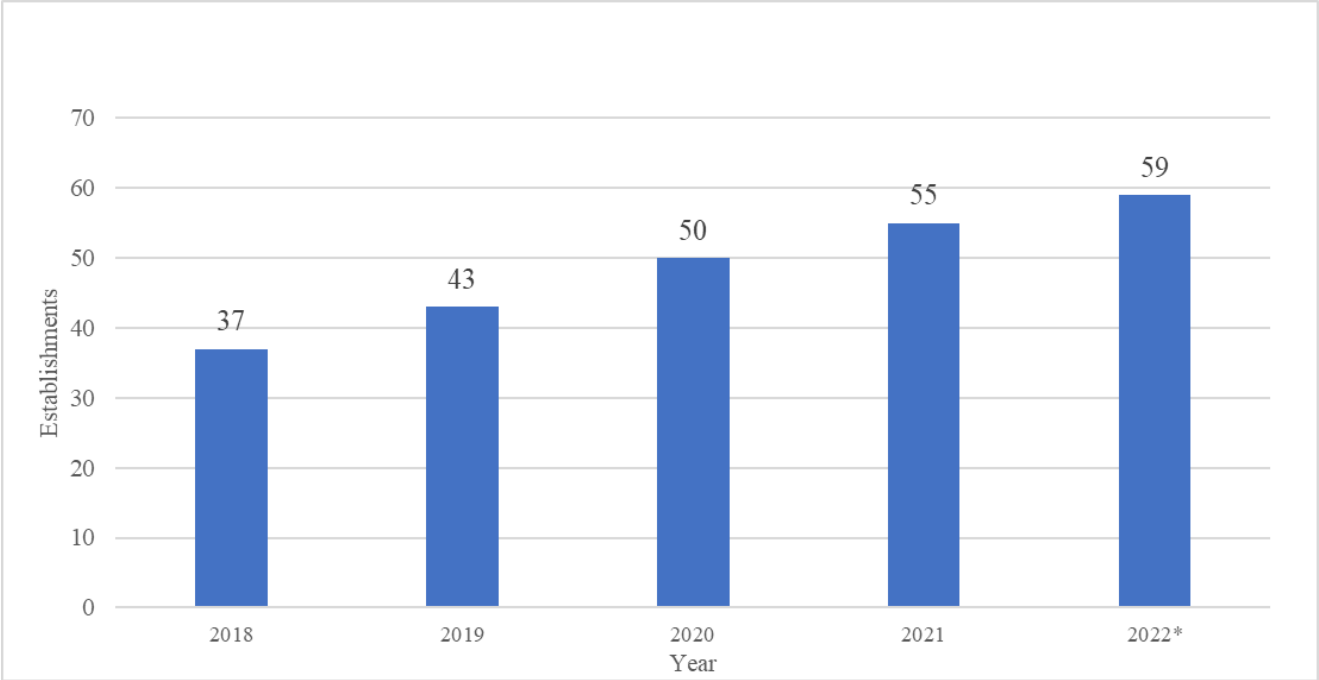
Figures

Figure 1.
Number of US distilleries, 2018-2022.



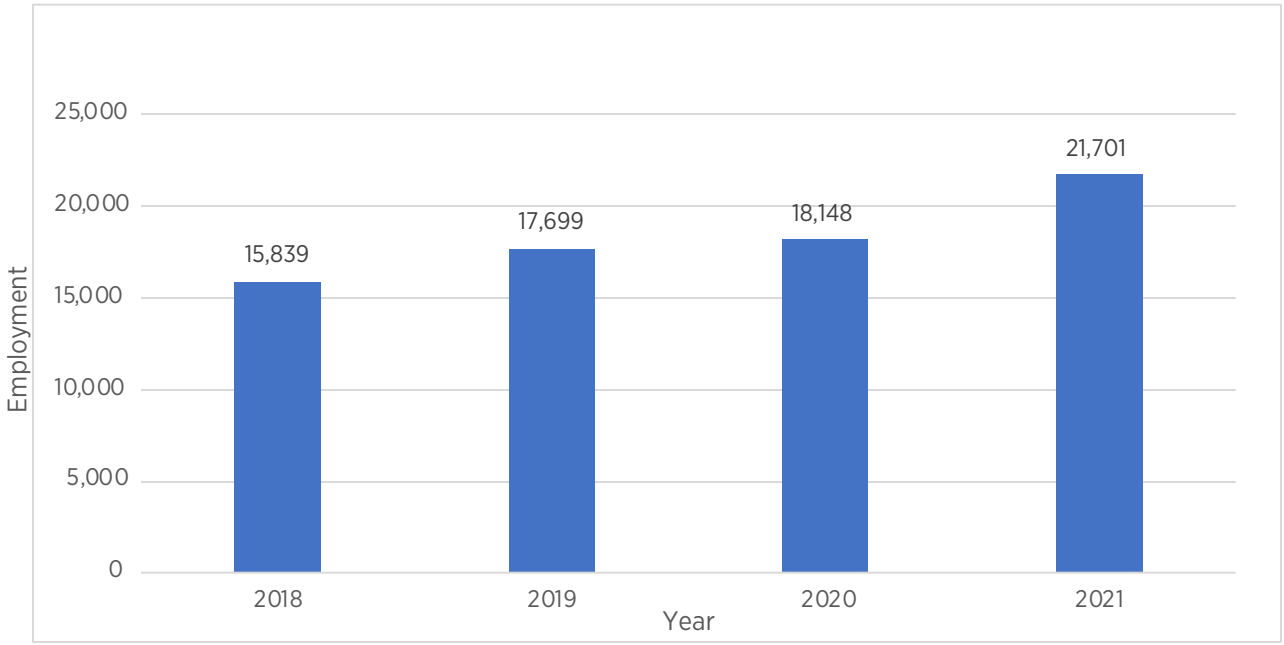
**Data for 2022 only includes the first three months of the year.*
Source: US Department of Labor.

Figure 2.
Number of Tennessee distilleries, 2018- 2022.



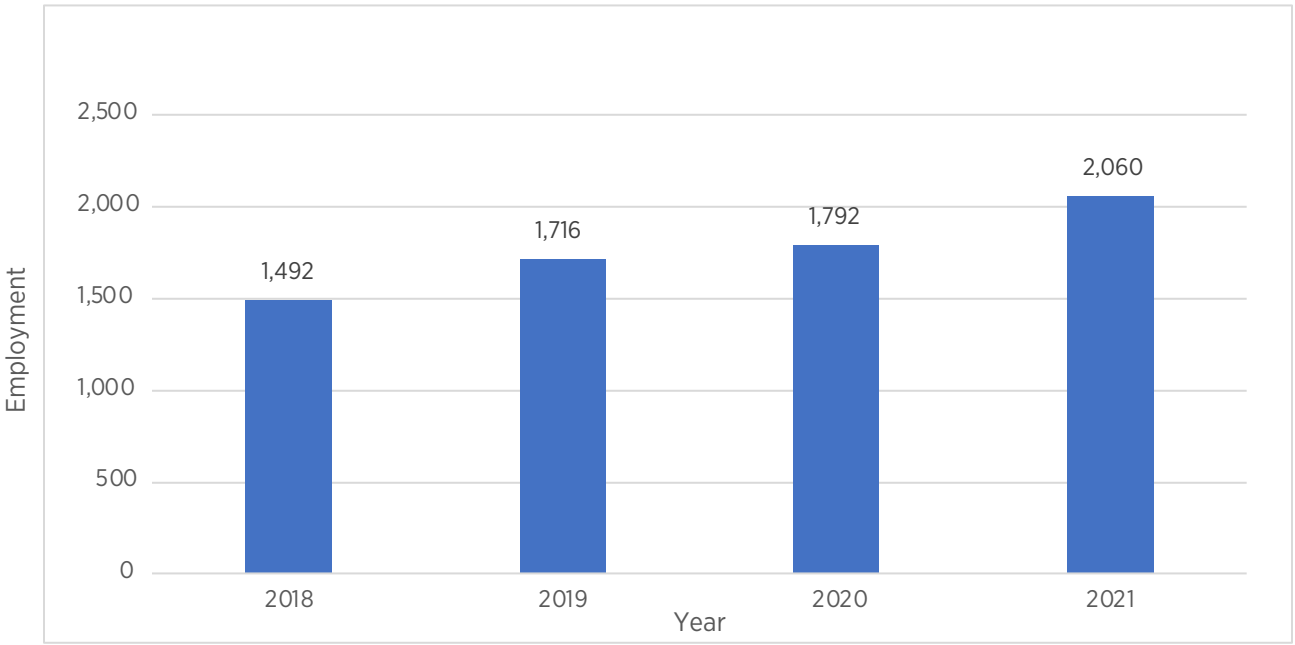
**Data for 2022 only includes the first three months of the year.*
Source: US Department of Labor.

Figure 3.
Total employment in US distilleries, 2018-2021.



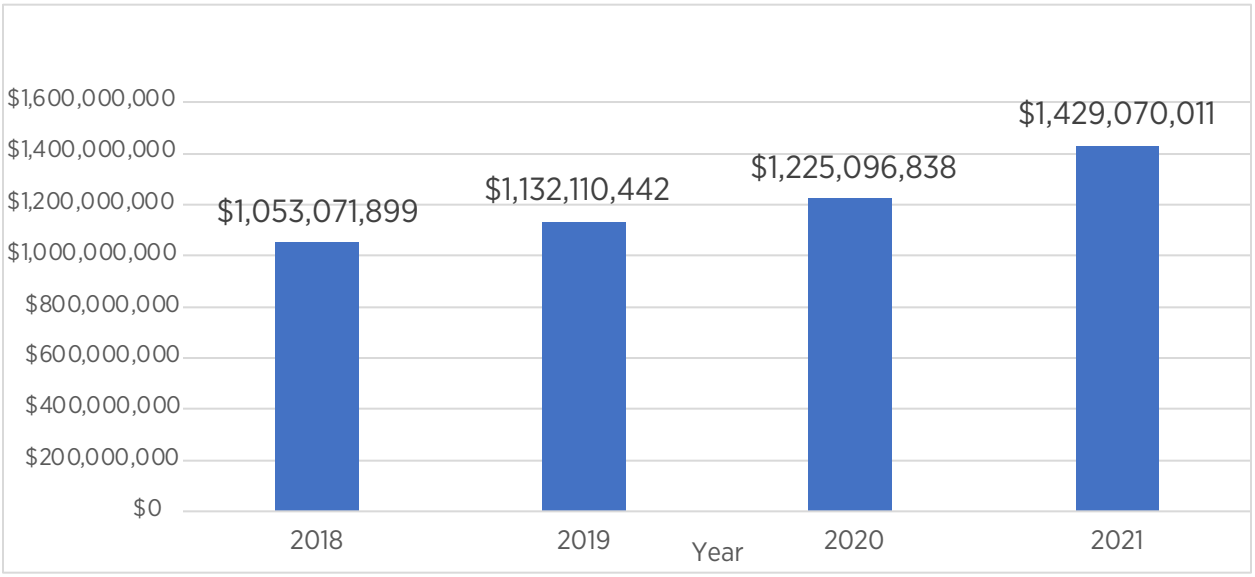
Source: US Department of Labor.

Figure 4.
Total employment in Tennessee distilleries, 2018-2021.



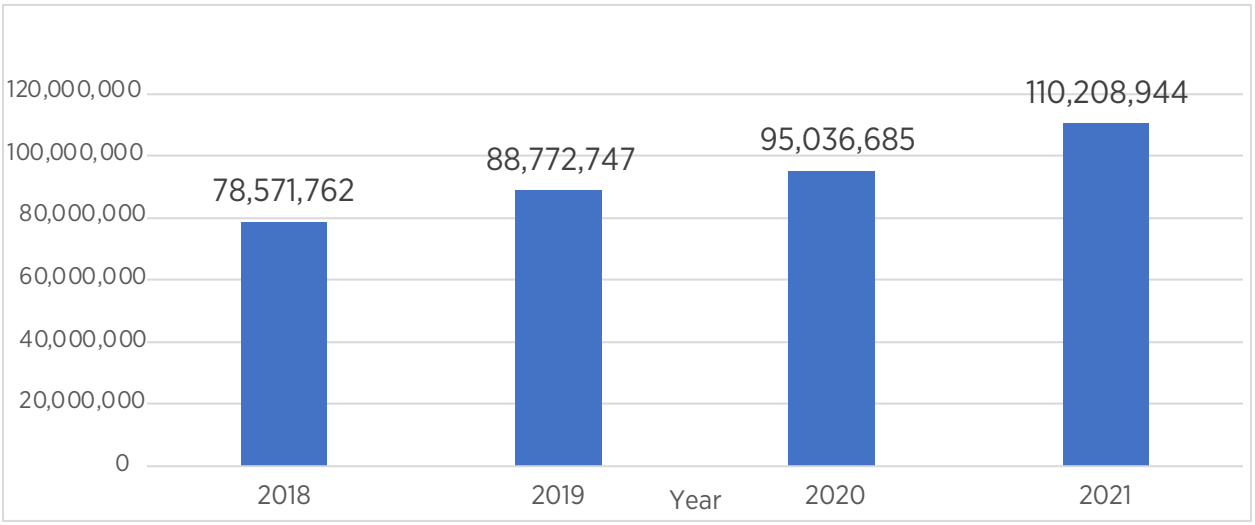
Source: US Department of Labor.

Figure 5.
Total wages and salaries paid by US distilleries, 2018-2021.



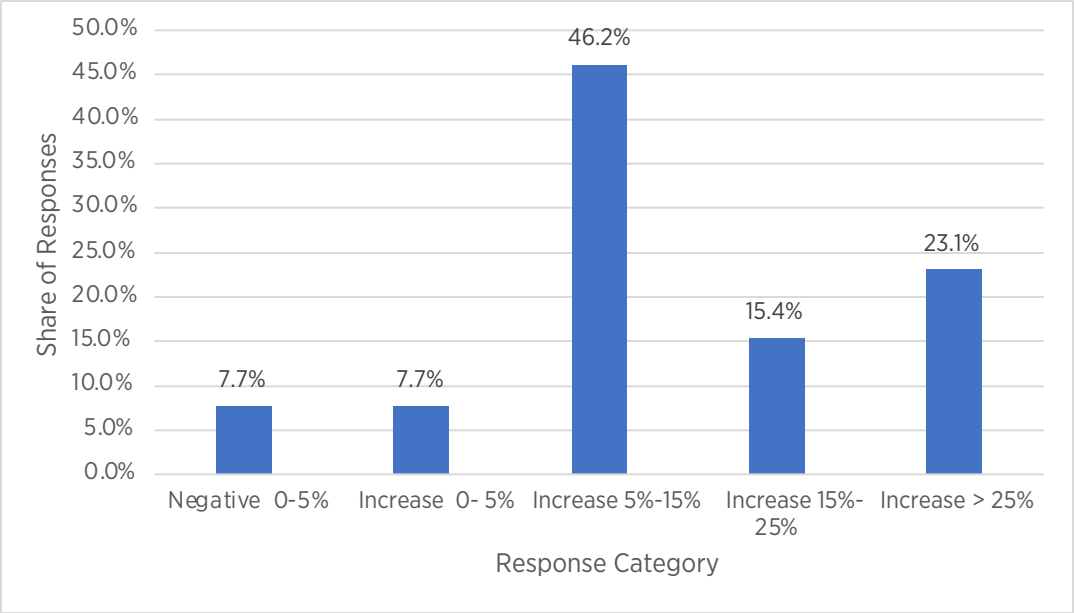
Source: US Department of Labor.

Figure 6.
Total wages and salaries paid by Tennessee distilleries, 2018-2021.



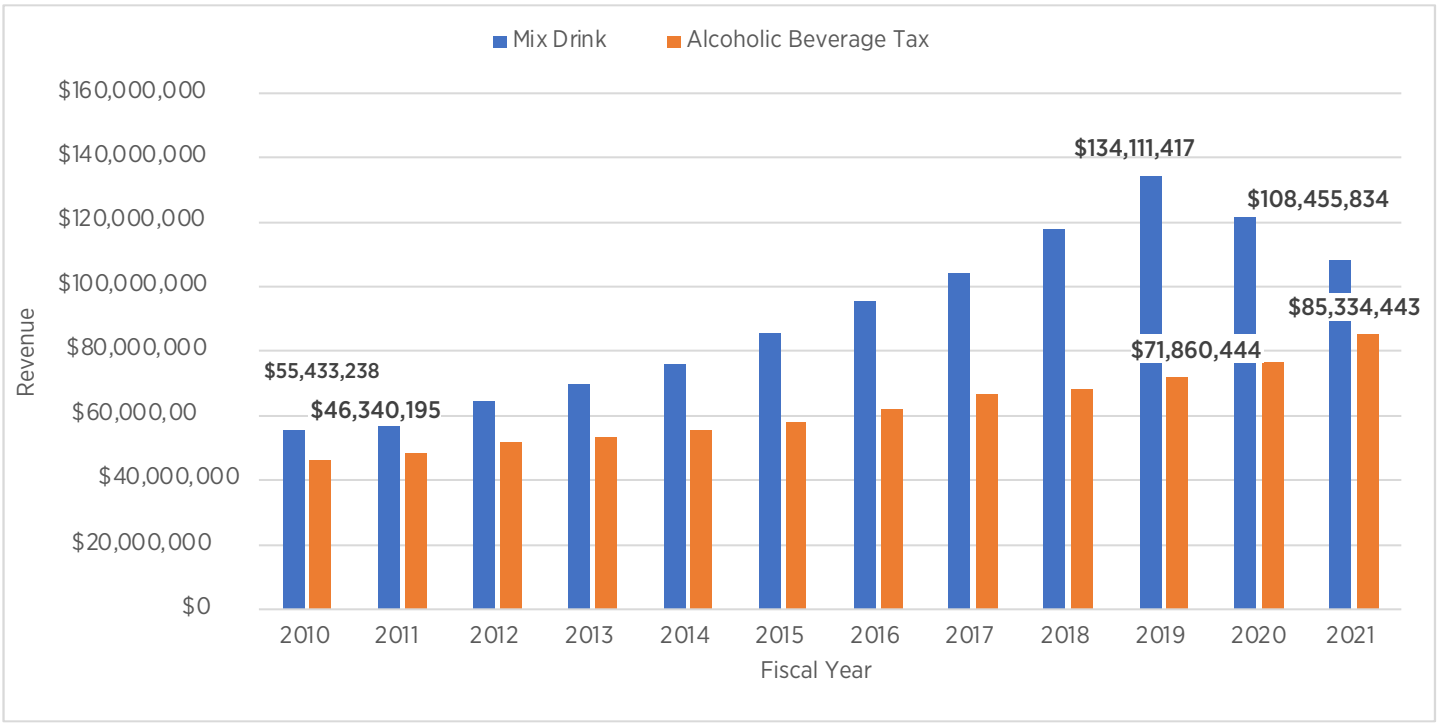
Source: US Department of Labor.

Figure 7.
Responses to "How much do you expect your sales to change in 2022?"



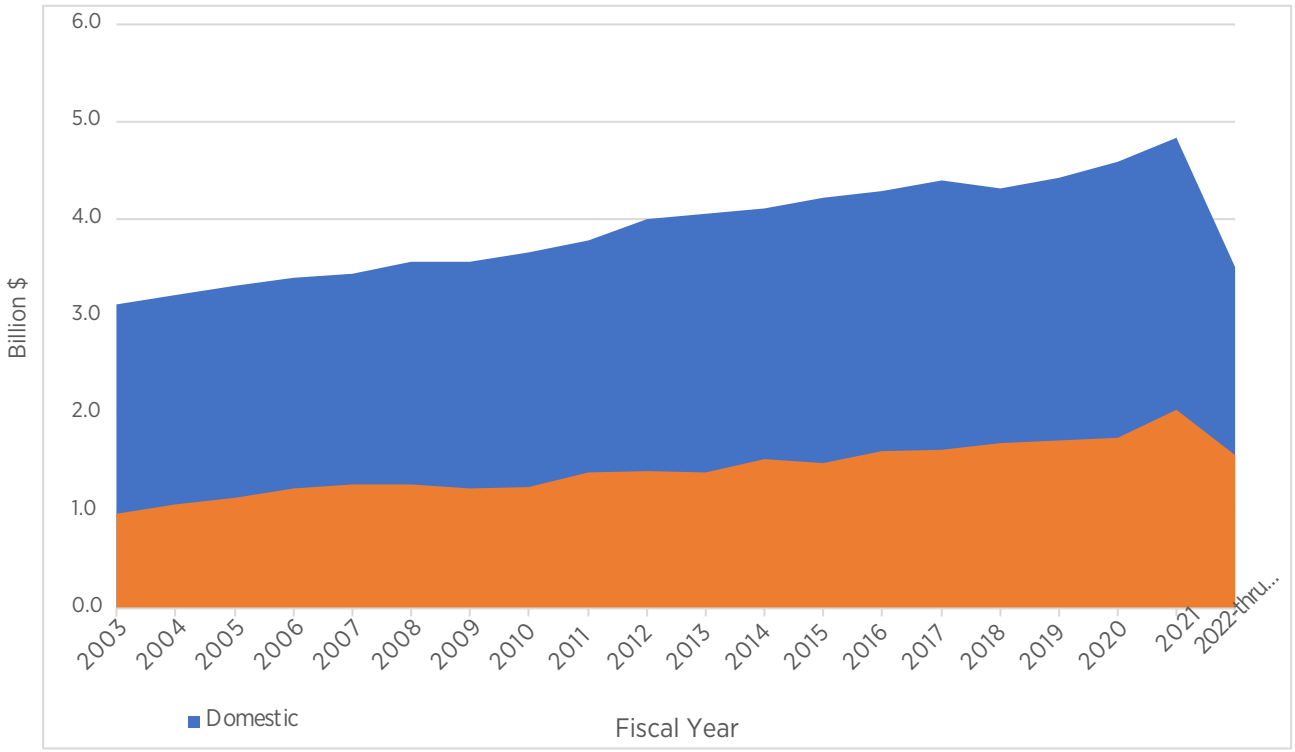
Note: No responses for losses of over 5 percent or no change categories.

Figure 8.
Tennessee mix drink and alcoholic beverage tax revenue collection, fiscal year 2010-2021.



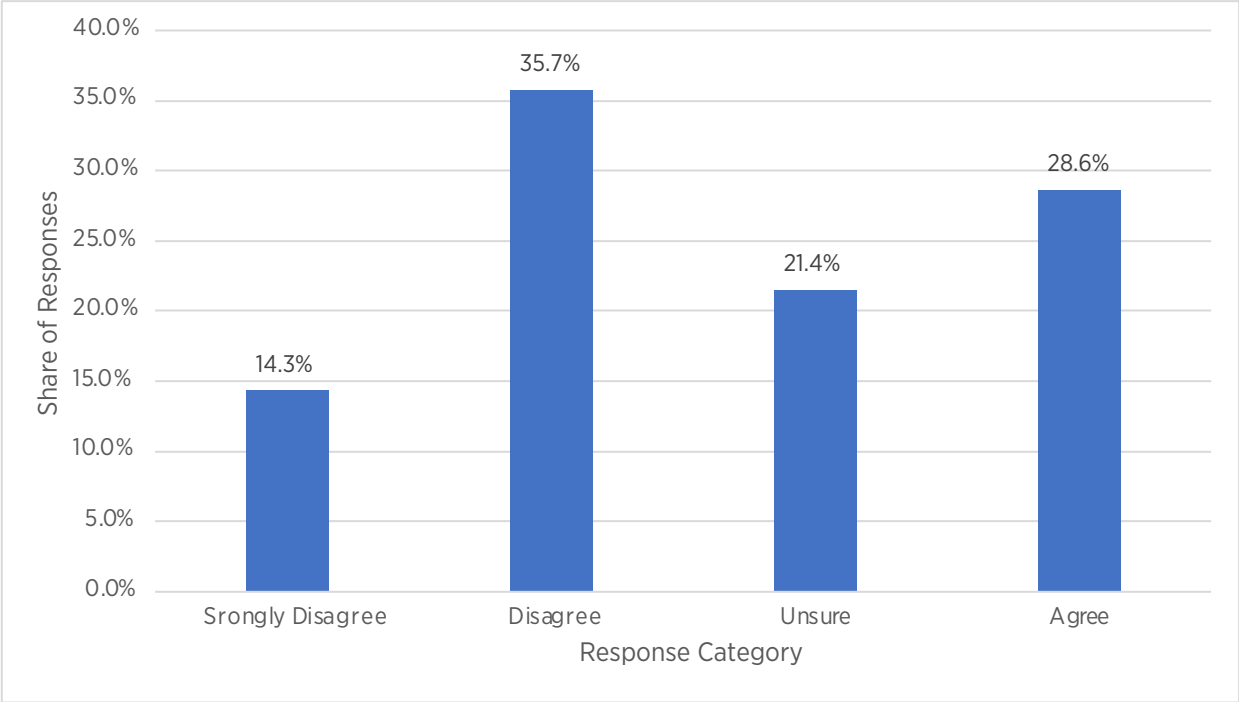
Source: Tennessee Department of Revenue, various years.

Figure 9.
US federal government distilled spirits tax collections, 2003 through June 30, 2022.



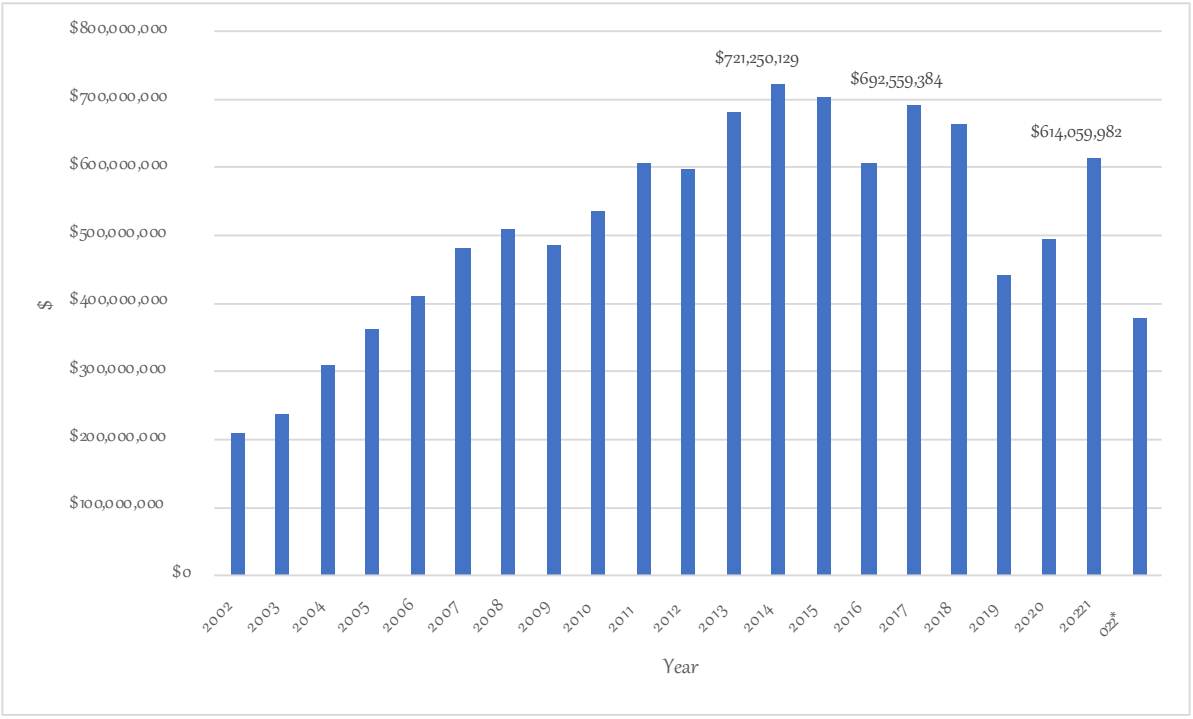
Source: US Department of the Treasury.

Figure 10.
Responses to "The primary reason out of state visitors came to Tennessee was to visit this facility."



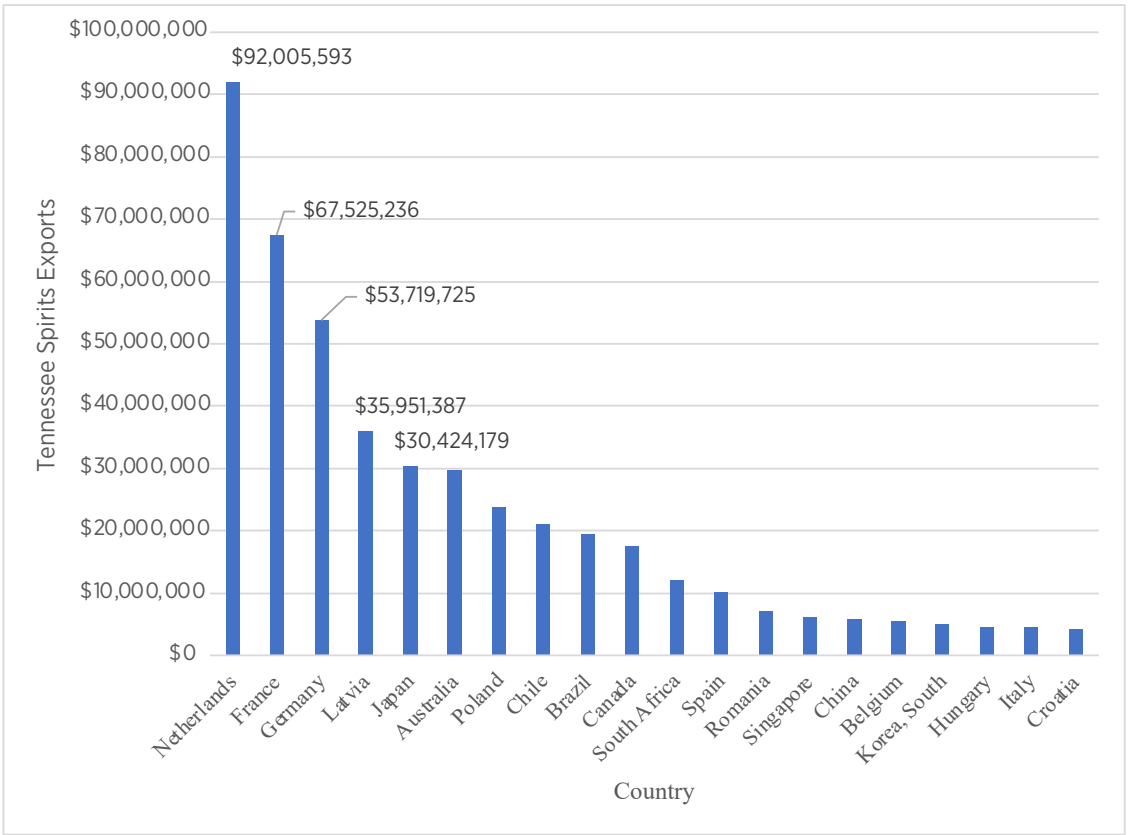
Source: Survey of Tennessee distilleries.

Figure 11.
International exports of Tennessee-made distilled spirits, 2002 through July 2022.



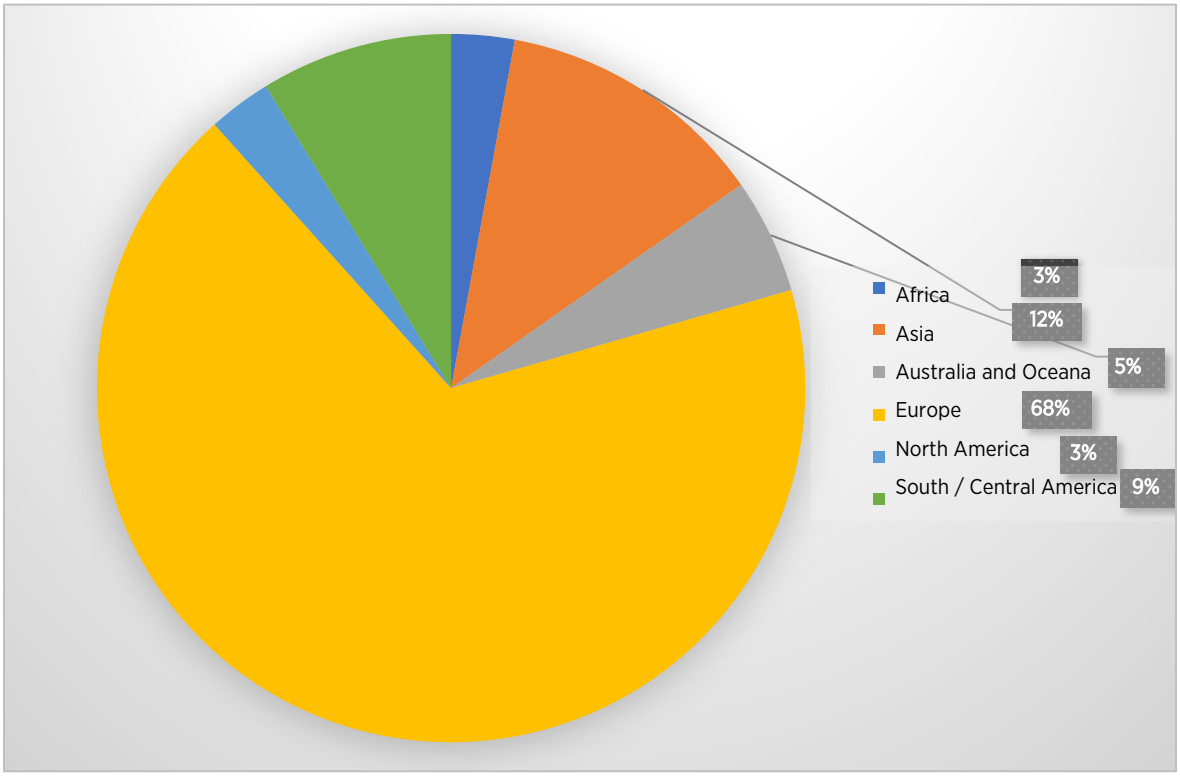
*Note: *Through July 2022.*
Source: US Census Bureau.

Figure 12.
Top 20 countries as export markets for Tennessee distilled spirits, 2021.



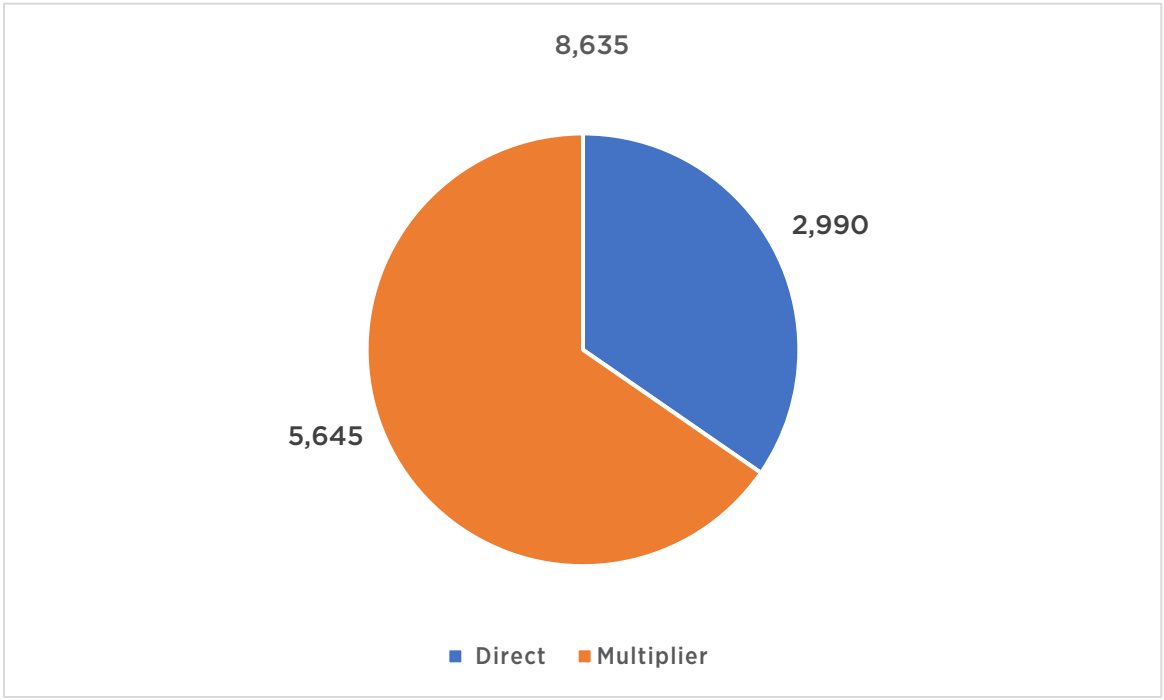
Source: US Census Bureau.

Figure 13.
Distribution of export markets for Tennessee distilled spirits by continent, 2021.



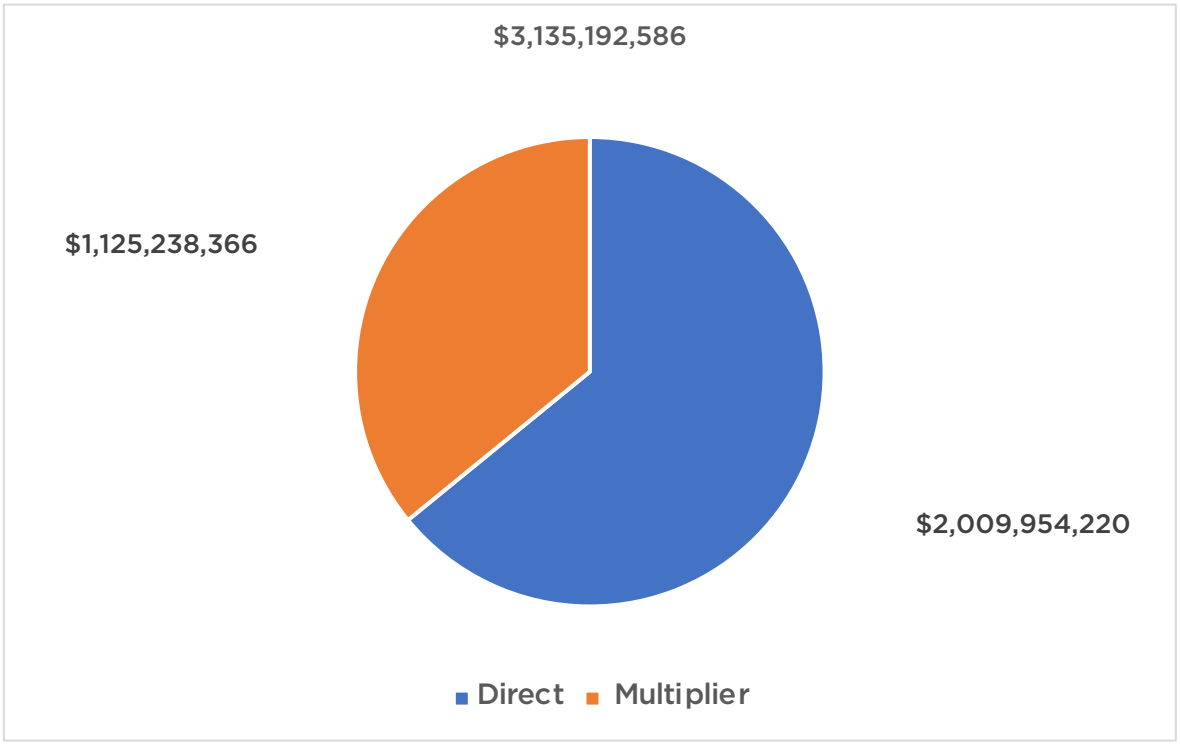
Note: $614.060 million in total value of exports.
Source: US Census Bureau.

Figure 14.
Direct and multiplied-based employment impact due to the economic activity of Tennessee distilleries.



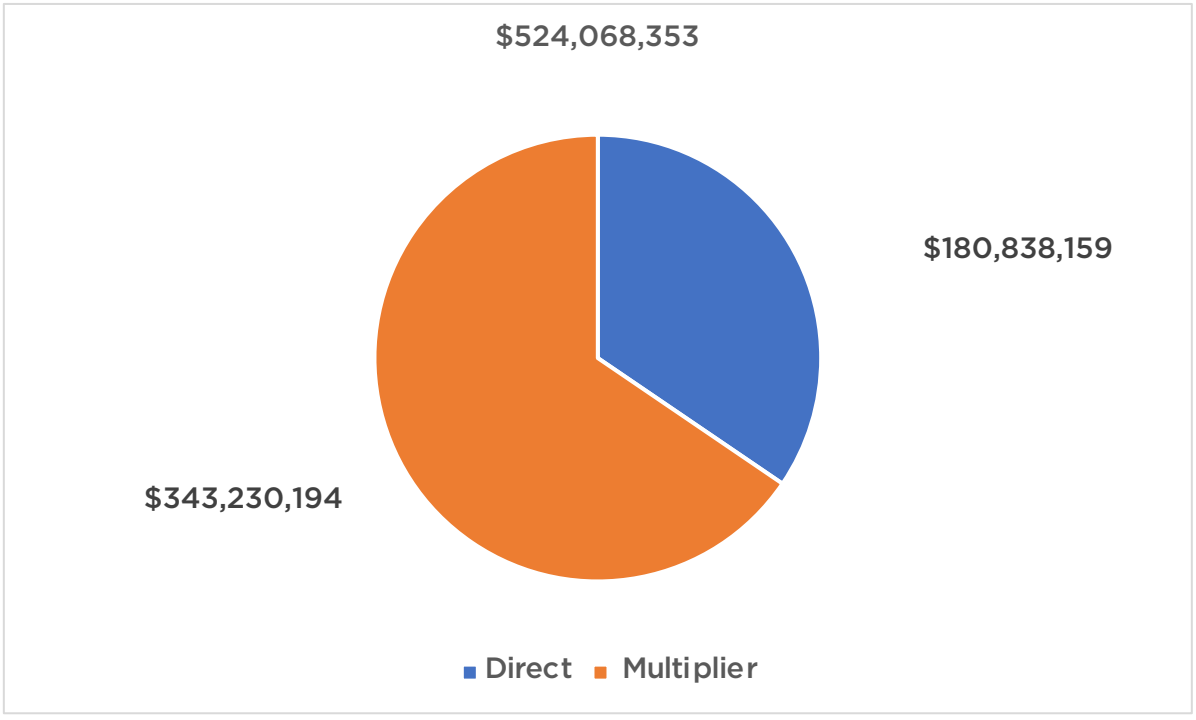
Source: Tennessee input-output model.

Figure 15.
Direct and multiplied-based output impact due to the economic activity of Tennessee distilleries.



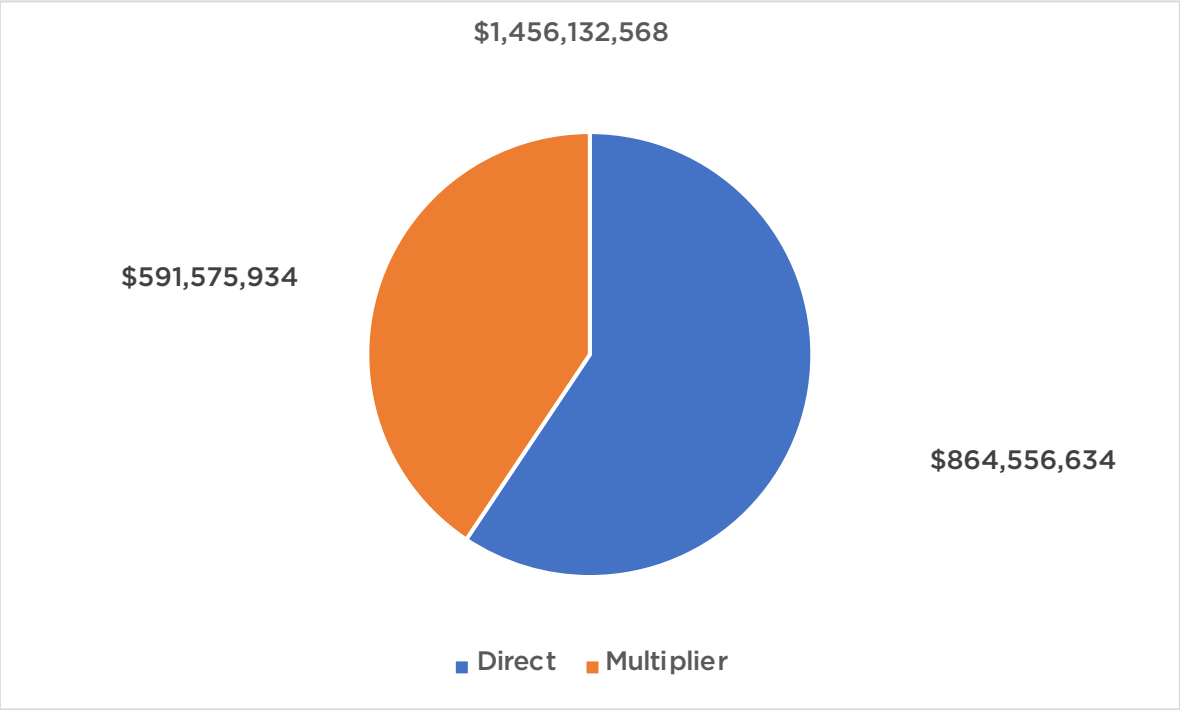
Source: Tennessee input-output model.

Figure 16.
Direct and multiplied-based labor income impact due to the economic activity of Tennessee distilleries.



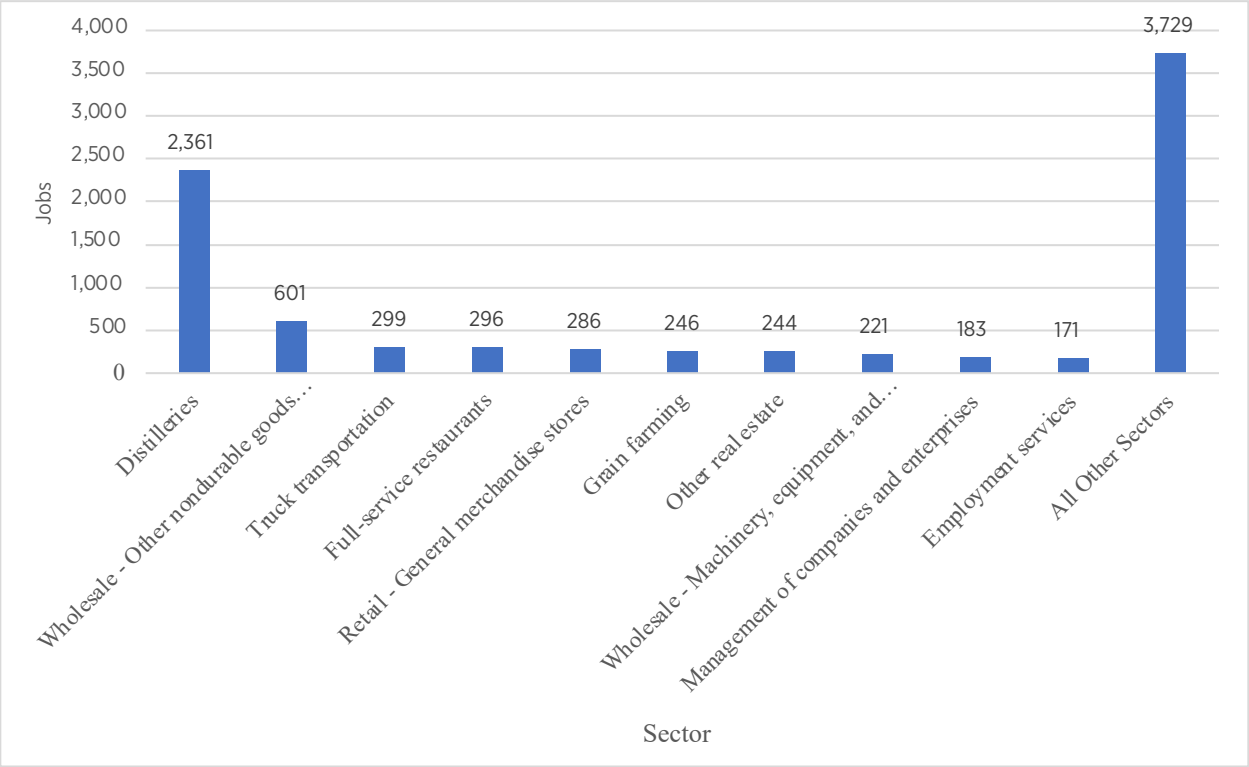
Source: Tennessee input-output model.

Figure 17.
Direct and multiplied-based gross regional product impact due to the economic activity of Tennessee distilleries.



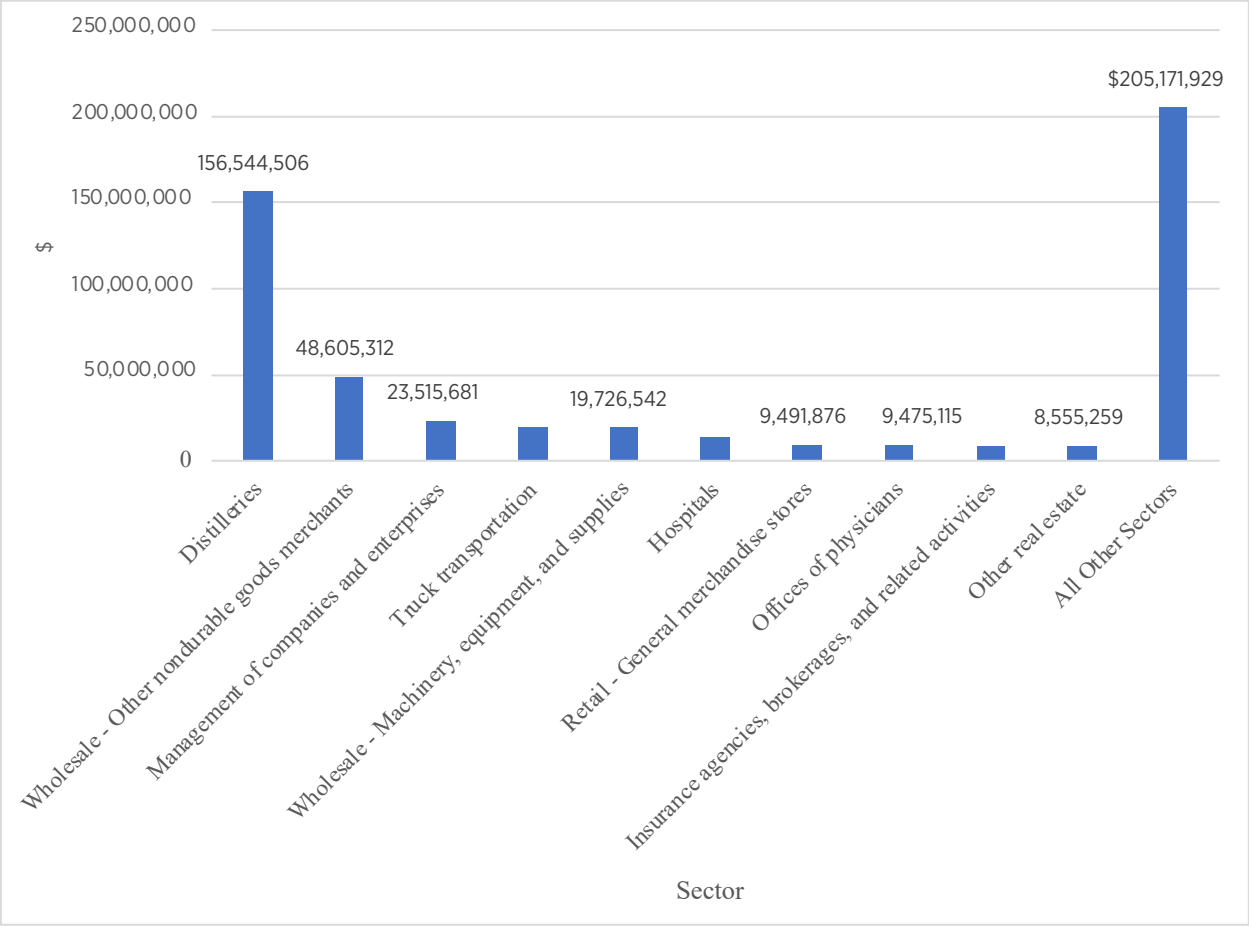
Source: Tennessee input-output model.

Figure 18.
Economic sectors with largest employment impact due to the economic activity of Tennessee distilleries.



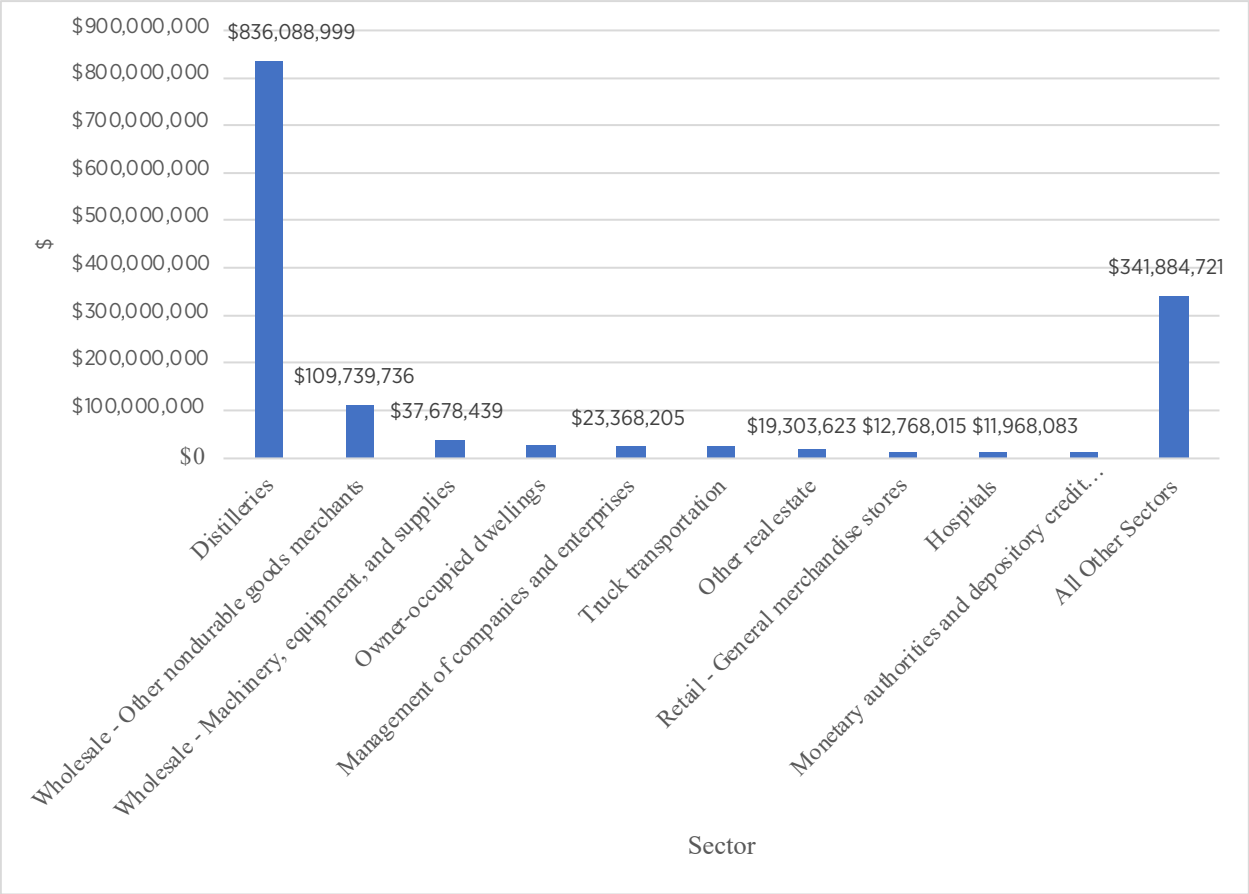
Source: Tennessee input-output model.

Figure 19.
Economic sectors with largest labor income impact due to the economic activity of Tennessee distilleries.



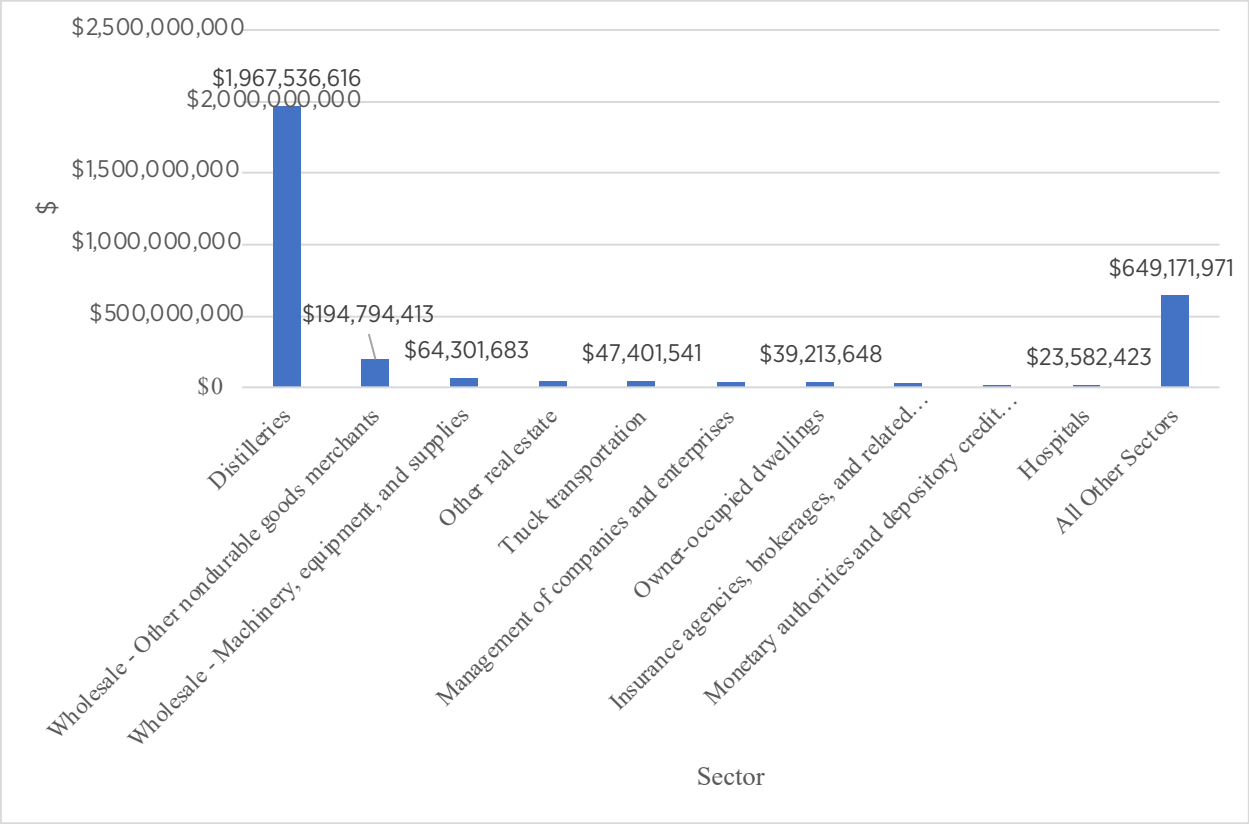
Source: Tennessee input-output model.

Figure 20.
Economic sectors with largest gross regional product impact due to the economic activity of Tennessee distilleries.



Source: Tennessee input-output model.

Figure 21.
Economic sectors with largest output impact due to the economic activity of Tennessee distilleries.



Source: Tennessee input-output model.

Tables

Table 1.
Number of distilleries across the United States and 2018-2022 growth and ranks.

State	Number of Establishments by Year					Rank	2018-2022 Growth	
	2018	2019	2020	2021	2022, 1st Quarter	2022	Level	Rank
US TOTAL	964	1,115	1,248	1,424	1,549		60.7%	
Alabama	4	4	5	5	5	47	25.0%	41
Alaska	8	9	10	9	9	40	12.5%	45
Arizona	5	6	8	9	9	40	80.0%	16
Arkansas	4	4	3	5	6	45	50.0%	31
California	77	92	95	104	114	2	48.1%	33
Colorado	62	69	70	75	77	6	24.2%	42
Connecticut	6	8	11	12	12	30	100.0%	9
Delaware	3	3	2	3	3	50	0.0%	49
DC	9	9	9	9	1	31	22.2%	43
Florida	34	41	53	71	83	5	144.1%	6
Georgia	10	12	23	33	36	14	260.0%	1
Hawaii	6	7	8	10	11	31	83.3%	15
Idaho	9	9	9	9	10	35	11.1%	46
Illinois	41	48	58	69	77	6	87.8%	12
Indiana	13	17	17	20	23	22	76.9%	19
Iowa	10	9	12	14	15	26	50.0%	31
Kansas	6	7	8	10	10	35	66.7%	22
Kentucky	54	59	69	82	88	4	63.0%	24
Louisiana	11	11	14	14	15	26	36.4%	34
Maine	11	14	15	16	15	26	36.4%	34
Maryland	19	22	24	28	32	16	68.4%	21
Massachusetts	11	14	15	16	17	25	54.5%	28
Michigan	35	48	55	58	63	10	80.0%	16
Minnesota	21	21	24	26	27	20	28.6%	39
Mississippi	3	4	6	6	7	43	133.3%	7
Missouri	15	14	18	22	28	19	86.7%	14
Montana	17	19	20	21	22	23	29.4%	38
Nebraska	3	3	4	5	4	49	33.3%	37
Nevada	6	7	9	10	10	35	66.7%	22
New Hampshire	9	10	11	12	20	35	11.1%	846
New Jersey	16	20	22	31	36	14	125.0%	8
New Mexico	4	8	8	9	10	25	150.0%	4
New York	60	66	75	84	92	3	53.3%	29
North Carolina	30	35	38	44	46	12	53.3%	29

Table 1 Continued

North Dakota	1	2	2	2	1	53	0.0%	49
Ohio	19	21	22	20	21	24	10.5%	48
Oklahoma	2	3	3	4	7	43	250.0%	2
Oregon	30	33	31	31	30	18	0.0%	49
Pennsylvania	39	51	57	64	70	8	79.5%	18
Rhode Island	1	2	3	3	3	50	200.0%	3
South Carolina	16	20	24	29	32	16	100.0%	9
South Dakota	2	2	2	2	2	52	0.0%	49
Tennessee	**37**	**43**	**50**	**55**	**59**	**11**	**59.5%**	**26**
Texas	68	75	85	103	118	1	73.5%	20
Utah	8	12	15	17	15	26	87.5%	13
Vermont	14	14	12	11	11	31	-21.4%	53
Virginia	25	29	32	36	40	13	60.0%	125
Washington	50	55	53	59	67	9	34.0%	36
West Virginia	3	4	4	7	6	45	100.0%	9
Wisconsin	16	20	22	27	25	21	56.3%	27
Wyoming	7	8	10	9	9	40	28.6%	39
Puerto Rico	9	10	12	11	11	31	22.2%	43
Virgin Islands	2	4	4	5	5	47	150.0%	4

Source: US Department of Labor.

Table 2.
Employment in distilleries across the United States and 2018-2021 growth and ranks.

Employment by Year							
	2018	2019	2020	2021	2021 State Rank	2018-2021 Growth	Growth Rank
US TOTAL	15,839	17,699	18,148	21,701		37.0%	
Alabama	NA	30	NA	NA			
Alaska	24	NA	NA	NA			
Arizona	25	NA	21	31	38	24.0%	22
Arkansas	231	NA	230	252	20	9.1%	30
California	599	681	800	916	4	52.9%	13
Colorado	577	684	688	824	5	42.8%	18
Delaware	NA	NA	NA	22	40		
DC	35	59	46	41	35	17.1%	26
Florida	460	522	570	662	9	43.9%	16
Georgia	NA	NA	NA	93	32		
Hawaii	NA	95	67	194	30		
Idaho	34	35	46	NA			
Illinois	511	555	554	576	10	12.7%	28
Indiana	449	574	NA	NA			
Iowa	58	75	101	163	25	181.0%	2
Kansas	NA	NA	NA	301	17		
Kentucky	4,968	5,253	5,381	6,065	1	22.1%	23
Louisiana	71	55	49	102	31	43.7%	17
Maine	202	238	342	360	13	78.2%	7
Maryland	213	266	268	317	16	48.8%	15
Michigan	417	535	484	681	8	63.3%	9
Minnesota	408	426	373	464	12	13.7%	27
Mississippi	NA	24	21	NA			
Montana	152	181	166	192	23	26.3%	21
Nebraska	17	21	21	27	39	58.8%	11
Nevada	35	78	86	128	28	265.7%	1
New Hampshire	34	35	37	52	34	52.9%	12
New Jersey	248	260	233	321	15	29.4%	20
New Mexico	NA	NA	NA	NA			
New York	751	602	697	821	6	9.3%	29
North Carolina	128	158	175	252	20	96.9%	6
Ohio	198	224	180	233	22	17.7%	25
Pennsylvania	473	612	570	710	7	50.1%	14
Rhode Island	NA	NA	NA	34	36		
South Carolina	92	116	113	184	24	100.0%	4
Tennessee	1,492	1,716	1,792	2,060	2	38.1%	19
Texas	854	1,073	na	1,407	3	64.8%	8
Utah	53	74	83	105	29	98.1%	5

Table 2 Continued

Employment by Year

	2018	2019	2020	2021	2021 State Rank	2018-2021 Growth	Growth Rank
Vermont	145	NA	123	138	37	-4.8%	32
Virginia	NA	233	221	255	19		
Washington	277	367	322	338	14	22.0%	24
West Virginia	NA	30	NA	32	37		
Wisconsin	159	184	160	256	18	61.0%	10
Wyoming	27	37	45	56	33	107.4%	3
Puerto Rico	454	464	499	487	11	7.3%	31
Virgin Islands	NA	142	143	153	26		

Note: NA means not available. States without available data 2018-2022 are excluded.
Source: US Department of Labor.

Table 3.
Total annual wages in distilleries across the United States and 2018-2021 growth and ranks.

State	2018	2019	2020	2021	2021 State Rank	2018-2021 Growth	Growth Rank
US TOTAL	$1,053,071,899	$1,132,110,442	$1,225,096,838	$1,429,070,011		35.7%	
Alabama	NA	842,908	NA	NA			
Alaska	$566,925	NA	NA	NA			
Arizona	$533,605	NA	$885,275	$1,427,186	38	167.5%	2
Arkansas	$14,810,346	NA	$15,072,268	$16,144,238	17	9.0%	30
California	$32,204,892	$38,050,895	$48,763,834	$58,521,975	4	81.7%	12
Colorado	$20,406,885	25,451,997	$27,416,209	$35,233,885	8	72.7%	13
Delaware	NA	NA	NA	$1,107,049	39		
DC	$1,927,372	$2,334,821	$2,018,322	$2,503,044	34	29.9%	25
Florida	$29,232,325	$34,620,988	$41,044,278	$47,738,496	5	63.3%	16
Georgia	NA	NA	NA	$4,588,385	32		
Hawaii	NA	$3,823,778	$3,041,443	$4,781,906	31		
Idaho	$2,137,251	$2,132,507	$2,918,068	NA			
Illinois	$35,024,605	$35,104,193	$38,601,030	$42,859,538	6	22.4%	26
Indiana	$23,844,921	$31,307,407	NA	NA			
Iowa	$2,533,523	$3,112,187	$4,788,686	$6,598,224	27	160.4%	3
Kansas	NA	NA	NA	$32,415,818	9		
Kentucky	$482,690,580	$521,426,389	$546,544,276	$563,747,683	1	16.8%	28
Louisiana	$2,926,425	$2,094,414	$2,303,961	$5,679,846	28	94.1%	11
Maine	$9,119,590	$11,132,682	$17,730,106	$18,517,851	14	103.1%	9
Maryland	$12,540,698	$15,983,808	$16,822,701	$18,293,564	15	45.9%	21
Massachusetts	NA	NA	NA	NA			
Michigan	$10,765,622	$14,733,317	$16,305,844	$24,609,997	12	128.6%	5
Minnesota	$19,877,672	$19,055,801	$22,446,169	$29,677,575	10	49.3%	20
Mississippi	NA	$705,061	$852,662	NA			
Montana	$3,409,048	$4,077,251	$4,308,866	$5,521,614	29	62.0%	17
Nebraska	$237,820	$389,598	$386,143	$606,183	40	154.9%	4
Nevada	$2,567,222	$4,505,932	$5,278,455	$7,486,703	26	191.6%	1
New Hampshire	$1,420,674	$1,518,349	$1,760,408	$2,435,143	35	71.4%	14
New Jersey	$15,337,963	$16,849,866	$15,381,549	$18,152,695	16	18.4%	27

Table 3 Continued

State	2018	2019	2020	2021	2021 State Rank	2018-2021 Growth	Growth Rank
New York	$58,835,108	$24,647,633	$32,030,597	$35,607,257	7	-39.5%	32
North Carolina	$4,568,254	$5,793,433	$6,460,630	$9,332,927	22	104.3%	8
Ohio	$7,943,912	$9,213,612	$8,987,669	$11,237,245	20	41.5%	23
Pennsylvania	$14,969,722	$18,475,759	$18,025,851	$23,437,972	13	56.6%	19
Rhode Island	NA	NA	NA	$2,648,109	33		
South Carolina	$4,376,072	$5,382,980	$6,322,810	$9,217,812	23	110.6%	6
Tennessee	$78,571,762	$88,772,747	$95,036,685	$110,208,944	2	40.3%	24
Texas	$50,890,173	$61,363,494	NA	$86,272,198	3	69.5%	15
Utah	$2,497,416	$3,454,721	$3,741,197	$4,901,200	30	96.3%	10
Vermont	$5,244,617	NA	$6,490,481	$7,499,337	25	43.0%	22
Virginia	NA	$8,279,882	$8,599,428	$10,206,806	21		
Washington	$10,247,366	$15,209,312	$14,885,205	$16,068,615	18	56.8%	18
West Virginia	NA	$1,441,222	NA	$1,608,439	37		
Wisconsin	$4,438,962	$5,215,701	$5,812,689	$9,088,103	24	104.7%	7
Wyoming	$2,007,095	$1,278,007	$1,370,046	$1,859,352	36	-7.4%	31
Puerto Rico	$24,834,078	$25,933,376	$26,725,718	$27,084,837	11	9.1%	29
Virgin Islands	NA	$12,211,611	$12,877,742	$13,825,452	19		

Note: NA means not available. States without available data 2018-2022 are excluded.
Source: US Department of Labor.

Table 4.
Number of reported distilleries in Tennessee by county, 2018, 1st quarter, 2022.

County	2018	2019	2020	2021	2022
Cannon	1	1	1	1	1
Cheatham	0	1	1	1	1
Cocke	4	3	3	4	4
Davidson	3	4	6	10	13
Dyer	1	1	1	1	1
Giles	1	1	1	1	1
Hamilton	1	3	3	3	3
Humphreys	0	0	1	1	1
Jefferson	0	0	0	0	1
Knox	2	2	2	2	2
Lincoln	1	1	1	1	1
McMinn	1	1	1	1	1
Madison	0	0	0	1	1
Maury	1	1	1	1	1
Montgomery	1	1	1	1	1
Moore	2	2	2	2	2
Morgan	1	1	1	1	1
Sevier	11	11	12	11	12
Shelby	2	2	2	2	2
Sullivan	1	1	2	1	1
Sumner	0	0	0	1	1
Washington	0	1	1	1	1
Williamson	3	4	4	4	3
Wilson	1	0	0	0	0
Unknown	0	2	3	3	3
Total	38	44	50	55	59

Source: US Department of Labor.

Table 5.
Worker hourly pay and tip policies for tour guides, production workers and bartenders.

	Tour Guide	Production	Bar Tender
Hourly Pay			
Average	$14.61	$19.17	$12.31
Medium	$14.50	$20.00	$13.00
Mode	$15.00	NA	$15.00
Tip:			
Yes	8	1	10
No	2	8	0
N	10	9	10

Note: NA means not applicable.
Source: Survey of Tennessee distilleries.

Table 6.
Product mix among responding distilleries.

Type of Distilled Spirits						
	Gin	Moonshine	Rum	Vodka	Whiskey	Other
Number of Distilleries	6	7	4	3	10	7
Average Price Per Gallon	$150.67	$102.01	$149.75	$126.00	$230.56	$170.93
N-12						

Source: Survey of Tennessee distilleries.

Table 7.
Major spending categories Per Dollar of revenue, Tennessee distilling industry, IMPLAN model, 2022.

	IMPLAN Sector Number and Name	Percent Spending	Local Share	Local Spending
400	Wholesale - Other nondurable goods merchants	0.1207	0.7908	0.0954
107	Wineries	0.0721	0.0912	0.0066
201	Glass container manufacturing	0.0615	0.0080	0.0005
395	Wholesale - Machinery, equipment, and supplies	0.0410	0.7717	0.0317
2	Grain Farming	0.0403	0.2865	0.0115
108	Distilleries	0.0383	0.2515	0.0096
192	Plastics bottle manufacturing	0.0223	0.1315	0.0029
417	Truck transportation	0.0203	0.9927	0.0202
247	Machine shops	0.0183	0.1050	0.0019
143	All other miscellaneous wood product manufacturing	0.0136	0.4436	0.0060
Factors of Production				
	Employee Compensation	0.0748		
	Proprietor Income	0.0045		
	Other Property Type Income	0.2198		
	Tax on Production and Imports	0.1246		

Source: Tennessee input-output model.



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