The Potential Benefits of Allowing Beer and Wine Sales in Supermarkets, Grocery, and Convenience Stores in Maryland 2024 Update

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MRA
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DRAFT

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Introduction

Following the repeal of Prohibition in December of 1933, most control over the sale of beverage alcohol products (including distilled spirits, wines, and malt beverages) was given to state governments. Each of the states implemented alcohol control laws, some of which were extremely stringent. In Maryland, most liquor laws are implemented at the county level, making it unique among states in this regard.

Adults who choose to purchase beverage alcohol products in the state have traditionally faced many restrictions which have encouraged a fairly non-competitive retail system and forced consumers to pay relatively higher prices. This in turn has led many shoppers to seek out both lower prices and better selections, particularly in the bordering jurisdictions of Delaware and Washington D.C. One thing is certain, while Maryland's diffuse system of control of beverage alcohol sales and regulations does allow for more local control, it does make it difficult for the state's businesses, consumers, and visitors to navigate. This makes it less efficient, and more expensive, to sell beverage alcohol products in the state.

In 2020 John Dunham & Associates (JDA) conducted an analysis for the Maryland Retailers Association (MRA) to examine the impact of these stringent regulations on both the beverage alcohol industry and the general economy of the state of Maryland. That analysis found that were the state to allow for beer and wine sales in non-package stores, there would be a net increase of $192.9 million in sales, resulting in the creation of 760 additional full-time equivalent (FTE) jobs in Maryland, and an increase in tax collections of nearly $24.2 million.[1]

Based on this updated analysis of the Maryland retail economy, allowing beer and wine to be sold in additional food retailers (as is allowed in 39 states) would increase overall alcohol sales in Maryland by $214.4 million resulting in 754 net additional retail jobs and $31.6 million in increased tax revenues.[2]

The following presents the results of this updated analysis based on the most recently available data.

Summary

The state of Maryland restricts beverage alcohol sales for off-premise consumption to package stores, save for a few food retailers that are allowed to sell these products as they were grandfathered when the restrictions were adopted. This makes Maryland one of only a handful of states that do not at least allow for the sale of beer and/or wine at licensed food retailers.

Table 1
Potential Impact of Allowing Non-Package Store Beer and Wine Sales in Maryland (2024)

	Direct	Supplier	Induced	Total
Jobs	753	154	160	1,067
Wages	$31,948,151	$9,591,667	$9,573,780	$51,113,597
Economic Output	$74,168,816	$30,719,972	$29,701,337	$134,590,124
Federal Taxes				$12,403,394
State and Local Taxes				$12,975,834

The limits on the availability of beverage alcohol products in the state have hampered sales, reducing the volume of alcoholic beverages purchased in the state. Rationalizing the access of adult consumers to beer and wine products would lead to more stores selling these products, increasing employment by as much as 753 full-time equivalent (FTE) jobs at retailers. Once supplier and multiplier effects are included, the state could increase employment by as much as 1,070 jobs, which would pay employees over $51.1

[1] See: Douglas Moran, Catherine, *Grocers are battling alcohol laws. Here's how the fight is going in 3 states*, Grocery Dive, March 25, 2021, Updated April 5, 2021, at: https://www.grocerydive.com/news/grocers-are-battling-alcohol-laws-heres-how-the-fight-is-going-in-3-state/597080/. Link to JDA analysis: https://irp-cdn.multiscreensite.com/cf5489a9/files/uploaded/Dunham_EconomicStudy.pdf

[2] This is even after offsetting any sales that might be lost to current package store sellers.

million in additional wages and benefits. Overall the economy of the Old Line State would be about $134.6 million larger. (Table 1 on the prior page)

In addition to increasing economic activity in Maryland, the rationalization of alcohol retailing would increase state and local revenues. Additional excise taxes, sales taxes, business and personal taxes, and bottle taxes in Baltimore would raise an additional $13.0 million in revenues annually, or about 0.02 percent.

Markets in Other States

Before Prohibition, alcohol manufacturers either directly owned or had exclusive contracts with individual taverns to sell only their products. These "tied-houses" resulted in marketing practices that many thought to have encouraged intemperance.[3] In 1933, the 21st Amendment to the Constitution repealed Prohibition on a national level. Section 2 of the Amendment empowered states to enact their own laws concerning the production, distribution, and sale of alcohol. After the repeal of Prohibition, Congress and the general public believed that alcohol manufacturers should be separate from retailers. To ensure that this was the case, state and federal governments adopted laws and regulations that created a three-tier system of alcohol distribution.[4,5]

Although this structure is not federally mandated, 49 of the 50 states and Washington D.C. all have established some variation of the three-tier system. The structure of the system differs across states, with some having more restrictive regulations, while others are more open. Over time, however, states have begun to loosen the restrictions, making beverage alcohol products more accessible to adult consumers.

Table 2
Grocery Store Alcohol Sales by Restrictions

	Number of States (2020)	Percent	Number of States (2024)	Percent
No Alcohol Sales*	6	11.8%	5	9.8%
Beer Sales Only**	9	17.6%	7	13.7%
Beer and Wine	16	31.4%	19	37.3%
Beer, Wine and Spirits***	20	39.2%	20	39.2%
Total	51	100.0%	51	100.0%

* Note that New Jersey does allow for limited alcohol sales in certain grocery stores subject to ownership restrictions, while there are a handful of grocery stores in Maryland allowed to sell alcohol as they were grandfathered when the current restrictions were enacted.

** Minnesota allows for the sale of beer with an alcohol content of 3.2 percent or less, and New York allows grocers to sell low-alcohol "wine products."

*** West Virgina allows for sales from contracted "agency stores." A limited number of grocery stores have been contracted as agents for the state.

While there are retailers in Maryland that sell beer and wine beyond just package stores, the number is limited to those that held licenses prior to the enactment of a 1978 state law prohibiting food retailers and chains from holding licenses.[6] Certain retailers were exempted from this restriction as their licenses were grandfathered in the state code. This provision effectively limits the sale of all alcohol products for off-

[3] The name comes from a practice in England where a bar may be tied, by ownership links or contractual obligations, to a specific manufacturer.

[4] Fosdick, Raymond B., and Albert L. Scott, Toward Liquor Control, (Harper & Brothers: New York), 1933.

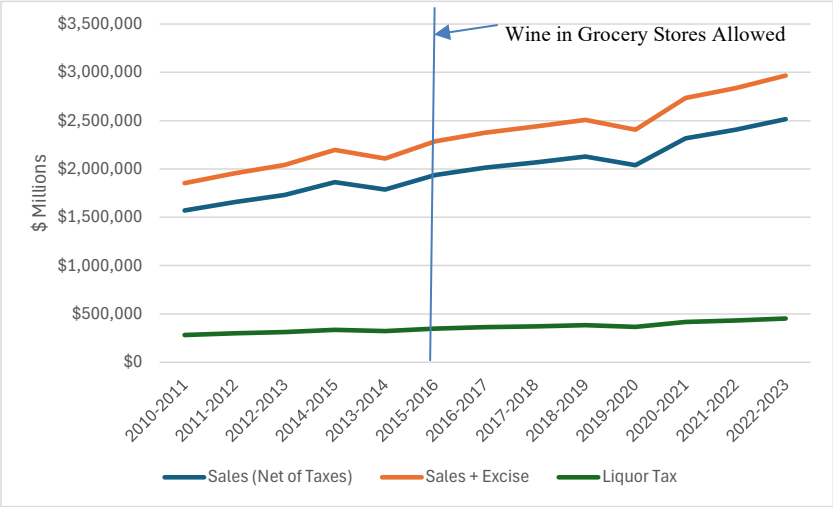
[3] *Code of Fair Competition for the Distilled Spirits Industry*, Federal Alcohol Control Administration, August 1, 1934, at: https://babel.hathitrust.org/cgi/pt?id=umn.31951d03592405e&view=1up&seq=3

[5] *The Three-Tier System: A Modern View*, National Alcohol Beverage Control Association, March 2015, at: www.nabca.org/three-tier-system-modern-view-0,

[6] Maryland Code, Alcoholic Beverages, Division 1:4, § 4-205, at: https://casetext.com/statute/code-of-maryland/article-alcoholic-beverages-and-cannabis/division-i-general-provisions-affecting-multiple-jurisdictions/title-4-local-licensing/subtitle-2-issuance-or-denial-of-local-licenses/section-4-205-chain-store-supermarket-or-discount-house

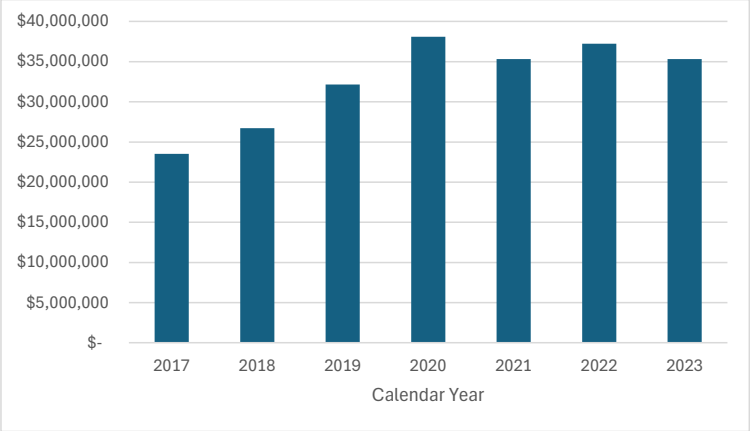
premise consumption to package liquor stores. Equivalently stringent restrictions currently exist in only 5 other states.[7]

Figure 1
Wine and Spirits Sales in Pennsylvania



In 2016, the Commonwealth of Pennsylvania, a state with some of the most restrictive beverage alcohol sales laws in the country, began allowing certain grocers to sell up to four bottles of wine to each legal-age customer. In the year following, according to the State Department of Revenue, overall liquor tax collections were up by 6.5 percent over the prior year. This is nearly double the growth rate in liquor tax revenue prior to the change in the law.[8] Over time, the number of retailers licensed to sell wine for off-premise consumption has grown from 285 retailers to nearly 1,400.[9] This has more than tripled the number of locations in the state where consumers can purchase wine. At the same time, the number of state stores has remained fairly constant, with 607 stores operating in 2016 and 586 in FY 2023. This follows the State's decision to close its state operated retail stores during the COVID-19 pandemic.

Figure 2
Oklahoma Alcohol Tax Revenues By Calendar Year



[7] Alaska, Delaware, New Jersey, North Dakota, and Rhode Island. Note that New Jersey permits a limited number of grocery stores to sell wine, while Pennsylvania allows for beer and limited wine sales in grocery stores subject to certain limits.

[8] *Monthly Revenue Report*, Pennsylvania Department of Revenue, at: http://www.revenue.pa.gov/GeneralTaxInformation/News%20and%20Statistics/Pages/Reports%20and%20Statistics/MRR/2016%20Monthly%20Revenue%20Reports.aspx#.WHj0ZhsrKUk. Includes beer taxes.

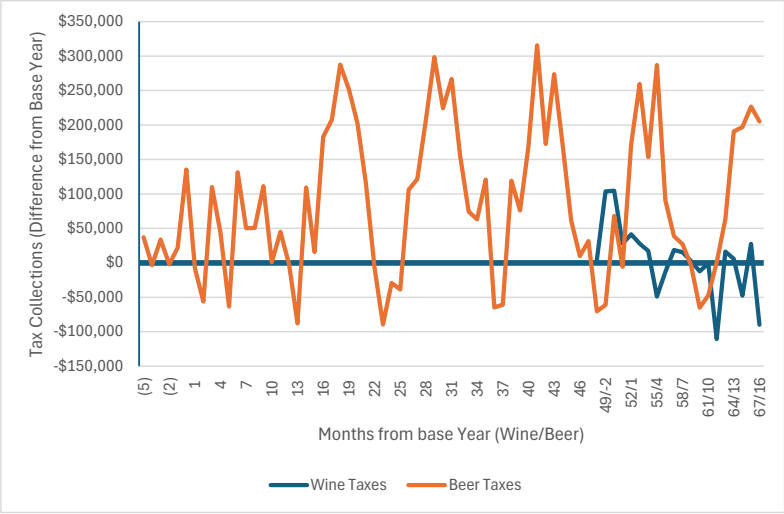
[9] *Annual Report*, Pennsylvania Liquor Control Board, various dates. At: https://www.lcb.pa.gov/About-Us/News-and-Reports/Pages/Annual-Reports.aspx. Note that this does not include restaurants and hotels.

Overall, the growth in wine sales through private grocery and convenience retailers has soared, up by 256.3 percent since 2016 when the first licenses began operating, however, at the same time, sales in state owned stores have not fallen but increased at a compound annual growth rate of 3.1 percent, a figure that includes the period when stores were shut down. Figure 1 on the prior page shows overall sales of wine and spirits in Pennsylvania as well as total excise taxes paid over the last 13 fiscal years.

In October of 2018, Oklahoma loosened its restriction of the sale of alcohol, allowing for the sale of "strong-beer," rather than lower alcohol 3.2 beer, and table wines (under 15 percent alcohol by volume (ABV)) in grocery stores, convenience stores, pharmacies and other establishments. Following the implementation of these changes, tax revenues on alcoholic beverages increased by 13.6 percent in 2018, 20.4 percent in 2019, and 18.4 percent in 2020. These tax increases occurred in spite of the onset of COVID-19 and the shutdown of much of the economy. Tax rates remained flat during this period of rapidly increasing revenues, meaning that volumes increased during the period.[10]

The most recent state to allow for the sale of wine in grocery and convenience retailers was Colorado, which began loosening restrictions on the sale of beer at the beginning of 2019. Previously grocers in Colorado could only sell beer with an alcohol by weight below 3.2 percent, effectively limiting beer, wine, and liquor sales to package stores. After voters passed a proposition in 2022, the state began to allow for the sale of wine in grocery and convenience stores beginning in March 2023.

Figure 3
Colorado Growth in Beer and Wine Excise Tax Collection



Changes in beer sales restrictions have been in effect for over 5 years and as Figure 3 shows, same-month excise tax collections from the sale of malt beverages have generally outpaced those from the period prior to the state allowing for full-strength beer to be sold by food retailers. The story of wine excise taxes has not been as dramatic, however there was a sizable jump in tax revenues right around the period when the law changed. In more recent months, wine tax collections have not kept pace with the base year figures; however, wine sales in general have been falling nationwide, and this may be simply a continuation of an existing trend.[11]

Finally, a recent analysis of a 2016 change in regulations allowing for the sale of wine in retail food stores in the state of Tennessee, found no statistically significant impact on the number of package stores in the state.[12] This study, which was produced for the Food Marketing Institute by Dr. Vincenzina Caputo, an

[10] *Daily Report of Taxes Collected,* Oklahoma Tax Commission, at: https://oktap.tax.ok.gov/OkTAP/Web/_/#15
[11] *Liquor Excise Taxes,* Colorado Department of Revenue, at: https://www.colorado.gov/pacific/revenue/colorado-liquor-excise-taxes
[12] Caputo, Vincenzina, *Assessing the Impact of Wine Sale Reform: A Case Study of Tennessee*, prepared for the Food Marketing Institute, undated.

academic economist, used a modeling methodology called a Synthetic Control Method. In effect, this method creates a baseline control state using data from those other states that are statistically most like Tennessee and compares data over time against what happened in the state. The model assumes that the artificial control state would behave like Tennessee if the regulatory change were not to have taken place. According to Dr. Caputo, *This methodological approach ensures a more robust evaluation of policy interventions with limited samples*.[13]

According to this analysis, the number of liquor stores selling wine in Tennessee grew from 505 in 2004 to 728 in 2019; however, Tennessee had 10.29 fewer liquor stores per capita (per million people) selling wine in the post-reform period from 2016 to 2019 than was predicted by the model. This result was not statistically significant, meaning that one could not interpret this decrease from the baseline as meaningful. Dr. Caputo also examined wine sales tax revenues using the same methodology. She found that following the reform Tennessee experienced a significant 23 percent surge in wine sales taxes relative to the base case meaning Tennessee's expansion of wine sales to retail food stores led to a statistically significant increase in state wine sales tax volume and, consequently, increased tax revenues overall.

Therefore, in all four of the recent cases where states rationalized their off-premise beer and/or wine sales restrictions, they experienced more economic activity and an overall increase in sales and tax revenues.

Maryland's Beverage Alcohol Environment

According to the Food Marketing Institute, consumers average 1.6 trips to the supermarket per week. This has remained fairly constant over the past 10 years in spite of the COVID-19 shutdown of the economy, and the growth in online retailing.[14] Maryland's restrictions limit taxable sales at food retailers and cost the state jobs and tax revenues.

According to the most recent comparative analysis of beverage alcohol sales volumes across states, Maryland ranks right in the middle (26th) in total gallonage of alcohol, and 19th in wine gallonage sold.[15] However, on a per adult basis, businesses in Maryland ranks at the bottom of the list (50th) in beverage alcohol sales, and 26th in wine sales.[16]

This compares to border states that include Delaware, Pennsylvania, West Virginia, Virginia, and the District of Columbia, which rank 4th, 35th, 14th, 51st and 1st in wine sales per adult respectively. This suggests that there is much more involved in the demand for wine than simply the availability at grocery stores, however, as the analysis below shows, this is an important factor.

It is also important to note that all of the border states save for Delaware are *control jurisdictions*, all of which have state-controlled alcohol wholesaling and/or retailing. The District of Columbia does allow for a market system of alcohol wholesaling and retailing, but levies some of the highest taxes on beverage alcohol products in the country.

Other restrictions in Maryland include:

- A control system in Montgomery County that allows only state stores to sell spirits for off-premise consumption. Retailers can be licensed to sell beer and table wines, but these must generally be purchased from the county's Department of Alcohol Beverage Services.

[13] Ibid.
[14] 2024 figures. See: https://www.fmi.org/our-research/research-reports/u-s-grocery-shopper-trends
[15] 2022 Estimates, John Dunham & Associates.
[16] *Annual Estimates of the Civilian Population by Single Year of Age and Sex for the United States and States: April 1, 2020 to July 1*, 2023 (SC-EST2023-AGESEX-CIV) https://www.census.gov/data/datasets/time-series/demo/popest/2020s-state-detail.html

- Sunday sales restrictions vary by county, and several counties, including those with large populations such as Prince George's and Baltimore counties prohibit Sunday sales.

- Retail licensing at the county level with no central location to locate or track the number of retailers authorized in a given community.

- Varied provisions regulating the sale and serving of alcoholic beverages. In some locations servers must be 21, while in others those as young as 15 (or even younger if they are a family member of the license holder) may serve alcoholic beverages from behind a bar.

One thing is certain, while Maryland's diffuse system of control of beverage alcohol sales and regulations does allow for more local control, it does make it difficult for the state's businesses, consumers, and visitors to navigate. This makes it less efficient, and more expensive, to sell beverage alcohol products in the state. Based on the following analysis of the Maryland retail economy, allowing beer and wine to be sold in additional food retailers (as is allowed in 39 states) would increase overall alcohol sales in Maryland by $214.4 million resulting in 754 net additional retail jobs and $31.6 million in increased tax revenues.[17]

Beverage Alcohol Retailing in Maryland

The regulations and licensing governing firms involved in selling alcoholic products are handled primarily by county governments in Maryland, and comprehensive data are not available. The Maryland Alcohol, Tobacco and Cannabis Commission does provide an annual count of licenses for most of the counties, although the latest data are from 2023. This includes the number of licenses for retailers that sell for consumption on-premise, including in taverns, restaurants, and brewpubs as well as licenses for sale for off-premise consumption. These licenses also differentiate the types of products permitted for sale by businesses, separating stores based on their sales of beer, wine, and/or spirits. More limited current data for Anne Arundel and Montgomery County can be found on those jurisdictions' web sites, but data for Calvert, Dorchester, Sommerset and Wicomico counties are not generally available.

JDA searched the Anne Arundel and Montgomery County data to determine how many off-premise retailers there were in each of these jurisdictions. This involved matching facilities with the 2020 data, locating the facilities in the Data Axle data and marking them appropriately, or as a last resort, searching for the facilities on Google Maps to determine if they were a package store or grocery store allowed to sell alcohol.

For the four counties with missing data, FY 2021 license counts from the Maryland Alcohol, Tobacco and Cannabis Commission were either inflated or deflated by the population weighted average change for known counties with a population of under 150,000. The four counties all have populations of less than 125,000 individuals. While this is not an exact estimate of the number of alcohol retailers in each of these counties, it does provide a solid method to estimate these figures.

Based on this analysis as of December 2023, a total of 1,277 retailers in Maryland had been authorized to sell liquor, wine and beer, and 369 additional stores had also been licensed to sell beer and/or wine in certain counties. These retail establishments range in size from large supermarkets to small local delis and convenience stores. These stores exist throughout the state, with the largest number located in Montgomery County, where the control retail system is managed by the Alcohol Beverage Services Department. This control system dramatically limits the number of package stores in the county to just 27 government-controlled establishments. Other counties with a significant number of retailers allowed to sell beer and/or wine include Frederick, Wicomico and Worcester. Table 3 on the following page shows the number of retailers by county.

[17] This is even after offsetting any sales that might be lost to current package store sellers.

Table 3
Off-Premise Alcohol Retail Licenses by County and Independent City in Maryland

County	Package	Beer and Wine	Beer	Total
Allegany MD	84	8	-	92
Annapolis City MD	13	3	1	17
Anne Arundel MD	108	-	-	108
Baltimore City MD	171	16	-	187
Baltimore MD	199	6	-	205
Calvert MD**	31	7	-	38
Caroline MD	18	5	3	26
Carroll MD	39	1	-	40
Cecil MD	24	3	-	27
Charles MD	27	-	-	27
Dorchester MD**	16	17	15	47
Frederick MD	64	36	5	105
Garrett MD	39	4	1	44
Harford MD	49	5	-	54
Howard MD	66	-	-	66
Kent MD	15	5	-	20
Montgomery MD*	45	100	-	145
Prince George's MD	140	1	-	141
Queen Anne's MD	21	10	2	33
Somerset MD**	-	9	1	10
St. Mary's MD	41	4	1	46
Talbot MD	16	8	-	24
Washington MD	40	2	1	43
Wicomico MD**	3	40	3	46
Worcester MD	8	47	-	55
Total	1,277	336	33	1,646

* 2024 Data from Montgomery County and Anne Arundel County

** Estimated. No Data Available

Based on data from the State, beer and wine sales have not recovered from the COVID-19 shutdowns. Prior to the shutdowns in the winter of 2019, the state was collecting nearly $15.0 million per year in excise taxes on beer and wine sales. Following the shutdowns, this had fallen to about $13.0 million annually.[18] (Table 4)

Table 4
Beverage Alcohol Excise Tax Collections in Maryland

Product	2017	2018	2019	2020	2021	2022	2023
Beer	$ 8,361,000	$ 8,201,000	$ 8,354,000	$ 6,882,000	$ 7,582,592	$ 7,324,602	$ 7,140,423
Wine	$ 6,891,000	$ 6,473,000	$ 6,374,000	$ 4,824,000	$ 6,198,003	$ 5,647,094	$ 5,972,527
Subtotal	$ 15,252,000	$ 14,674,000	$ 14,728,000	$ 11,706,000	$ 13,780,595	$ 12,971,696	$ 13,112,950
Spirits	$ 16,899,000	$ 17,007,000	$ 17,437,000	$ 12,743,000	$ 21,078,446	$ 21,078,446	$ 19,810,208
Total	$ 32,151,000	$ 31,681,000	$ 32,165,000	$ 24,449,000	$ 34,859,041	$ 34,050,142	$ 32,923,158

Spirits sales, on the other hand, recovered sharply after the COVID-19 shutdowns. This is partly due to the shift in consumer preferences toward spirits and spirits-based products, and away from wine. These types of shifts happen regularly in the beverage alcohol industry and reflect changes in demographic patterns in and between states. In addition, the number of retail licenses granting the privilege to sell either beer or beer and wine has been falling in Maryland, while package store licenses have increased.[19]

The Economic Impact of Beverage Alcohol Retailing in Maryland

In order to estimate the impact of allowing for expanded beer and wine sales in various types of retailers, it's important to understand the current market. This section compares the number of jobs in package

[18] *Proposed (FY 2025) Budget Documents*, State of Maryland, Department of Management and Budget, at: https://dbm.maryland.gov/budget/Pages/operbudhome.aspx

[19] *Annual Report*, Maryland Alcohol, Tobacco, and Cannabis Commission, various years, at: https://atcc.maryland.gov/resources/publications/#annual-reports and JDA estimates.

stores (including other retail locations that currently are allowed to sell beer and wine), and retail locations likely to acquire an off-premise beer and wine license should it become available, including convenience stores, grocery stores, large supermarkets, and warehouse clubs.

Table 5
Off Premise Alcohol Licenses by Type

Fiscal Year	Package	Beer and Wine	Wine Only	Beer Only	Total	Pct Package
2019	1,076	415	-	36	1,527	70.5%
2021	1,077	376	47	37	1,537	70.1%
2022	1,077	408	-	34	1,519	70.9%
2023/2024 (est.)	1,277	336	-	33	1,646	77.6%

With only limited data on the number of alcohol licenses by county, it is not possible to use government data to differentiate between licensees in terms of size and employment. Detailed data on businesses able to obtain liquor licenses in Maryland were gathered from a detailed business database maintained by Data Axle.[20] These data provide not only information on the address of businesses in the United States, but also on their classification, full-time equivalent employment and estimates of sales. The Data Axle data were matched to the license counts in the different counties, and also used to estimate the total number of licensed retailers in those counties lacking data.

Table 6
Current and Potential Off-Premise Beverage Alcohol Retailers in Maryland

		Stores	Jobs	Jobs/Store
Stores Currently Selling Alcohol	Beer, Wine, Spirits	1,277	6,081	4.76
	Beer and/or Wine	369	2,133	5.78
Potential Off-Premise Alcohol Retailers	Convenience Stores	2,546	12,077	4.74
	Variety Stores	543	4,898	9.02
	Grocery Stores	1,272	22,932	18.03
	Supermarkets and Sup	475	44,254	93.17
	Warehouse Clubs	39	6,766	173.49

Based on these data, package stores in Maryland tend to be small businesses, though there are retailers with as many as 50 jobs. Among the small number of food retailers that are licensed to sell beer and wine are a handful of supermarkets and grocery stores, as well as a large number of smaller corner convenience stores. Combining data from the Federal government's Supplemental Nutrition Assistant Program (SNAP) and the Infogroup database, gives a list of food retailers in the state, including their location, type, and employment levels. There are about 4,875 food retailers in the Old Line State.

Table 6 shows the current number of licensed stores (and their associated employment) as well as the number of food stores that could be licensed to sell wine and spirits under an expansion of the licensing regime.

Overall, food retailers in Maryland provide over 90,900 full-time equivalent jobs, paying almost $3.9 billion in wages and benefits. In addition, more than 18,650 jobs are generated in Maryland based firms that supply grocery retailers with services and equipment that they need to operate like shelving, electricity, or accounting services.[21] The re-spending of wages received by the 90,927 food retail

[20] Data Axle is the leading provider of business and consumer data for the top search engines and leading in-car navigation systems in North America. Data Axle gathers data from a variety of sources, by sourcing, refining, matching, appending, filtering, and delivering the best quality data. The company verifies its data at the rate of almost 100,000 phone calls per day to ensure absolute accuracy. Where jobs are not available, median job numbers were used.

[21] Note that this does not include jobs in companies that provide the products that are sold in the stores like meat, vegetables or milk.

employees and the 18,652 people working in supplier firms generates an additional 19,320 jobs in the Maryland economy.[22]

Table 7
Economic Impact of the Food Retailing Industry in Maryland

	Direct	Supplier	Induced	Total
Jobs	90,927	18,652	19,321	128,899
Wages	$ 3,857,834,658	$ 1,158,222,457	$ 1,156,062,486	$ 6,172,119,601
Economic Output	$ 8,956,106,125	$ 3,709,528,417	$ 3,586,525,132	$ 16,252,159,674
Federal Taxes				$ 1,497,746,923
State and Local Taxes				$ 1,566,870,746

All told, the grocery retailing industry creates nearly $16.3 billion in economic activity in the state and generates close to $1.6 billion in various state and local taxes (not including excise and sales taxes on the products sold to consumers). Table 8 outlines the overall economic impact of the grocery industry in the state.[23]

Table 8
Economic Impact of the Off-Premise Alcohol Retailing Industry in Maryland
Including Jobs from Alcohol Sales from Food Retailers Licensed to Sell Beer and Wine

	Direct	Supplier	Induced	Total
Jobs	8,214	1,674	1,747	11,635
Wages	$ 350,066,728	$ 102,924,175	$ 104,537,077	$ 557,527,980
Economic Output	$ 801,431,184	$ 333,247,460	$ 324,307,534	$ 1,458,986,179
Federal Taxes				$ 135,053,122
State and Local Taxes				$ 136,106,695

While grocery retailers are responsible for over 90,900 full-time equivalent jobs in Maryland, the off-premise alcohol retailing industry is much smaller. The 1,646 stores in the state employ about 8,210 full-time equivalent workers and pay just under $350.1 million in wages and benefits.[24] In total, about 11,635 full-time equivalent positions in the state are dependent on off-premise alcohol sales. These stores generate just under $1.46 billion in economic activity and drive about $136.1 million in state and local taxes (again not including sales and excise taxes on the products which are directly paid by consumers).

Measuring Potential Additional Sales from Expanded Food Retailers Licensure

While it is impossible to know which of Maryland's 4,875 food retailers that do not currently sell beer or wine would purchase licenses were the state to open up the sale of beer and wine by food retailers, the effect this change would have on the industry, and thus the state and local economies, can be estimated using data from other jurisdictions where similar proposals were implemented.

The current volume and dollar sales of beer, wine and spirits in Maryland can be calculated by multiplying the average prices by the volume data shown in Table 9 on the following page.

These numbers represent the current sales of beer and wine by package stores and other retailers currently licensed to sell these products in Maryland. A mathematical model is used to derive the impact of a

[22] Often economic impact studies present results with very large multipliers – as high as 4 or 5. These studies invariably include the firms supplying the supplier industries as part of the induced impact. John Dunham & Associates believes that this is not an appropriate definition of the induced impact and as such limits this calculation to only the effect of spending by direct and supplier employees. Multipliers have fallen dramatically throughout the economy over the past few years reflecting stagnant income levels, higher levels of saving, and lower levels of spending.

[23] Detailed data by state legislative district can be found in the Appendix.

[24] Job numbers are from Data Axle. Where jobs are not available estimated using median job numbers.

modernization of the sales restrictions on overall beverage alcohol sales, and specifically which of these sales will transfer to food retailers. This model examines those states that have passed measures reducing restrictions on food retailers selling alcohol, in order to predict the percent change that will occur to alcohol sales if Maryland implements similar measures. Table 10 presents the output of seasonally adjusted semi-logarithmic regression models to measure such changes based on monthly sales data in both Colorado and Oklahoma.[25]

Table 9
Beer and Wine Sales in Maryland

Product Volume (Gallons)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	% Change (2019-2023)
Spirits	10,954,279	11,011,704	10,954,279	13,407,515	14,815,694	35.3%
Wine	14,612,595	15,177,445	14,612,595	21,712,470	13,412,884	-8.2%
Beer	83,385,796	80,665,552	83,385,796	75,565,191	76,228,083	-8.6%
Total	108,952,670	106,854,701	108,952,670	110,685,176	104,456,661	-4.1%

Off Premise Share (%)	FY 2019	FY 2020	FY 2021*	FY 2022	FY 2023	% Change (2019-2023)
Spirits	71%	68%	76%	84%	87%	22%
Wine	79%	73%	75%	77%	80%	1%
Beer	77%	77%	78%	80%	82%	8%

Product Price (Gallon)	FY 2019	FY 2020	FY 2021*	FY 2022	FY 2023	% Change (2019-2023)
Spirits	$ 92.34	$ 79.26	$ 79.28	$ 79.30	$ 81.66	-11.6%
Wine	$ 69.55	$ 76.26	$ 76.28	$ 76.30	$ 78.57	13.0%
Beer	$ 18.07	$ 19.65	$ 23.67	$ 27.70	$ 28.52	57.9%

Product Sales ($)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	% Change (2019-2023)
Spirits	$ 720,184,525	$ 591,027,439	$ 660,769,532	$ 897,932,332	$ 1,052,055,723	46.1%
Wine	$ 800,651,609	$ 844,567,890	$ 837,291,161	$ 1,280,019,322	$ 838,399,264	4.7%
Beer	$ 1,153,095,727	$ 1,213,083,718	$ 1,545,246,712	$ 1,674,824,242	$ 1,791,364,146	55.4%
Total	$ 2,673,931,861	$ 2,648,679,046	$ 3,043,307,406	$ 3,852,775,896	$ 3,681,819,132	37.7%

Using monthly data collected on employment in package stores in Oklahoma beginning in 2017, and on gallons of product sales in Colorado beginning in from Colorado, models were developed to understand how policy changes impacted both employment in alcohol retailing and sales of beer and wine products.

Table 10
Regression Outputs Measuring Impact of Policy Changes in Colorado and Oklahoma

Percent Effect on Package Store Employment

Variable Name	Coeffecient	P-Value	Signficance
Year	0.52%	0.30	Not significant
Policy Change	-4.43%	0.00	Dummy
COVID	3.35%	0.10	Dummy
January	0.00%	N/A	Dummy
February	-1.65%	N/A	Dummy
March	-1.63%	0.42	Dummy
April	-3.68%	0.08	Dummy
May	-2.02%	0.32	Dummy
June	0.07%	0.97	Dummy
July	-0.07%	0.97	Dummy
August	0.36%	0.85	Dummy
September	1.74%	0.35	Dummy
October	2.97%	0.12	Dummy
November	3.43%	0.08	Dummy
December	3.09%	0.11	Dummy
Model F Statistic:	2.675	R2:	0.496
Model Signficance:	0.990	Adjusted R2:	0.284

Percent Effect on Sales Volume (Beer)

Variable Name	Coeffecient	P-Value	Signficance
Year	-0.80%	0.02	0.97
COVID	-3.64%	0.21	Dummy
Beer	7.84%	0.00	0.99
January	-19.37%	0.00	Dummy
February	-24.01%	0.00	Dummy
March	-7.09%	0.01	Dummy
April	-6.10%	0.02	Dummy
May	7.35%	0.00	Dummy
June	17.00%	0.00	Dummy
July	8.99%	0.00	Dummy
August	16.92%	0.00	Dummy
September	0.00%	N/A	N/A
October	-6.51%	N/A	N/A
November	-10.05%	0.00	Dummy
December	-12.34%	0.00	Dummy
Model F Statistic:	49.5004	R^2:	0.8862
Model Signficance:	0.99	Adjusted R^2:	0.8571

Percent Effect on Sales Volume (Wine)

Variable Name	Coeffecient	P-Value	Signficance
Year	0.05%	0.91	Not significant
COVID	-8.96%	0.05	Dummy
Wine	-0.41%	0.89	Not significant
Jan	-45.48%	0.00	Dummy
Feb	-22.43%	0.00	Dummy
Mar	-15.90%	0.00	Dummy
Apr	-28.91%	0.00	Dummy
May	-28.06%	0.00	Dummy
Jun	-13.56%	0.00	Dummy
Jul	-26.16%	0.00	Dummy
Aug	-13.62%	0.00	Dummy
Sep	-29.67%	0.00	Dummy
Oct	-18.56%	0.00	Dummy
Nov	-9.17%	0.03	Dummy
Dec	0.00%	N/A	N/A
Model F Statistic:	13.1820	R2:	0.6746
Model Signficance:	0.99	Adjusted R2:	0.6122

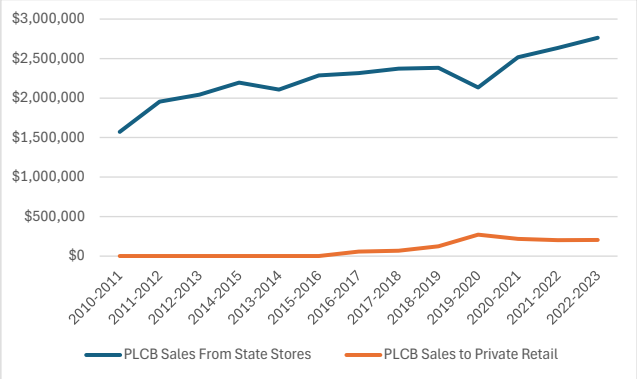
These results are then applied to Maryland to develop estimates of how changes in rules to allow more beer and wine sales in food retailers would impact the state. Data for Pennsylvania were not used as monthly statistics were not available, and because that state still maintains control of wholesaling through

[25] Note that Pennsylvania only releases annual data.

its state-owned retailers. Even so, the annual data suggests that allowing private retailers to sell wine and beer has not impacted the PLCB's own retail sales through state stores. In fact, the only decline in sales occurred during the COVID-19 pandemic, when the governor of the Commonwealth shut down state owned wine and spirits stores.

The regression models show that, despite beer and wine sales constituting a core part of package store's business, there is expected to be only a 4.4 percent decline in employment in that sector following a change in regulations that would allow for the sale of beer and wine in grocery stores.[26]

Figure 4
Sales of Wine and Spirits in Pennsylvania



These job losses in package stores would more than be made up through increased employment at food retailers, which would now be able to sell beer and wine. Based on the averages from what happened in Colorado when these retailers were first able to sell beer, and later began to sell wine, overall beer sales increased dramatically, up by about 7.8 percent. Sales of wine remained fairly constant, down by about 0.4 percent overall, however, that value was not statistically significant and may likely be more representative of the secular decline in wine sales nationally. Together, these changes would result in a net increase in beer and wine sales of about 7.5 percent, with this coming from food retailers that would now be able to offer these products. Table 11 below outlines the estimated net impact in Maryland were similar rules to be adopted in the state.

Table 11
Estimated Change in Off-Premise Beverage Alcohol Sales in Maryland

	Beer	Wine	Total
Food Retailer Sales	$ 305,174,778	$ 12,724,741	$ 317,899,518
"Cannibalized" Package Store Sales	$ (99,404,084)	$ (4,144,809)	$ (103,548,893)
Net Change in Sales	$ 205,770,693	$ 8,579,932	$ 214,350,625

Multiplying the sales figures in Table 11 by the rates from the regression models, provides an estimate of additional sales of about $317.9 million for food retailers, with an associated $103.5 million decline in sales for current retailers of alcohol, netting $214.4 million in additional sales for retailers across the state of Maryland. In volume terms, the net sales increase in Maryland is estimated to be 63.4 million additional bottles of beer and about 567,500 bottles of wine. (See Table 12 on the following page.)

A second model, generated using beer and wine excise tax collection data collected from the Colorado Department of Revenue and the Oklahoma Taxpayer Access Point, demonstrates that, while there is a small decline in employment in package liquor store employment following the passage of these laws,

[26] *Quarterly Census of Employment and Wages*, US Department of Labor, Bureau of Labor Statistics, at: https://www.bls.gov/cew/

there is a significant 7.5 percent increase in overall sales of beer and wine in these states.[27,28] This is similar to the growth in sales and tax revenues in other states that have rationalized their alcohol sales restrictions.

It should be noted that the sales lost by package stores are calculated in volume terms. It is impossible to know exactly how an individual store will react to the increased competition from grocery type retail stores selling beverage alcohol. It is possible that some package stores will go out of business, while on the other hand some may actually expand. When supermarkets began selling beer in Pennsylvania, the existing beer retailers worried that they would be devastated by the competition. This proved to be unfounded, and as the Pennsylvania Supreme Court commented, 3 years after the change went into effect, the number of active beer distributor licenses has remained steady since 2007 (when grocery stores began selling beer), despite the fact that 117 new grocery store/café licenses have been granted during that period of time.[29]

Table 12
Estimated Effect of Proposal on Beer and Wine Sales by Volume, Sales and Excise Tax Collection

	Net Volume Increase (gallons)	Net Volume Increase (bottles)	Net Sales Increase	Net Tax Increase
Beer Sales	5,944,001	63,402,681	$ 205,770,693	17,641,916
Wine Sales	112,450	567,559	$ 8,579,932	$ 753,035
Total Impcat	6,056,451	63,970,240	$ 214,350,625	$ 18,394,950

Potential Additional Tax Revenues from Additional Alcohol Sales

The higher sales volumes will come from three sources. First, and most importantly, some Maryland consumers purchase wine and spirits from retailers located outside of the state, thereby avoiding paying Maryland state excise and sales taxes. Some of these tax-avoiding sales may come home to Maryland retailers from these other jurisdictions. In addition, by opening up the market to more retailers, the state will make it more convenient for shoppers to purchase wine and spirits. Since the time involved in shopping constitutes a "cost" for consumers, this convenience factor should not be overlooked. By making it easier to purchase wine and spirits, the State will be in effect reducing the overall cost of these products, and as with all normal goods, lower costs equate to higher sales. Finally, more competition will lead to lower costs and greater variety as supermarkets and other food retailers will compete with local package stores mainly in the lower end of the market. As Table 11 shows, these three factors together should increase overall beer sales by 63.4 million 12 oz bottles (or 3.2 bottles per adult in the state), and wine sales by 567,560 750 ml bottles (or 0.03 bottles per adult).[30]

Table 13
Estimated New Revenue from Wine Sales in Food Retailers

Revenue Source	From Beer	From Wine	Total
Sales Taxes	$ 16,979,736	$ 708,055	$ 17,687,791
Excise Taxes	$ 662,179	$ 44,980	$ 707,159
Corporate Taxes	$ 12,459,218	$ 516,615	$ 12,975,834

Since Maryland's excise taxes on beer and wine are based on volumes, and sales taxes are based on overall dollar sales, these increased taxable sales will increase overall state revenues. Overall, the state of Maryland should see a net increase of about $30.3 million in new taxes from beer sales and $1.3 million from wine sales (this is net of any lost sales from package stores). Total revenue for the state can be expected to increase by up to $31.6 million.

27 Colorado Department of Revenue, Liquor Excise Taxes, https://www.colorado.gov/pacific/revenue/colorado-liquor-excise-taxes
28 *Daily Report of Taxes Collected*, Oklahoma Tax Commission, at: https://oktap.tax.ok.gov/OkTAP/Web/_/#15
29 Malt. Beverages. Distributors. Ass'n. v. PA Liquor Control Board, 8 A. 3d 885 (Pa. 2010) ("Wegmans").
30 Op. cit. Footnote 12.

Economic Impact of Additional Alcohol Sales

The change in sales volumes can be used to estimate the larger impact on jobs, wages, and the Maryland economy using IMPLAN, an input-output analysis model designed for performing impact analyses.[31] As Table 14 on the following page shows, JDA estimates that 753 new jobs (on net) would be directly created in the retailing sectors as a result of the change in sales, with supermarkets gaining about 1,117 jobs and package stores losing 364 jobs. The bulk of the impact would come from shifts in beer sales from package stores to food retailers.

Table 14
Estimated Direct Economic Impact in Terms of Jobs

	Food Retailers	Package Stores	Total
Jobs from Beer Sales	1,073	(349)	723
Jobs from Wine Sales	45	(15)	30
Total Job Change	1,117	(364)	753

These new retail jobs will also create new economic activity from supplier jobs in the state. In addition to the 753 new jobs created in retailing locations, this loosening of sales restrictions will create 154 additional jobs in firms that supply those retailers with the goods and services that they need to operate, and an additional 160 full-time equivalent jobs will be created throughout the state as a result of the re-spending of employee wages. All told, workers in Maryland will receive over $51.1 million in additional wages and benefits as a result of this change and the state economy will grow by $134.6 million.

In addition to the $18.4 million in on-going additional revenues that the State would receive from excise and sales taxes paid by consumers, state and local governments will receive nearly $13.0 million in additional business and personal tax revenues (for example property taxes, income taxes, gasoline excise taxes) resulting from the increased employment and economic activity.

Table 15
Estimated Economic Impact from Change

	Direct	Supplier	Induced	Total
Jobs	753	154	160	1,067
Wages	$31,948,151	$9,591,667	$9,573,780	$51,113,597
Economic Output	$74,168,816	$30,719,972	$29,701,337	$134,590,124
Federal Taxes				$12,403,394
State and Local Taxes				$12,975,834

Conclusions

In the past, Maryland allowed food retailers such as supermarkets to sell beverage alcohol products. This convenience to the state's consumers was ended in 1978 when the state adopted regulations designed to protect package stores from competition. Maryland has an opportunity to abolish this anti-consumer policy and create a "win-win" scenario by opening up beer and wine sales to more food retailers. Not only will these retailers earn new revenues with which to hire new workers, but consumers gain convenience and greater access to lower-priced products. All told, as many as 753 new jobs could be created at Maryland retailers simply by eliminating these prohibition era restrictions. All told, nearly 1,070 full-time-equivalent jobs would be created.

[31] IMPLAN® model, 2022 Data, using inputs provided by the user and IMPLAN Group LLC, IMPLAN System (2024), 16905 Northcross Dr., Suite 120, Huntersville, NC 28078, www.IMPLAN.com.

On top of the economic benefits, the State of Maryland could benefit from additional tax revenues. It is not often that state revenues can increase without legislatively increasing tax rates, but in this case, constituents would be happy to pay taxes as they are receiving the benefit of increased convenience and lower overall costs to purchase products that they would buy normally. It is estimated that Maryland and its localities could receive as much as $13.0 million in new tax revenue as a result of this regulatory change.

While some jobs will be lost in the package store business, these losses will be more than offset by new jobs at food retailers, netting tens of millions of dollars in wages and tax revenue for the people and state of Maryland.

Table 16
Economic Impact of Package Stores by State Senate District

	Direct			Multiplier			Total		
	Jobs	Wages	Output	Jobs	Wages	Output	Jobs	Wages	Output
MD 1	187	$ 7,988,984	$ 18,289,715	131	$ 8,469,897	$ 23,562,173	318	$ 16,458,881	$ 41,851,888
MD 2	199	$ 8,471,834	$ 19,395,137	71	$ 4,413,346	$ 12,869,466	270	$ 12,885,181	$ 32,264,603
MD 3	224	$ 9,547,274	$ 21,857,214	6	$ 339,760	$ 1,054,368	230	$ 9,887,034	$ 22,911,582
MD 4	152	$ 6,496,536	$ 14,872,955	82	$ 4,972,264	$ 15,256,892	234	$ 11,468,800	$ 30,129,847
MD 5	170	$ 7,242,760	$ 16,581,335	22	$ 1,228,078	$ 3,500,937	192	$ 8,470,838	$ 20,082,272
MD 6	127	$ 5,399,148	$ 12,360,631	126	$ 9,300,392	$ 28,822,649	253	$ 14,699,540	$ 41,183,281
MD 7	119	$ 5,091,880	$ 11,657,181	78	$ 5,163,716	$ 13,711,633	197	$ 10,255,596	$ 25,368,813
MD 8	218	$ 9,305,849	$ 21,304,503	61	$ 4,008,254	$ 10,366,620	280	$ 13,314,103	$ 31,671,123
MD 9	141	$ 6,013,685	$ 13,767,533	71	$ 4,106,975	$ 12,228,231	212	$ 10,120,661	$ 25,995,763
MD 10	89	$ 3,775,014	$ 8,642,393	81	$ 4,776,212	$ 13,841,325	169	$ 8,551,226	$ 22,483,718
MD 11	230	$ 9,788,700	$ 22,409,925	32	$ 1,894,303	$ 5,722,804	262	$ 11,683,002	$ 28,132,729
MD 12	217	$ 9,261,954	$ 21,204,010	44	$ 2,680,600	$ 7,427,168	261	$ 11,942,554	$ 28,631,179
MD 13	116	$ 4,960,193	$ 11,355,702	66	$ 3,764,338	$ 10,555,779	183	$ 8,724,532	$ 21,911,481
MD 14	122	$ 5,179,671	$ 11,858,167	31	$ 1,938,656	$ 5,572,525	153	$ 7,118,327	$ 17,430,692
MD 15	73	$ 3,094,634	$ 7,084,752	28	$ 1,590,241	$ 4,778,046	101	$ 4,684,874	$ 11,862,798
MD 16	129	$ 5,508,887	$ 12,611,864	157	$ 9,638,703	$ 32,824,515	286	$ 15,147,590	$ 45,436,379
MD 17	184	$ 7,835,349	$ 17,937,990	192	$ 12,056,256	$ 38,888,695	375	$ 19,891,606	$ 56,826,685
MD 18	99	$ 4,235,917	$ 9,697,569	53	$ 3,065,922	$ 9,208,435	152	$ 7,301,839	$ 18,906,004
MD 19	62	$ 2,633,731	$ 6,029,576	47	$ 2,823,899	$ 8,379,211	109	$ 5,457,630	$ 14,408,787
MD 20	149	$ 6,342,902	$ 14,521,230	65	$ 3,962,770	$ 10,407,582	214	$ 10,305,672	$ 24,928,812
MD 21	191	$ 8,120,670	$ 18,591,194	117	$ 6,414,285	$ 17,964,109	307	$ 14,534,956	$ 36,555,302
MD 22	186	$ 7,945,088	$ 18,189,222	70	$ 3,699,479	$ 10,203,139	257	$ 11,644,567	$ 28,392,361
MD 23	111	$ 4,740,716	$ 10,853,237	17	$ 927,722	$ 2,677,373	129	$ 5,668,437	$ 13,530,611
MD 24	162	$ 6,913,544	$ 15,827,638	44	$ 2,895,055	$ 9,354,198	207	$ 9,808,599	$ 25,181,836
MD 25	190	$ 8,076,775	$ 18,490,701	65	$ 3,681,086	$ 11,158,682	255	$ 11,757,861	$ 29,649,383
MD 26	103	$ 4,389,551	$ 10,049,294	23	$ 1,324,407	$ 4,095,085	126	$ 5,713,959	$ 14,144,379
MD 27	198	$ 8,427,939	$ 19,294,644	94	$ 5,333,335	$ 14,654,078	292	$ 13,761,274	$ 33,948,723
MD 28	172	$ 7,330,551	$ 16,782,321	116	$ 6,465,612	$ 19,018,743	288	$ 13,796,163	$ 35,801,064
MD 29	215	$ 9,174,163	$ 21,003,024	91	$ 5,419,479	$ 16,769,173	306	$ 14,593,641	$ 37,772,197
MD 30	255	$ 10,886,088	$ 24,922,249	47	$ 2,495,514	$ 6,738,891	302	$ 13,381,602	$ 31,661,140
MD 31	98	$ 4,170,074	$ 9,546,829	19	$ 1,113,903	$ 3,111,607	117	$ 5,283,977	$ 12,658,436
MD 32	160	$ 6,803,805	$ 15,576,405	117	$ 7,000,195	$ 21,170,009	277	$ 13,804,000	$ 36,746,414
MD 33	132	$ 5,618,626	$ 12,863,096	55	$ 2,974,871	$ 8,632,633	187	$ 8,593,497	$ 21,495,729
MD 34	200	$ 8,515,730	$ 19,495,630	74	$ 4,491,681	$ 13,531,365	273	$ 13,007,411	$ 33,026,995
MD 35	110	$ 4,696,820	$ 10,752,744	27	$ 1,650,109	$ 4,629,124	138	$ 6,346,929	$ 15,381,868
MD 36	363	$ 15,451,221	$ 35,373,514	23	$ 1,325,072	$ 3,719,308	386	$ 16,776,293	$ 39,092,823
MD 37	421	$ 17,931,318	$ 41,051,365	87	$ 5,826,193	$ 18,308,376	508	$ 23,757,510	$ 59,359,742
MD 38	534	$ 22,759,824	$ 52,105,589	109	$ 6,325,249	$ 18,502,102	643	$ 29,085,073	$ 70,607,691
MD 39	90	$ 3,840,858	$ 8,793,132	35	$ 2,089,538	$ 6,242,572	125	$ 5,930,395	$ 15,035,704
MD 40	312	$ 13,278,393	$ 30,399,114	48	$ 3,143,644	$ 8,711,585	360	$ 16,422,037	$ 39,110,699
MD 41	138	$ 5,881,999	$ 13,466,054	14	$ 793,465	$ 2,776,649	152	$ 6,675,464	$ 16,242,702
MD 42	73	$ 3,094,634	$ 7,084,752	129	$ 8,184,913	$ 25,422,745	202	$ 11,279,547	$ 32,507,497
MD 43	142	$ 6,035,633	$ 13,817,779	95	$ 5,837,804	$ 14,729,096	237	$ 11,873,438	$ 28,546,875
MD 44	163	$ 6,935,491	$ 15,877,884	64	$ 3,627,697	$ 9,522,293	227	$ 10,563,189	$ 25,400,177
MD 45	155	$ 6,606,275	$ 15,124,187	54	$ 3,077,622	$ 8,996,109	209	$ 9,683,897	$ 24,120,296
MD 46	213	$ 9,086,371	$ 20,802,038	293	$ 16,309,079	$ 45,299,832	506	$ 25,395,451	$ 66,101,870
MD 47	122	$ 5,179,671	$ 11,858,167	14	$ 801,895	$ 1,998,473	136	$ 5,981,566	$ 13,856,640
Total	8,214	$ 350,066,728	$ 801,431,184	3,387	$ 203,423,489	$ 596,916,403	11,601	$ 553,490,217	$ 1,398,347,588

Table 17
Economic Impact of Package Stores by State Delegate District

	Direct			Multiplier			Total		
	Jobs	Wages	Output	Jobs	Wages	Output	Jobs	Wages	Output
MD 1A	87	$ 3,687,223	$ 8,441,407	27	$ 1,400,857	$ 3,676,960	114	$ 5,088,080	$ 12,118,367
MD 1B	51	$ 2,194,776	$ 5,024,647	2	$ 106,127	$ 337,298	53	$ 2,300,903	$ 5,361,945
MD 1C	49	$ 2,106,985	$ 4,823,661	30	$ 1,862,899	$ 5,642,318	79	$ 3,969,884	$ 10,465,979
MD 2A	88	$ 3,731,119	$ 8,541,900	33	$ 1,976,467	$ 5,979,060	120	$ 5,707,586	$ 14,520,960
MD 2B	111	$ 4,740,716	$ 10,853,237	223	$ 13,518,051	$ 39,426,364	334	$ 18,258,766	$ 50,279,601
MD 3	224	$ 9,547,274	$ 21,857,214	15	$ 863,358	$ 2,701,315	239	$ 10,410,632	$ 24,558,529
MD 4	152	$ 6,496,536	$ 14,872,955	131	$ 8,769,778	$ 24,861,769	283	$ 15,266,314	$ 39,734,724
MD 5	170	$ 7,242,760	$ 16,581,335	30	$ 1,858,138	$ 5,202,804	200	$ 9,100,898	$ 21,784,139
MD 6	127	$ 5,399,148	$ 12,360,631	17	$ 977,127	$ 3,057,393	143	$ 6,376,276	$ 15,418,024
MD 7A	78	$ 3,336,059	$ 7,637,463	77	$ 4,578,252	$ 15,188,448	156	$ 7,914,312	$ 22,825,911
MD 7B	41	$ 1,755,821	$ 4,019,718	4	$ 190,325	$ 503,176	45	$ 1,946,146	$ 4,522,893
MD 8	218	$ 9,305,849	$ 21,304,503	24	$ 1,477,601	$ 4,548,761	242	$ 10,783,450	$ 25,853,264
MD 9A	118	$ 5,047,984	$ 11,556,688	129	$ 7,189,967	$ 20,204,408	247	$ 12,237,951	$ 31,761,096
MD 9B	23	$ 965,701	$ 2,210,845	14	$ 670,516	$ 1,908,372	37	$ 1,636,217	$ 4,119,216
MD 10	89	$ 3,775,014	$ 8,642,393	42	$ 2,717,569	$ 9,194,888	131	$ 6,492,584	$ 17,837,281
MD 11A	12	$ 526,746	$ 1,205,915	2	$ 106,179	$ 317,005	14	$ 632,925	$ 1,522,920
MD 11B	217	$ 9,261,954	$ 21,204,010	125	$ 7,952,624	$ 23,238,882	342	$ 17,214,578	$ 44,442,892
MD 12A	179	$ 7,637,820	$ 17,485,771	0	$ 23,380	$ 58,760	180	$ 7,661,199	$ 17,544,532
MD 12B	38	$ 1,624,134	$ 3,718,239	37	$ 2,750,343	$ 8,776,356	75	$ 4,374,477	$ 12,494,595
MD 13	116	$ 4,960,193	$ 11,355,702	30	$ 1,990,568	$ 6,685,374	146	$ 6,950,761	$ 18,041,076
MD 14	122	$ 5,179,671	$ 11,858,167	72	$ 3,980,617	$ 11,124,818	194	$ 9,160,288	$ 22,982,985
MD 15	73	$ 3,094,634	$ 7,084,752	28	$ 1,566,820	$ 4,643,174	101	$ 4,661,454	$ 11,727,926
MD 16	129	$ 5,508,887	$ 12,611,864	112	$ 6,590,022	$ 19,678,392	241	$ 12,098,909	$ 32,290,256
MD 17	184	$ 7,835,349	$ 17,937,990	6	$ 309,829	$ 821,479	190	$ 8,145,179	$ 18,759,468
MD 18	99	$ 4,235,917	$ 9,697,569	5	$ 223,500	$ 1,106,219	104	$ 4,459,417	$ 10,803,787
MD 19	62	$ 2,633,731	$ 6,029,576	5	$ 251,207	$ 695,180	66	$ 2,884,938	$ 6,724,757
MD 20	149	$ 6,342,902	$ 14,521,230	172	$ 10,383,081	$ 31,922,194	321	$ 16,725,983	$ 46,443,423
MD 21	191	$ 8,120,670	$ 18,591,194	17	$ 1,063,477	$ 2,891,447	208	$ 9,184,148	$ 21,482,641
MD 22	186	$ 7,945,088	$ 18,189,222	1	$ 69,897	$ 198,417	188	$ 8,014,985	$ 18,387,639
MD 23	111	$ 4,740,716	$ 10,853,237	91	$ 4,821,790	$ 12,847,515	202	$ 9,562,505	$ 23,700,753
MD 24	162	$ 6,913,544	$ 15,827,638	0	$ 6,893	$ 12,959	162	$ 6,920,436	$ 15,840,596
MD 25	190	$ 8,076,775	$ 18,490,701	26	$ 1,530,947	$ 4,793,966	216	$ 9,607,722	$ 23,284,667
MD 26	103	$ 4,389,551	$ 10,049,294	76	$ 4,420,623	$ 13,347,074	179	$ 8,810,175	$ 23,396,368
MD 27A	41	$ 1,755,821	$ 4,019,718	27	$ 1,460,526	$ 4,056,525	68	$ 3,216,346	$ 8,076,243
MD 27B	74	$ 3,160,477	$ 7,235,492	38	$ 2,323,490	$ 8,513,258	113	$ 5,483,968	$ 15,748,749
MD 27C	82	$ 3,511,641	$ 8,039,435	38	$ 2,660,451	$ 10,151,206	121	$ 6,172,093	$ 18,190,641
MD 28	172	$ 7,330,551	$ 16,782,321	21	$ 1,164,376	$ 3,198,444	193	$ 8,494,927	$ 19,980,765
MD 29A	91	$ 3,862,805	$ 8,843,379	12	$ 700,541	$ 2,230,498	103	$ 4,563,346	$ 11,073,877
MD 29B	57	$ 2,414,253	$ 5,527,112	9	$ 568,222	$ 1,835,953	66	$ 2,982,476	$ 7,363,065
MD 29C	68	$ 2,897,104	$ 6,632,534	27	$ 1,577,690	$ 5,043,292	95	$ 4,474,794	$ 11,675,826
MD 30A	148	$ 6,320,954	$ 14,470,983	28	$ 1,557,389	$ 4,356,007	176	$ 7,878,343	$ 18,826,990
MD 30B	107	$ 4,565,134	$ 10,451,266	68	$ 4,403,669	$ 15,179,725	176	$ 8,968,802	$ 25,630,991
MD 31	98	$ 4,170,074	$ 9,546,829	71	$ 3,726,430	$ 11,050,116	169	$ 7,896,504	$ 20,596,945
MD 32	160	$ 6,803,805	$ 15,576,405	74	$ 4,431,956	$ 12,378,355	233	$ 11,235,761	$ 27,954,760
MD 33A	40	$ 1,711,925	$ 3,919,225	1	$ 51,484	$ 152,159	41	$ 1,763,409	$ 4,071,384
MD 33B	55	$ 2,326,462	$ 5,326,126	45	$ 2,581,251	$ 7,355,438	99	$ 4,907,713	$ 12,681,564
MD 33C	37	$ 1,580,239	$ 3,617,746	45	$ 2,484,594	$ 7,030,927	82	$ 4,064,833	$ 10,648,673
MD 34A	104	$ 4,433,447	$ 10,149,787	14	$ 727,754	$ 2,003,263	118	$ 5,161,201	$ 12,153,049
MD 34B	96	$ 4,082,283	$ 9,345,843	5	$ 228,557	$ 560,068	101	$ 4,310,840	$ 9,905,912
MD 35A	61	$ 2,589,835	$ 5,929,083	26	$ 1,337,335	$ 3,618,992	87	$ 3,927,170	$ 9,548,075
MD 35B	49	$ 2,106,985	$ 4,823,661	68	$ 3,963,178	$ 11,719,269	118	$ 6,070,163	$ 16,542,930
MD 36	363	$ 15,451,221	$ 35,373,514	85	$ 4,927,338	$ 14,282,754	448	$ 20,378,560	$ 49,656,268
MD 37A	179	$ 7,615,872	$ 17,435,525	9	$ 617,744	$ 1,510,810	188	$ 8,233,615	$ 18,946,335
MD 37B	242	$ 10,315,446	$ 23,615,841	426	$ 27,624,855	$ 75,249,249	668	$ 37,940,301	$ 98,865,089
MD 38A	149	$ 6,342,902	$ 14,521,230	6	$ 347,847	$ 979,647	155	$ 6,690,749	$ 15,500,877
MD 38B	79	$ 3,379,955	$ 7,737,956	2	$ 121,591	$ 541,401	81	$ 3,501,546	$ 8,279,358
MD 38C	306	$ 13,036,968	$ 29,846,403	14	$ 680,673	$ 1,975,542	319	$ 13,717,640	$ 31,821,944
MD 39	90	$ 3,840,858	$ 8,793,132	40	$ 2,515,460	$ 7,222,237	131	$ 6,356,317	$ 16,015,369
MD 40	312	$ 13,278,393	$ 30,399,114	0	$ 25,111	$ 65,357	312	$ 13,303,504	$ 30,464,471
MD 41	138	$ 5,881,999	$ 13,466,054	38	$ 2,177,167	$ 6,359,207	176	$ 8,059,166	$ 19,825,261
MD 42A	41	$ 1,733,873	$ 3,969,471	44	$ 2,640,878	$ 8,123,991	85	$ 4,374,751	$ 12,093,462
MD 42B	5	$ 219,478	$ 502,465	2	$ 101,176	$ 314,732	7	$ 320,653	$ 817,196
MD 42C	27	$ 1,141,283	$ 2,612,816	24	$ 1,453,215	$ 4,022,056	51	$ 2,594,499	$ 6,634,872
MD 43A	119	$ 5,069,932	$ 11,606,934	19	$ 1,097,615	$ 3,402,851	138	$ 6,167,547	$ 15,009,786
MD 43B	23	$ 965,701	$ 2,210,845	12	$ 718,297	$ 2,074,130	35	$ 1,683,998	$ 4,284,975
MD 44A	31	$ 1,316,865	$ 3,014,788	5	$ 270,520	$ 773,705	36	$ 1,587,385	$ 3,788,493
MD 44B	132	$ 5,618,626	$ 12,863,096	15	$ 857,681	$ 2,488,952	147	$ 6,476,307	$ 15,352,048
MD 45	155	$ 6,606,275	$ 15,124,187	26	$ 1,563,027	$ 4,535,975	181	$ 8,169,302	$ 19,660,162
MD 46	213	$ 9,086,371	$ 20,802,038	392	$ 22,998,772	$ 65,434,373	605	$ 32,085,143	$ 86,236,411
MD 47A	99	$ 4,213,969	$ 9,647,322	9	$ 509,375	$ 1,465,037	108	$ 4,723,344	$ 11,112,359
MD 47B	23	$ 965,701	$ 2,210,845	1	$ 28,983	$ 78,296	23	$ 994,684	$ 2,289,140
Total	8,214	$ 350,066,728	$ 801,431,184	3,387	$ 203,425,045	$ 596,926,343	11,601	$ 553,491,773	$ 1,398,357,527

Table 18
Economic Impact of Food Retailers by State Senate District

	Direct			Multiplier			Total		
	Jobs	Wages	Output	Jobs	Wages	Output	Jobs	Wages	Output
MD 1	3,244	$ 137,620,575	$ 319,491,266	1,450	$ 94,358,675	$ 261,792,316	4,693	$ 231,979,250	$ 581,283,582
MD 2	3,730	$ 158,267,091	$ 367,422,917	785	$ 48,917,270	$ 142,391,729	4,516	$ 207,184,361	$ 509,814,646
MD 3	3,514	$ 149,075,619	$ 346,084,574	69	$ 3,765,616	$ 11,634,814	3,583	$ 152,841,235	$ 357,719,388
MD 4	725	$ 30,775,427	$ 71,446,294	906	$ 55,329,629	$ 169,115,675	1,631	$ 86,105,056	$ 240,561,969
MD 5	1,745	$ 74,057,658	$ 171,927,597	240	$ 13,712,455	$ 38,935,205	1,985	$ 87,770,113	$ 210,862,803
MD 6	1,662	$ 70,513,682	$ 163,700,127	1,394	$ 103,666,757	$ 319,249,048	3,056	$ 174,180,440	$ 482,949,175
MD 7	856	$ 36,308,602	$ 84,291,764	875	$ 59,083,281	$ 155,007,737	1,731	$ 95,391,882	$ 239,299,501
MD 8	2,693	$ 114,253,201	$ 265,243,039	684	$ 45,453,227	$ 116,580,420	3,377	$ 159,706,427	$ 381,823,459
MD 9	1,231	$ 52,245,060	$ 121,288,842	783	$ 45,611,607	$ 135,319,811	2,014	$ 97,856,667	$ 256,608,653
MD 10	688	$ 29,174,922	$ 67,730,662	895	$ 53,290,283	$ 153,555,348	1,582	$ 82,465,205	$ 221,286,010
MD 11	2,328	$ 98,774,030	$ 229,307,571	358	$ 21,348,222	$ 64,058,280	2,686	$ 120,122,252	$ 293,365,851
MD 12	1,992	$ 84,506,670	$ 196,185,366	482	$ 29,675,356	$ 82,049,846	2,474	$ 114,182,026	$ 278,235,212
MD 13	3,322	$ 140,958,772	$ 327,241,012	728	$ 41,417,621	$ 116,063,016	4,050	$ 182,376,393	$ 443,304,028
MD 14	1,132	$ 48,015,153	$ 111,468,958	348	$ 21,900,617	$ 62,293,174	1,480	$ 69,915,771	$ 173,762,132
MD 15	792	$ 33,610,607	$ 78,028,271	316	$ 17,709,407	$ 53,036,697	1,108	$ 51,320,014	$ 131,064,967
MD 16	2,396	$ 101,654,939	$ 235,995,708	1,741	$ 106,871,824	$ 362,087,676	4,137	$ 208,526,763	$ 598,083,384
MD 17	2,610	$ 110,732,089	$ 257,068,649	2,122	$ 134,123,496	$ 430,589,327	4,731	$ 244,855,585	$ 687,657,976
MD 18	2,656	$ 112,698,424	$ 261,633,568	583	$ 34,018,873	$ 101,975,360	3,239	$ 146,717,297	$ 363,608,928
MD 19	1,688	$ 71,611,172	$ 166,247,989	522	$ 31,390,035	$ 92,804,825	2,210	$ 103,001,206	$ 259,052,814
MD 20	2,182	$ 92,577,789	$ 214,922,767	724	$ 43,956,745	$ 115,230,142	2,906	$ 136,534,534	$ 330,152,909
MD 21	2,184	$ 92,646,382	$ 215,082,008	1,300	$ 71,626,151	$ 199,837,412	3,484	$ 164,272,533	$ 414,919,420
MD 22	2,253	$ 95,595,884	$ 221,929,387	777	$ 41,064,506	$ 113,001,596	3,030	$ 136,660,390	$ 334,930,983
MD 23	2,015	$ 85,512,702	$ 198,520,906	194	$ 10,365,978	$ 29,746,143	2,209	$ 95,878,679	$ 228,267,049
MD 24	2,236	$ 94,887,089	$ 220,283,893	496	$ 32,846,349	$ 104,618,657	2,732	$ 127,733,438	$ 324,902,550
MD 25	1,872	$ 79,407,918	$ 184,348,424	731	$ 41,620,137	$ 125,106,087	2,602	$ 121,028,055	$ 309,454,512
MD 26	1,967	$ 83,454,909	$ 193,743,665	261	$ 14,815,218	$ 45,538,337	2,228	$ 98,270,127	$ 239,282,002
MD 27	1,797	$ 76,252,636	$ 177,023,321	1,036	$ 59,029,914	$ 161,971,515	2,833	$ 135,282,550	$ 338,994,836
MD 28	1,361	$ 57,755,370	$ 134,081,232	1,288	$ 71,879,641	$ 210,593,919	2,649	$ 129,635,011	$ 344,675,151
MD 29	1,947	$ 82,586,064	$ 191,726,608	1,001	$ 60,040,851	$ 185,088,684	2,948	$ 142,626,915	$ 376,815,292
MD 30	1,643	$ 69,713,430	$ 161,842,311	521	$ 27,799,854	$ 74,853,216	2,164	$ 97,513,284	$ 236,695,526
MD 31	1,616	$ 68,547,348	$ 159,135,208	210	$ 12,523,053	$ 34,721,862	1,825	$ 81,070,400	$ 193,857,070
MD 32	2,473	$ 104,924,542	$ 243,586,213	1,299	$ 78,070,423	$ 235,089,618	3,772	$ 182,994,966	$ 478,675,832
MD 33	955	$ 40,515,644	$ 94,058,568	609	$ 33,192,290	$ 96,040,807	1,564	$ 73,707,933	$ 190,099,375
MD 34	1,265	$ 53,662,650	$ 124,579,831	812	$ 49,812,614	$ 149,711,012	2,077	$ 103,475,264	$ 274,290,842
MD 35	1,435	$ 60,864,923	$ 141,300,174	304	$ 18,460,745	$ 51,503,560	1,739	$ 79,325,668	$ 192,803,735
MD 36	2,277	$ 96,624,780	$ 224,318,008	259	$ 14,805,365	$ 41,329,548	2,536	$ 111,430,145	$ 265,647,555
MD 37	3,026	$ 128,383,374	$ 298,046,761	971	$ 65,089,305	$ 202,922,345	3,997	$ 193,472,679	$ 500,969,106
MD 38	3,595	$ 152,528,137	$ 354,099,723	1,212	$ 70,416,781	$ 205,415,993	4,807	$ 222,944,918	$ 559,515,716
MD 39	2,543	$ 107,896,909	$ 250,486,673	384	$ 23,254,208	$ 69,187,140	2,927	$ 131,151,117	$ 319,673,813
MD 40	1,283	$ 54,417,174	$ 126,331,486	532	$ 34,839,394	$ 96,306,753	1,814	$ 89,256,568	$ 222,638,239
MD 41	1,247	$ 52,908,126	$ 122,828,176	157	$ 8,930,257	$ 30,930,041	1,404	$ 61,838,383	$ 153,758,216
MD 42	1,304	$ 55,331,748	$ 128,454,704	1,438	$ 91,899,431	$ 283,394,811	2,742	$ 147,231,179	$ 411,849,515
MD 43	974	$ 41,338,761	$ 95,969,465	1,063	$ 65,482,873	$ 164,400,832	2,037	$ 106,821,633	$ 260,370,297
MD 44	1,464	$ 62,099,598	$ 144,166,519	717	$ 40,849,696	$ 106,598,669	2,180	$ 102,949,294	$ 250,765,188
MD 45	917	$ 38,915,139	$ 90,342,936	597	$ 34,286,522	$ 99,947,392	1,515	$ 73,201,661	$ 190,290,329
MD 46	2,291	$ 97,219,253	$ 225,698,100	3,263	$ 182,659,833	$ 504,599,419	5,555	$ 279,879,086	$ 730,297,518
MD 47	1,801	$ 76,412,687	$ 177,394,884	159	$ 8,957,081	$ 22,268,609	1,960	$ 85,369,768	$ 199,663,493
Total	90,927	$ 3,857,834,658	$ 8,956,106,125	37,597	$ 2,270,219,465	$ 6,628,494,424	128,524	$ 6,128,054,124	$ 15,584,600,548

Table 19
Economic Impact of Food Retailers by State Delegate District

	Direct			Multiplier			Total		
	Jobs	Wages	Output	Jobs	Wages	Output	Jobs	Wages	Output
MD 1A	1,109	$ 47,054,850	$ 109,239,579	305	$ 15,646,966	$ 40,894,145	1,414	$ 62,701,817	$ 150,133,724
MD 1B	1,346	$ 57,115,168	$ 132,594,979	19	$ 1,176,143	$ 3,738,075	1,365	$ 58,291,311	$ 136,333,055
MD 1C	788	$ 33,450,557	$ 77,656,707	328	$ 20,695,701	$ 62,478,574	1,117	$ 54,146,258	$ 140,135,282
MD 2A	1,641	$ 69,644,837	$ 161,683,069	363	$ 21,932,732	$ 66,208,767	2,004	$ 91,577,569	$ 227,891,836
MD 2B	2,089	$ 88,622,255	$ 205,739,848	2,468	$ 150,628,226	$ 437,425,697	4,557	$ 239,250,481	$ 643,165,546
MD 3	3,514	$ 149,075,619	$ 346,084,574	164	$ 9,639,016	$ 30,077,007	3,678	$ 158,714,635	$ 376,161,581
MD 4	725	$ 30,775,427	$ 71,446,294	1,452	$ 98,062,044	$ 276,598,547	2,177	$ 128,837,471	$ 348,044,841
MD 5	1,745	$ 74,057,658	$ 171,927,597	335	$ 20,607,162	$ 57,562,363	2,081	$ 94,664,820	$ 229,489,960
MD 6	1,662	$ 70,513,682	$ 163,700,127	185	$ 10,894,800	$ 34,002,693	1,847	$ 81,408,482	$ 197,702,820
MD 7A	515	$ 21,858,327	$ 50,744,916	855	$ 50,909,926	$ 168,100,549	1,370	$ 72,768,253	$ 218,845,465
MD 7B	341	$ 14,450,275	$ 33,546,848	41	$ 2,119,868	$ 5,591,882	382	$ 16,570,142	$ 39,138,730
MD 8	2,693	$ 114,253,201	$ 265,243,039	265	$ 16,449,039	$ 50,460,123	2,958	$ 130,702,239	$ 315,703,162
MD 9A	947	$ 40,195,543	$ 93,315,442	1,436	$ 80,538,742	$ 225,110,397	2,384	$ 120,734,284	$ 318,425,839
MD 9B	284	$ 12,049,517	$ 27,973,400	155	$ 7,448,548	$ 21,160,013	439	$ 19,498,065	$ 49,133,413
MD 10	688	$ 29,174,922	$ 67,730,662	466	$ 30,083,843	$ 101,632,197	1,154	$ 59,258,765	$ 169,362,859
MD 11A	719	$ 30,523,919	$ 70,862,409	21	$ 1,177,252	$ 3,507,622	740	$ 31,701,171	$ 74,370,031
MD 11B	1,609	$ 68,250,111	$ 158,445,162	1,386	$ 89,163,328	$ 258,919,999	2,994	$ 157,413,439	$ 417,365,160
MD 12A	863	$ 36,628,703	$ 85,034,891	5	$ 263,463	$ 658,449	868	$ 36,892,166	$ 85,693,340
MD 12B	1,128	$ 47,877,967	$ 111,150,475	410	$ 30,515,649	$ 97,032,325	1,539	$ 78,393,616	$ 208,182,800
MD 13	3,322	$ 140,958,772	$ 327,241,012	334	$ 22,392,605	$ 74,276,490	3,656	$ 163,351,377	$ 401,517,502
MD 14	1,132	$ 48,015,153	$ 111,468,958	800	$ 44,155,369	$ 123,208,453	1,932	$ 92,170,522	$ 234,677,411
MD 15	792	$ 33,610,607	$ 78,028,271	310	$ 17,491,777	$ 51,593,098	1,102	$ 51,102,384	$ 129,621,368
MD 16	2,396	$ 101,654,939	$ 235,995,708	1,240	$ 73,976,254	$ 218,877,121	3,636	$ 175,631,193	$ 454,872,829
MD 17	2,610	$ 110,732,089	$ 257,068,649	67	$ 3,434,156	$ 9,091,480	2,677	$ 114,166,246	$ 266,160,130
MD 18	2,656	$ 112,698,424	$ 261,633,568	54	$ 2,455,587	$ 12,100,233	2,710	$ 115,154,012	$ 273,733,802
MD 19	1,688	$ 71,611,172	$ 166,247,989	51	$ 2,796,199	$ 7,710,727	1,739	$ 74,407,371	$ 173,958,716
MD 20	2,182	$ 92,577,789	$ 214,922,767	1,909	$ 116,232,861	$ 355,305,711	4,091	$ 208,810,650	$ 570,228,478
MD 21	2,184	$ 92,646,382	$ 215,082,008	189	$ 11,849,717	$ 32,179,498	2,373	$ 104,496,098	$ 247,261,506
MD 22	2,253	$ 95,595,884	$ 221,929,387	12	$ 769,310	$ 2,181,864	2,265	$ 96,365,194	$ 224,111,251
MD 23	2,015	$ 85,512,702	$ 198,520,906	1,002	$ 53,388,894	$ 142,093,585	3,018	$ 138,901,596	$ 340,614,491
MD 24	2,236	$ 94,887,089	$ 220,283,893	1	$ 76,546	$ 144,290	2,237	$ 94,963,635	$ 220,428,183
MD 25	1,872	$ 79,407,918	$ 184,348,424	292	$ 17,001,724	$ 53,023,701	2,163	$ 96,409,642	$ 237,372,125
MD 26	1,967	$ 83,454,909	$ 193,743,665	849	$ 49,129,848	$ 147,638,707	2,816	$ 132,584,757	$ 341,382,372
MD 27A	434	$ 18,405,809	$ 42,729,767	297	$ 16,323,036	$ 45,200,651	730	$ 34,728,845	$ 87,930,418
MD 27B	828	$ 35,119,655	$ 81,531,581	427	$ 25,821,809	$ 93,925,056	1,254	$ 60,941,464	$ 175,456,637
MD 27C	536	$ 22,727,173	$ 52,761,973	425	$ 29,414,679	$ 111,512,679	960	$ 52,141,852	$ 164,274,653
MD 28	1,361	$ 57,755,370	$ 134,081,232	227	$ 12,911,137	$ 35,411,016	1,589	$ 70,666,508	$ 169,492,248
MD 29A	541	$ 22,955,816	$ 53,292,778	137	$ 7,823,369	$ 24,866,842	678	$ 30,779,185	$ 78,159,620
MD 29B	903	$ 38,320,665	$ 88,962,845	101	$ 6,308,071	$ 20,391,657	1,004	$ 44,628,737	$ 109,354,501
MD 29C	502	$ 21,309,582	$ 49,470,985	295	$ 17,441,492	$ 55,703,156	798	$ 38,751,074	$ 105,174,141
MD 30A	1,265	$ 53,662,650	$ 124,579,831	309	$ 17,456,780	$ 48,575,915	1,574	$ 71,119,430	$ 173,155,746
MD 30B	378	$ 16,050,780	$ 37,262,480	758	$ 48,847,100	$ 167,461,073	1,136	$ 64,897,879	$ 204,723,553
MD 31	1,616	$ 68,547,348	$ 159,135,208	788	$ 41,371,415	$ 122,234,612	2,404	$ 109,918,763	$ 281,369,819
MD 32	2,473	$ 104,924,542	$ 243,586,213	814	$ 49,083,268	$ 136,880,434	3,287	$ 154,007,810	$ 380,466,647
MD 33A	519	$ 22,041,242	$ 51,169,560	10	$ 568,927	$ 1,676,247	529	$ 22,610,169	$ 52,845,806
MD 33B	103	$ 4,389,957	$ 10,191,448	498	$ 28,741,641	$ 81,612,630	601	$ 33,131,598	$ 91,804,078
MD 33C	332	$ 14,084,445	$ 32,697,561	500	$ 27,708,188	$ 78,173,649	832	$ 41,792,633	$ 110,871,210
MD 34A	694	$ 29,449,294	$ 68,367,628	150	$ 8,076,122	$ 22,189,130	844	$ 37,525,416	$ 90,556,758
MD 34B	571	$ 24,213,356	$ 56,212,203	53	$ 2,562,648	$ 6,271,442	624	$ 26,776,004	$ 62,483,645
MD 35A	946	$ 40,149,814	$ 93,209,281	288	$ 14,881,764	$ 40,193,253	1,234	$ 55,031,578	$ 133,402,534
MD 35B	488	$ 20,715,109	$ 48,090,893	758	$ 44,174,162	$ 130,177,044	1,246	$ 64,889,271	$ 178,267,937
MD 36	2,277	$ 96,624,780	$ 224,318,008	944	$ 54,668,344	$ 158,230,788	3,222	$ 151,293,124	$ 382,548,796
MD 37A	1,188	$ 50,393,047	$ 116,989,325	101	$ 6,873,186	$ 16,778,357	1,289	$ 57,266,233	$ 133,767,682
MD 37B	1,838	$ 77,990,328	$ 181,057,436	4,745	$ 310,725,412	$ 840,401,581	6,584	$ 388,715,739	$ 1,021,459,017
MD 38A	651	$ 27,620,145	$ 64,121,191	63	$ 3,842,362	$ 10,828,318	714	$ 31,462,507	$ 74,949,509
MD 38B	1,917	$ 81,328,524	$ 188,807,183	20	$ 1,330,222	$ 5,892,018	1,937	$ 82,658,747	$ 194,699,201
MD 38C	1,027	$ 43,579,468	$ 101,171,349	149	$ 7,628,260	$ 21,979,198	1,176	$ 51,207,728	$ 123,150,548
MD 39	2,543	$ 107,896,909	$ 250,486,673	448	$ 27,972,534	$ 80,023,158	2,991	$ 135,869,443	$ 330,509,830
MD 40	1,283	$ 54,417,174	$ 126,331,486	4	$ 274,902	$ 715,844	1,286	$ 54,692,076	$ 127,047,329
MD 41	1,247	$ 52,908,126	$ 122,828,176	418	$ 24,213,580	$ 70,432,477	1,665	$ 77,121,706	$ 193,260,653
MD 42A	333	$ 14,130,174	$ 32,803,722	491	$ 29,322,774	$ 89,843,256	824	$ 43,452,948	$ 122,646,977
MD 42B	468	$ 19,846,263	$ 46,073,836	20	$ 1,122,689	$ 3,476,165	488	$ 20,968,953	$ 49,550,000
MD 42C	503	$ 21,355,311	$ 49,577,146	271	$ 16,142,841	$ 44,606,051	774	$ 37,498,152	$ 94,183,197
MD 43A	812	$ 34,433,724	$ 79,939,167	212	$ 12,194,483	$ 37,687,254	1,023	$ 46,628,207	$ 117,626,421
MD 43B	163	$ 6,905,036	$ 16,030,298	132	$ 7,974,066	$ 22,973,948	295	$ 14,879,102	$ 39,004,246
MD 44A	647	$ 27,437,230	$ 63,696,547	52	$ 2,986,540	$ 8,532,960	699	$ 30,423,771	$ 72,229,507
MD 44B	817	$ 34,662,368	$ 80,469,972	171	$ 9,524,579	$ 27,541,504	988	$ 44,186,947	$ 108,011,476
MD 45	917	$ 38,915,139	$ 90,342,936	286	$ 17,642,048	$ 50,696,884	1,203	$ 56,557,187	$ 141,039,820
MD 46	2,291	$ 97,219,253	$ 225,698,100	4,360	$ 257,229,858	$ 727,911,214	6,651	$ 354,449,111	$ 953,609,313
MD 47A	1,485	$ 63,014,173	$ 146,289,737	102	$ 5,631,981	$ 16,162,850	1,587	$ 68,646,154	$ 162,452,587
MD 47B	316	$ 13,398,514	$ 31,105,147	6	$ 321,122	$ 866,667	321	$ 13,719,636	$ 31,971,814
Total	90,927	$ 3,857,834,658	$ 8,956,106,125	37,597	$ 2,270,240,688	$ 6,628,621,361	128,524	$ 6,128,075,347	$ 15,584,727,486

Table 20
Economic Impact of All Current Alcohol Retailers by State Senate District

	Direct			Multiplier			Total		
	Jobs	Wages	Output	Jobs	Wages	Output	Jobs	Wages	Output
MD 1	3,431	$ 145,609,559	$ 337,780,980	1,580	$ 102,828,572	$ 285,354,490	5,011	$ 248,438,131	$ 623,135,470
MD 2	3,929	$ 166,738,926	$ 386,818,055	856	$ 53,330,616	$ 155,261,195	4,785	$ 220,069,542	$ 542,079,249
MD 3	3,738	$ 158,622,893	$ 367,941,788	76	$ 4,105,376	$ 12,689,182	3,813	$ 162,728,269	$ 380,630,970
MD 4	878	$ 37,271,963	$ 86,319,249	988	$ 60,301,893	$ 184,372,567	1,865	$ 97,573,856	$ 270,691,816
MD 5	1,915	$ 81,300,418	$ 188,508,932	261	$ 14,940,533	$ 42,436,142	2,177	$ 96,240,951	$ 230,945,075
MD 6	1,789	$ 75,912,831	$ 176,060,758	1,520	$ 112,967,149	$ 348,071,698	3,309	$ 188,879,980	$ 524,132,456
MD 7	975	$ 41,400,481	$ 95,948,945	953	$ 64,246,997	$ 168,719,370	1,928	$ 105,647,478	$ 264,668,315
MD 8	2,911	$ 123,559,050	$ 286,547,542	746	$ 49,461,480	$ 126,947,040	3,657	$ 173,020,530	$ 413,494,582
MD 9	1,372	$ 58,258,745	$ 135,056,375	854	$ 49,718,582	$ 147,548,042	2,226	$ 107,977,327	$ 282,604,417
MD 10	776	$ 32,949,936	$ 76,373,055	975	$ 58,066,495	$ 167,396,673	1,752	$ 91,016,431	$ 243,769,728
MD 11	2,558	$ 108,562,730	$ 251,717,496	390	$ 23,242,525	$ 69,781,084	2,948	$ 131,805,254	$ 321,498,579
MD 12	2,209	$ 93,768,623	$ 217,389,376	526	$ 32,355,956	$ 89,477,015	2,735	$ 126,124,580	$ 306,866,391
MD 13	3,439	$ 145,918,965	$ 338,596,714	795	$ 45,181,959	$ 126,618,795	4,233	$ 191,100,924	$ 465,215,509
MD 14	1,253	$ 53,194,824	$ 123,327,125	379	$ 23,839,274	$ 67,865,699	1,633	$ 77,034,098	$ 191,192,824
MD 15	865	$ 36,705,241	$ 85,113,023	344	$ 19,299,648	$ 57,814,742	1,209	$ 56,004,889	$ 142,927,765
MD 16	2,525	$ 107,163,826	$ 248,607,572	1,898	$ 116,510,527	$ 394,912,191	4,423	$ 223,674,354	$ 643,519,763
MD 17	2,794	$ 118,567,439	$ 275,006,639	2,313	$ 146,179,752	$ 469,478,022	5,107	$ 264,747,191	$ 744,484,661
MD 18	2,756	$ 116,934,341	$ 271,331,137	636	$ 37,084,795	$ 111,183,795	3,392	$ 154,019,136	$ 382,514,932
MD 19	1,750	$ 74,244,902	$ 172,277,565	569	$ 34,213,934	$ 101,184,036	2,319	$ 108,458,836	$ 273,461,601
MD 20	2,331	$ 98,920,690	$ 229,443,997	790	$ 47,919,515	$ 125,637,724	3,120	$ 146,840,206	$ 355,081,721
MD 21	2,374	$ 100,767,052	$ 233,673,202	1,417	$ 78,040,437	$ 217,801,521	3,791	$ 178,807,488	$ 451,474,723
MD 22	2,440	$ 103,540,972	$ 240,118,609	847	$ 44,763,985	$ 123,204,735	3,287	$ 148,304,957	$ 363,323,344
MD 23	2,127	$ 90,253,417	$ 209,374,143	211	$ 11,293,699	$ 32,423,517	2,338	$ 101,547,116	$ 241,797,660
MD 24	2,399	$ 101,800,632	$ 236,111,531	540	$ 35,741,404	$ 113,972,855	2,939	$ 137,542,036	$ 350,084,385
MD 25	2,061	$ 87,484,693	$ 202,839,125	796	$ 45,301,223	$ 136,264,770	2,857	$ 132,785,915	$ 339,103,895
MD 26	2,070	$ 87,844,461	$ 203,792,959	284	$ 16,139,625	$ 49,633,422	2,354	$ 103,984,086	$ 253,426,381
MD 27	1,995	$ 84,680,575	$ 196,317,965	1,130	$ 64,363,249	$ 176,625,593	3,125	$ 149,043,824	$ 372,943,558
MD 28	1,533	$ 65,085,921	$ 150,863,553	1,404	$ 78,345,253	$ 229,612,662	2,937	$ 143,431,174	$ 380,476,215
MD 29	2,162	$ 91,760,226	$ 212,729,632	1,092	$ 65,460,330	$ 201,857,857	3,253	$ 157,220,556	$ 414,587,489
MD 30	1,899	$ 80,599,517	$ 186,764,560	568	$ 30,295,369	$ 81,592,107	2,467	$ 110,894,886	$ 268,356,666
MD 31	1,713	$ 72,717,421	$ 168,682,037	229	$ 13,636,956	$ 37,833,470	1,942	$ 86,354,377	$ 206,515,506
MD 32	2,633	$ 111,728,347	$ 259,162,619	1,416	$ 85,070,619	$ 256,259,627	4,049	$ 196,798,966	$ 515,422,246
MD 33	1,087	$ 46,134,270	$ 106,921,664	664	$ 36,167,160	$ 104,673,440	1,750	$ 82,301,430	$ 211,595,105
MD 34	1,465	$ 62,178,380	$ 144,075,461	886	$ 54,304,295	$ 163,242,376	2,350	$ 116,482,675	$ 307,317,837
MD 35	1,545	$ 65,561,743	$ 152,052,919	332	$ 20,110,854	$ 56,132,684	1,876	$ 85,672,597	$ 208,185,603
MD 36	2,640	$ 112,076,001	$ 259,691,522	282	$ 16,130,437	$ 45,048,856	2,922	$ 128,206,438	$ 304,740,378
MD 37	3,447	$ 146,314,692	$ 339,098,127	1,059	$ 70,915,497	$ 221,230,721	4,505	$ 217,230,189	$ 560,328,848
MD 38	4,129	$ 175,287,961	$ 406,205,312	1,321	$ 76,742,030	$ 223,918,095	5,450	$ 252,029,991	$ 630,123,407
MD 39	2,633	$ 111,737,766	$ 259,279,805	419	$ 25,343,745	$ 75,429,712	3,052	$ 137,081,512	$ 334,709,516
MD 40	1,594	$ 67,695,567	$ 156,730,600	580	$ 37,983,038	$ 105,018,338	2,174	$ 105,678,605	$ 261,748,937
MD 41	1,385	$ 58,790,125	$ 136,294,229	172	$ 9,723,722	$ 33,706,689	1,557	$ 68,513,848	$ 170,000,918
MD 42	1,377	$ 58,426,382	$ 135,539,456	1,568	$ 100,084,344	$ 308,817,556	2,944	$ 158,510,726	$ 444,357,012
MD 43	1,116	$ 47,374,394	$ 109,787,244	1,158	$ 71,320,677	$ 179,129,928	2,274	$ 118,695,071	$ 288,917,172
MD 44	1,626	$ 69,035,090	$ 160,044,403	781	$ 44,477,393	$ 116,120,962	2,407	$ 113,512,483	$ 276,165,365
MD 45	1,072	$ 45,521,414	$ 105,467,124	651	$ 37,364,145	$ 108,943,501	1,723	$ 82,885,558	$ 214,410,625
MD 46	2,505	$ 106,305,625	$ 246,500,138	3,556	$ 198,968,912	$ 549,899,250	6,060	$ 305,274,537	$ 796,399,388
MD 47	1,923	$ 81,592,358	$ 189,253,051	173	$ 9,758,976	$ 24,267,082	2,096	$ 91,351,334	$ 213,520,133
Total	99,141	$ 4,207,901,386	$ 9,757,537,309	40,984	$ 2,473,642,954	$ 7,225,410,827	140,125	$ 6,681,544,340	$ 16,982,948,136

Table 21
Economic Impact of All Current Alcohol Retailers by State Delegate District

	Direct			Multiplier			Total		
	Jobs	Wages	Output	Jobs	Wages	Output	Jobs	Wages	Output
MD 1A	1,196	$ 50,742,074	$ 117,680,986	332	$ 17,047,823	$ 44,571,106	1,528	$ 67,789,897	$ 162,252,091
MD 1B	1,398	$ 59,309,944	$ 137,619,626	21	$ 1,282,270	$ 4,075,373	1,419	$ 60,592,214	$ 141,695,000
MD 1C	838	$ 35,557,542	$ 82,480,368	358	$ 22,558,600	$ 68,120,892	1,196	$ 58,116,142	$ 150,601,260
MD 2A	1,729	$ 73,375,955	$ 170,224,969	396	$ 23,909,199	$ 72,187,827	2,125	$ 97,285,155	$ 242,412,796
MD 2B	2,200	$ 93,362,970	$ 216,593,085	2,691	$ 164,146,277	$ 476,852,061	4,891	$ 257,509,247	$ 693,445,146
MD 3	3,738	$ 158,622,893	$ 367,941,788	179	$ 10,502,374	$ 32,778,322	3,917	$ 169,125,268	$ 400,720,110
MD 4	878	$ 37,271,963	$ 86,319,249	1,582	$ 106,831,822	$ 301,460,317	2,460	$ 144,103,785	$ 387,779,565
MD 5	1,915	$ 81,300,418	$ 188,508,932	366	$ 22,465,300	$ 62,765,166	2,281	$ 103,765,718	$ 251,274,099
MD 6	1,789	$ 75,912,831	$ 176,060,758	202	$ 11,871,927	$ 37,060,086	1,990	$ 87,784,758	$ 213,120,844
MD 7A	593	$ 25,194,386	$ 58,382,379	932	$ 55,488,179	$ 183,288,996	1,526	$ 80,682,565	$ 241,671,376
MD 7B	382	$ 16,206,095	$ 37,566,566	45	$ 2,310,193	$ 6,095,058	426	$ 18,516,288	$ 43,661,624
MD 8	2,911	$ 123,559,050	$ 286,547,542	289	$ 17,926,640	$ 55,008,884	3,200	$ 141,485,689	$ 341,556,427
MD 9A	1,066	$ 45,243,527	$ 104,872,130	1,565	$ 87,728,709	$ 245,314,806	2,631	$ 132,972,236	$ 350,186,936
MD 9B	307	$ 13,015,218	$ 30,184,245	169	$ 8,119,064	$ 23,068,384	476	$ 21,134,282	$ 53,252,629
MD 10	776	$ 32,949,936	$ 76,373,055	508	$ 32,801,412	$ 110,827,085	1,284	$ 65,751,348	$ 187,200,140
MD 11A	732	$ 31,050,665	$ 72,068,324	23	$ 1,283,431	$ 3,824,627	755	$ 32,334,096	$ 75,892,951
MD 11B	1,826	$ 77,512,064	$ 179,649,172	1,511	$ 97,115,952	$ 282,158,881	3,336	$ 174,628,016	$ 461,808,052
MD 12A	1,043	$ 44,266,522	$ 102,520,662	5	$ 286,843	$ 717,209	1,048	$ 44,553,365	$ 103,237,872
MD 12B	1,167	$ 49,502,101	$ 114,868,714	447	$ 33,265,992	$ 105,808,682	1,614	$ 82,768,093	$ 220,677,395
MD 13	3,439	$ 145,918,965	$ 338,596,714	364	$ 24,383,173	$ 80,961,865	3,803	$ 170,302,138	$ 419,558,579
MD 14	1,253	$ 53,194,824	$ 123,327,125	873	$ 48,135,986	$ 134,333,271	2,126	$ 101,330,810	$ 257,660,396
MD 15	865	$ 36,705,241	$ 85,113,023	338	$ 19,058,597	$ 56,236,272	1,203	$ 55,763,838	$ 141,349,295
MD 16	2,525	$ 107,163,826	$ 248,607,572	1,352	$ 80,566,275	$ 238,555,512	3,877	$ 187,730,101	$ 487,163,084
MD 17	2,794	$ 118,567,439	$ 275,006,639	73	$ 3,743,985	$ 9,912,959	2,866	$ 122,311,424	$ 284,919,598
MD 18	2,756	$ 116,934,341	$ 271,331,137	59	$ 2,679,087	$ 13,206,452	2,814	$ 119,613,429	$ 284,537,589
MD 19	1,750	$ 74,244,902	$ 172,277,565	55	$ 3,047,406	$ 8,405,908	1,805	$ 77,292,309	$ 180,683,473
MD 20	2,331	$ 98,920,690	$ 229,443,997	2,081	$ 126,615,942	$ 387,227,905	4,412	$ 225,536,633	$ 616,671,901
MD 21	2,374	$ 100,767,052	$ 233,673,202	207	$ 12,913,194	$ 35,070,945	2,581	$ 113,680,246	$ 268,744,147
MD 22	2,440	$ 103,540,972	$ 240,118,609	13	$ 839,207	$ 2,380,281	2,453	$ 104,380,179	$ 242,498,890
MD 23	2,127	$ 90,253,417	$ 209,374,143	1,093	$ 58,210,684	$ 154,941,100	3,220	$ 148,464,101	$ 364,315,243
MD 24	2,399	$ 101,800,632	$ 236,111,531	1	$ 83,439	$ 157,249	2,400	$ 101,884,071	$ 236,268,780
MD 25	2,061	$ 87,484,693	$ 202,839,125	318	$ 18,532,671	$ 57,817,667	2,379	$ 106,017,364	$ 260,656,792
MD 26	2,070	$ 87,844,461	$ 203,792,959	925	$ 53,550,471	$ 160,985,782	2,995	$ 141,394,932	$ 364,778,740
MD 27A	475	$ 20,161,629	$ 46,749,485	323	$ 17,783,562	$ 49,257,176	798	$ 37,945,191	$ 96,006,661
MD 27B	902	$ 38,280,132	$ 88,767,072	465	$ 28,145,300	$ 102,438,314	1,367	$ 66,425,432	$ 191,205,386
MD 27C	618	$ 26,238,814	$ 60,801,408	463	$ 32,075,131	$ 121,663,886	1,081	$ 58,313,944	$ 182,465,294
MD 28	1,533	$ 65,085,921	$ 150,863,553	248	$ 14,075,514	$ 38,609,460	1,781	$ 79,161,435	$ 189,473,013
MD 29A	632	$ 26,818,621	$ 62,136,157	149	$ 8,523,910	$ 27,097,340	781	$ 35,342,531	$ 89,233,497
MD 29B	960	$ 40,734,919	$ 94,489,956	110	$ 6,876,294	$ 22,227,610	1,070	$ 47,611,212	$ 116,717,566
MD 29C	570	$ 24,206,686	$ 56,103,519	322	$ 19,019,181	$ 60,746,448	892	$ 43,225,868	$ 116,849,967
MD 30A	1,413	$ 59,983,604	$ 139,050,814	337	$ 19,014,169	$ 52,931,922	1,750	$ 78,997,773	$ 191,982,736
MD 30B	485	$ 20,615,913	$ 47,713,746	826	$ 53,250,768	$ 182,640,798	1,311	$ 73,866,682	$ 230,354,544
MD 31	1,713	$ 72,717,421	$ 168,682,037	860	$ 45,097,845	$ 133,284,728	2,573	$ 117,815,267	$ 301,966,765
MD 32	2,633	$ 111,728,347	$ 259,162,619	887	$ 53,515,223	$ 149,258,789	3,520	$ 165,243,570	$ 408,421,408
MD 33A	560	$ 23,753,167	$ 55,088,784	11	$ 620,411	$ 1,828,406	570	$ 24,373,578	$ 56,917,190
MD 33B	158	$ 6,716,419	$ 15,517,573	543	$ 31,322,891	$ 88,968,068	701	$ 38,039,311	$ 104,485,642
MD 33C	369	$ 15,664,684	$ 36,315,307	545	$ 30,192,782	$ 85,204,576	914	$ 45,857,465	$ 121,519,883
MD 34A	798	$ 33,882,741	$ 78,517,414	163	$ 8,803,876	$ 24,192,393	961	$ 42,686,617	$ 102,709,807
MD 34B	666	$ 28,295,639	$ 65,558,046	58	$ 2,791,205	$ 6,831,510	724	$ 31,086,844	$ 72,389,557
MD 35A	1,007	$ 42,739,649	$ 99,138,364	314	$ 16,219,099	$ 43,812,244	1,321	$ 58,958,749	$ 142,950,609
MD 35B	538	$ 22,822,094	$ 52,914,554	826	$ 48,137,340	$ 141,896,313	1,364	$ 70,959,434	$ 194,810,868
MD 36	2,640	$ 112,076,001	$ 259,691,522	1,030	$ 59,595,683	$ 172,513,542	3,670	$ 171,671,684	$ 432,205,064
MD 37A	1,366	$ 58,008,918	$ 134,424,850	110	$ 7,490,930	$ 18,289,167	1,477	$ 65,499,848	$ 152,714,017
MD 37B	2,080	$ 88,305,774	$ 204,673,276	5,171	$ 338,350,267	$ 915,650,829	7,252	$ 426,656,040	$ 1,120,324,106
MD 38A	800	$ 33,963,047	$ 78,642,421	68	$ 4,190,209	$ 11,807,965	868	$ 38,153,256	$ 90,450,386
MD 38B	1,996	$ 84,708,479	$ 196,545,139	22	$ 1,451,814	$ 6,433,420	2,018	$ 86,160,293	$ 202,978,558
MD 38C	1,333	$ 56,616,436	$ 131,017,752	163	$ 8,308,933	$ 23,954,740	1,496	$ 64,925,368	$ 154,972,492
MD 39	2,633	$ 111,737,766	$ 259,279,805	488	$ 30,487,994	$ 87,245,395	3,121	$ 142,225,761	$ 346,525,200
MD 40	1,594	$ 67,695,567	$ 156,730,600	4	$ 300,013	$ 781,201	1,598	$ 67,995,579	$ 157,511,800
MD 41	1,385	$ 58,790,125	$ 136,294,229	455	$ 26,390,747	$ 76,791,684	1,840	$ 85,180,872	$ 213,085,913
MD 42A	374	$ 15,864,047	$ 36,773,193	535	$ 31,963,652	$ 97,967,246	909	$ 47,827,699	$ 134,740,439
MD 42B	473	$ 20,065,741	$ 46,576,301	22	$ 1,223,865	$ 3,790,896	495	$ 21,289,606	$ 50,367,197
MD 42C	530	$ 22,496,594	$ 52,189,962	295	$ 17,596,057	$ 48,628,107	825	$ 40,092,651	$ 100,818,069
MD 43A	931	$ 39,503,656	$ 91,546,101	231	$ 13,292,098	$ 41,090,106	1,161	$ 52,795,754	$ 132,636,207
MD 43B	185	$ 7,870,738	$ 18,241,142	144	$ 8,692,363	$ 25,048,078	330	$ 16,563,101	$ 43,289,221
MD 44A	678	$ 28,754,096	$ 66,711,336	57	$ 3,257,060	$ 9,306,665	734	$ 32,011,156	$ 76,018,000
MD 44B	949	$ 40,280,994	$ 93,333,068	186	$ 10,382,260	$ 30,030,456	1,135	$ 50,663,254	$ 123,363,524
MD 45	1,072	$ 45,521,414	$ 105,467,124	312	$ 19,205,075	$ 55,232,858	1,384	$ 64,726,488	$ 160,699,982
MD 46	2,505	$ 106,305,625	$ 246,500,138	4,752	$ 280,228,629	$ 793,345,586	7,256	$ 386,534,254	$ 1,039,845,724
MD 47A	1,584	$ 67,228,142	$ 155,937,059	111	$ 6,141,355	$ 17,627,887	1,695	$ 73,369,498	$ 173,564,946
MD 47B	338	$ 14,364,216	$ 33,315,992	6	$ 350,104	$ 944,963	345	$ 14,714,320	$ 34,260,955
Total	99,141	$ 4,207,901,386	$ 9,757,537,309	40,984	$ 2,473,665,734	$ 7,225,547,705	140,125	$ 6,681,567,120	$ 16,983,085,014

Table 22
Economic Impact of Proposed Change in Laws by State Senate District

	Direct			Multiplier			Total		
	Jobs	Wages	Output	Jobs	Wages	Output	Jobs	Wages	Output
MD 1	32	$ 1,338,089	$ 3,117,811	12	$ 786,212	$ 2,181,777	44	$ 2,124,300	$ 5,299,589
MD 2	37	$ 1,570,552	$ 3,658,171	7	$ 407,758	$ 1,187,104	44	$ 1,978,309	$ 4,845,275
MD 3	33	$ 1,409,878	$ 3,286,696	1	$ 31,389	$ 97,020	34	$ 1,441,267	$ 3,383,715
MD 4	2	$ 90,504	$ 219,371	8	$ 461,059	$ 1,409,685	10	$ 551,563	$ 1,629,056
MD 5	14	$ 589,615	$ 1,379,139	2	$ 114,233	$ 324,460	16	$ 703,848	$ 1,703,599
MD 6	15	$ 627,740	$ 1,465,020	12	$ 863,730	$ 2,661,304	26	$ 1,491,470	$ 4,126,323
MD 7	5	$ 220,786	$ 519,822	7	$ 491,223	$ 1,290,003	13	$ 712,009	$ 1,809,825
MD 8	23	$ 992,416	$ 2,317,196	6	$ 378,175	$ 970,618	29	$ 1,370,591	$ 3,287,814
MD 9	9	$ 375,884	$ 881,201	7	$ 380,141	$ 1,128,130	15	$ 756,024	$ 2,009,331
MD 10	5	$ 191,431	$ 449,795	7	$ 443,968	$ 1,279,890	12	$ 635,398	$ 1,729,685
MD 11	18	$ 780,692	$ 1,826,362	3	$ 177,709	$ 533,536	21	$ 958,401	$ 2,359,897
MD 12	15	$ 628,610	$ 1,472,546	4	$ 247,389	$ 684,128	19	$ 875,999	$ 2,156,673
MD 13	36	$ 1,513,356	$ 3,520,383	6	$ 345,454	$ 968,108	42	$ 1,858,810	$ 4,488,492
MD 14	9	$ 360,834	$ 845,074	3	$ 182,271	$ 518,891	11	$ 543,106	$ 1,363,965
MD 15	7	$ 276,122	$ 645,438	3	$ 147,562	$ 442,043	9	$ 423,684	$ 1,087,481
MD 16	24	$ 1,005,777	$ 2,342,802	15	$ 890,822	$ 3,019,439	38	$ 1,896,599	$ 5,362,241
MD 17	24	$ 1,014,287	$ 2,365,876	18	$ 1,117,668	$ 3,589,558	42	$ 2,131,956	$ 5,955,434
MD 18	28	$ 1,197,975	$ 2,787,183	5	$ 283,545	$ 850,095	33	$ 1,481,520	$ 3,637,278
MD 19	18	$ 763,786	$ 1,776,911	4	$ 261,595	$ 773,638	22	$ 1,025,380	$ 2,550,549
MD 20	20	$ 857,208	$ 1,999,084	6	$ 366,385	$ 960,607	26	$ 1,223,594	$ 2,959,691
MD 21	18	$ 779,269	$ 1,820,679	11	$ 596,685	$ 1,665,278	29	$ 1,375,954	$ 3,485,957
MD 22	19	$ 823,316	$ 1,922,685	6	$ 342,259	$ 942,005	26	$ 1,165,575	$ 2,864,690
MD 23	20	$ 841,341	$ 1,959,962	2	$ 86,350	$ 247,905	21	$ 927,691	$ 2,207,868
MD 24	20	$ 860,314	$ 2,007,108	4	$ 273,273	$ 871,419	24	$ 1,133,588	$ 2,878,527
MD 25	15	$ 618,440	$ 1,447,245	6	$ 346,366	$ 1,041,860	21	$ 964,806	$ 2,489,105
MD 26	20	$ 831,601	$ 1,936,851	2	$ 123,401	$ 379,490	22	$ 955,002	$ 2,316,340
MD 27	13	$ 564,082	$ 1,321,552	9	$ 492,112	$ 1,350,453	22	$ 1,056,193	$ 2,672,004
MD 28	9	$ 385,278	$ 904,889	11	$ 599,016	$ 1,755,584	20	$ 984,294	$ 2,660,473
MD 29	14	$ 608,886	$ 1,426,629	8	$ 500,500	$ 1,543,375	23	$ 1,109,385	$ 2,970,004
MD 30	9	$ 374,744	$ 885,502	4	$ 231,634	$ 623,841	13	$ 606,378	$ 1,509,343
MD 31	16	$ 658,030	$ 1,533,587	2	$ 104,266	$ 289,269	17	$ 762,296	$ 1,822,856
MD 32	23	$ 988,594	$ 2,304,757	11	$ 650,437	$ 1,959,322	34	$ 1,639,031	$ 4,264,079
MD 33	6	$ 249,171	$ 586,470	5	$ 276,529	$ 800,317	11	$ 525,700	$ 1,386,787
MD 34	7	$ 282,434	$ 667,822	7	$ 415,202	$ 1,248,127	13	$ 697,637	$ 1,915,949
MD 35	13	$ 540,227	$ 1,260,854	3	$ 153,765	$ 429,182	15	$ 693,992	$ 1,690,036
MD 36	12	$ 503,329	$ 1,190,524	2	$ 123,331	$ 344,437	14	$ 626,659	$ 1,534,960
MD 37	19	$ 783,912	$ 1,845,444	8	$ 542,209	$ 1,691,497	27	$ 1,326,121	$ 3,536,941
MD 38	21	$ 866,808	$ 2,044,774	10	$ 586,758	$ 1,712,044	31	$ 1,453,566	$ 3,756,818
MD 39	27	$ 1,156,445	$ 2,690,206	3	$ 193,774	$ 576,724	30	$ 1,350,220	$ 3,266,930
MD 40	2	$ 80,652	$ 206,166	4	$ 290,413	$ 802,954	6	$ 371,064	$ 1,009,120
MD 41	9	$ 389,872	$ 913,488	1	$ 74,346	$ 257,716	11	$ 464,218	$ 1,171,204
MD 42	13	$ 543,195	$ 1,265,460	12	$ 765,230	$ 2,361,172	25	$ 1,308,425	$ 3,626,633
MD 43	6	$ 240,812	$ 567,658	9	$ 545,307	$ 1,369,600	15	$ 786,119	$ 1,937,258
MD 44	11	$ 456,201	$ 1,068,974	6	$ 340,067	$ 887,843	17	$ 796,268	$ 1,956,817
MD 45	4	$ 185,724	$ 440,582	5	$ 285,681	$ 832,966	9	$ 471,404	$ 1,273,548
MD 46	19	$ 792,700	$ 1,853,235	27	$ 1,521,286	$ 4,204,447	46	$ 2,313,986	$ 6,057,682
MD 47	17	$ 709,998	$ 1,655,672	1	$ 74,616	$ 185,542	18	$ 784,614	$ 1,841,214
Total	754	$ 31,920,916	$ 74,604,657	313	$ 18,913,101	$ 55,244,401	1,067	$ 50,834,017	$ 129,849,058

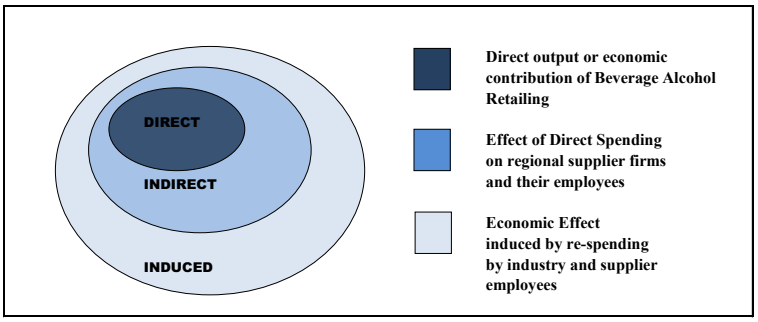
Table 23
Economic Impact of Proposed Change in Laws by State Delegate District

	Direct			Multiplier			Total		
	Jobs	Wages	Output	Jobs	Wages	Output	Jobs	Wages	Output
MD 1A	10	$ 415,165	$ 969,078	3	$ 130,345	$ 340,784	12	$ 545,510	$ 1,309,862
MD 1B	14	$ 605,001	$ 1,407,662	0	$ 9,804	$ 31,160	14	$ 614,805	$ 1,438,822
MD 1C	8	$ 317,922	$ 741,071	3	$ 172,480	$ 520,842	10	$ 490,401	$ 1,261,913
MD 2A	16	$ 690,977	$ 1,609,448	3	$ 182,806	$ 551,937	19	$ 873,783	$ 2,161,385
MD 2B	21	$ 879,575	$ 2,048,723	21	$ 1,255,038	$ 3,645,939	41	$ 2,134,612	$ 5,694,662
MD 3	33	$ 1,409,878	$ 3,286,696	1	$ 80,300	$ 250,618	35	$ 1,490,178	$ 3,537,314
MD 4	2	$ 90,504	$ 219,371	12	$ 816,820	$ 2,304,920	14	$ 907,324	$ 2,524,291
MD 5	14	$ 589,615	$ 1,379,139	3	$ 171,766	$ 479,893	17	$ 761,381	$ 1,859,032
MD 6	15	$ 627,740	$ 1,465,020	2	$ 90,771	$ 283,356	16	$ 718,511	$ 1,748,376
MD 7A	3	$ 120,922	$ 285,480	7	$ 424,254	$ 1,401,400	10	$ 545,176	$ 1,686,880
MD 7B	2	$ 99,864	$ 234,342	0	$ 17,663	$ 46,602	3	$ 117,528	$ 280,944
MD 8	23	$ 992,416	$ 2,317,196	2	$ 137,064	$ 420,590	26	$ 1,129,480	$ 2,737,786
MD 9A	6	$ 270,523	$ 635,227	12	$ 670,760	$ 1,875,640	18	$ 941,284	$ 2,510,867
MD 9B	2	$ 105,360	$ 245,974	1	$ 62,077	$ 176,377	4	$ 167,437	$ 422,352
MD 10	5	$ 191,431	$ 449,795	4	$ 250,795	$ 847,367	8	$ 442,225	$ 1,297,163
MD 11A	8	$ 351,966	$ 817,853	0	$ 9,813	$ 29,243	8	$ 361,779	$ 847,096
MD 11B	10	$ 428,726	$ 1,008,508	12	$ 742,534	$ 2,157,344	22	$ 1,171,260	$ 3,165,852
MD 12A	3	$ 111,897	$ 270,662	0	$ 2,193	$ 5,484	3	$ 114,090	$ 276,146
MD 12B	12	$ 516,713	$ 1,201,884	3	$ 254,347	$ 808,997	16	$ 771,060	$ 2,010,881
MD 13	36	$ 1,513,356	$ 3,520,383	3	$ 186,430	$ 619,022	38	$ 1,699,786	$ 4,139,406
MD 14	9	$ 360,834	$ 845,074	7	$ 368,040	$ 1,027,092	15	$ 728,875	$ 1,872,166
MD 15	7	$ 276,122	$ 645,438	3	$ 145,719	$ 429,974	9	$ 421,841	$ 1,075,412
MD 16	24	$ 1,005,777	$ 2,342,802	10	$ 615,998	$ 1,823,959	34	$ 1,621,775	$ 4,166,762
MD 17	24	$ 1,014,287	$ 2,365,876	1	$ 28,626	$ 75,793	24	$ 1,042,913	$ 2,441,669
MD 18	28	$ 1,197,975	$ 2,787,183	0	$ 20,484	$ 100,975	29	$ 1,218,459	$ 2,888,158
MD 19	18	$ 763,786	$ 1,776,911	0	$ 23,300	$ 64,270	18	$ 787,086	$ 1,841,182
MD 20	20	$ 857,208	$ 1,999,084	16	$ 968,086	$ 2,960,686	36	$ 1,825,295	$ 4,959,770
MD 21	18	$ 779,269	$ 1,820,679	2	$ 98,732	$ 268,147	20	$ 878,001	$ 2,088,826
MD 22	19	$ 823,316	$ 1,922,685	0	$ 6,416	$ 18,199	20	$ 829,732	$ 1,940,884
MD 23	20	$ 841,341	$ 1,959,962	8	$ 445,070	$ 1,184,656	28	$ 1,286,411	$ 3,144,619
MD 24	20	$ 860,314	$ 2,007,108	0	$ 638	$ 1,202	20	$ 860,952	$ 2,008,310
MD 25	15	$ 618,440	$ 1,447,245	2	$ 141,698	$ 442,065	17	$ 760,138	$ 1,889,310
MD 26	20	$ 831,601	$ 1,936,851	7	$ 409,439	$ 1,230,873	27	$ 1,241,040	$ 3,167,724
MD 27A	4	$ 148,500	$ 347,251	2	$ 135,970	$ 376,613	6	$ 284,470	$ 723,864
MD 27B	7	$ 291,758	$ 681,833	4	$ 215,195	$ 783,228	10	$ 506,953	$ 1,465,061
MD 27C	3	$ 123,824	$ 292,467	4	$ 245,242	$ 930,224	6	$ 369,065	$ 1,222,691
MD 28	9	$ 385,278	$ 904,889	2	$ 107,619	$ 295,202	11	$ 492,898	$ 1,200,091
MD 29A	3	$ 111,073	$ 263,367	1	$ 65,173	$ 207,182	4	$ 176,245	$ 470,549
MD 29B	9	$ 364,186	$ 848,913	1	$ 52,575	$ 169,949	9	$ 416,761	$ 1,018,862
MD 29C	3	$ 133,627	$ 314,350	2	$ 145,418	$ 464,458	6	$ 279,045	$ 778,808
MD 30A	9	$ 379,697	$ 890,492	3	$ 145,379	$ 404,709	12	$ 525,076	$ 1,295,201
MD 30B	(0)	$ (4,953)	$ (4,990)	6	$ 407,147	$ 1,396,444	6	$ 402,195	$ 1,391,454
MD 31	16	$ 658,030	$ 1,533,587	7	$ 344,811	$ 1,019,075	22	$ 1,002,842	$ 2,552,662
MD 32	23	$ 988,594	$ 2,304,757	7	$ 409,169	$ 1,141,210	30	$ 1,397,763	$ 3,445,967
MD 33A	5	$ 195,145	$ 455,477	0	$ 4,744	$ 13,980	5	$ 199,889	$ 469,457
MD 33B	(1)	$ (49,121)	$ (110,720)	4	$ 239,490	$ 680,236	3	$ 190,369	$ 569,516
MD 33C	2	$ 103,147	$ 241,713	4	$ 230,849	$ 651,461	7	$ 333,997	$ 893,174
MD 34A	4	$ 165,626	$ 390,826	1	$ 67,313	$ 184,971	5	$ 232,939	$ 575,798
MD 34B	3	$ 116,809	$ 276,996	0	$ 21,341	$ 52,233	3	$ 138,150	$ 329,228
MD 35A	9	$ 378,895	$ 883,312	2	$ 124,009	$ 334,982	11	$ 502,904	$ 1,218,293
MD 35B	4	$ 161,332	$ 377,542	6	$ 368,051	$ 1,084,918	10	$ 529,383	$ 1,462,460
MD 36	12	$ 503,329	$ 1,190,524	8	$ 455,660	$ 1,319,013	20	$ 958,988	$ 2,509,536
MD 37A	7	$ 282,110	$ 665,787	1	$ 57,275	$ 139,836	8	$ 339,385	$ 805,623
MD 37B	12	$ 501,802	$ 1,179,657	40	$ 2,586,975	$ 7,000,928	51	$ 3,088,777	$ 8,180,585
MD 38A	1	$ 58,517	$ 144,891	1	$ 32,038	$ 90,282	2	$ 90,554	$ 235,173
MD 38B	20	$ 850,197	$ 1,978,582	0	$ 11,100	$ 49,189	20	$ 861,297	$ 2,027,771
MD 38C	(1)	$ (41,905)	$ (78,699)	1	$ 63,529	$ 183,154	0	$ 21,624	$ 104,456
MD 39	27	$ 1,156,445	$ 2,690,206	4	$ 233,107	$ 667,065	31	$ 1,389,552	$ 3,357,271
MD 40	2	$ 80,652	$ 206,166	0	$ 2,294	$ 5,973	2	$ 82,946	$ 212,139
MD 41	9	$ 389,872	$ 913,488	3	$ 201,780	$ 587,138	13	$ 591,652	$ 1,500,626
MD 42A	2	$ 96,901	$ 227,432	4	$ 244,389	$ 749,043	6	$ 341,290	$ 976,474
MD 42B	6	$ 234,295	$ 544,237	0	$ 9,357	$ 28,985	6	$ 243,652	$ 573,222
MD 42C	5	$ 211,999	$ 493,791	2	$ 134,537	$ 371,803	7	$ 346,536	$ 865,594
MD 43A	5	$ 198,706	$ 468,531	2	$ 101,629	$ 314,169	6	$ 300,335	$ 782,700
MD 43B	1	$ 42,106	$ 99,127	1	$ 66,460	$ 191,514	2	$ 108,566	$ 290,641
MD 44A	7	$ 278,999	$ 649,584	0	$ 24,903	$ 71,157	7	$ 303,902	$ 720,741
MD 44B	4	$ 177,201	$ 419,390	1	$ 79,381	$ 229,608	6	$ 256,583	$ 648,998
MD 45	4	$ 185,724	$ 440,582	2	$ 146,839	$ 422,302	7	$ 332,563	$ 862,884
MD 46	19	$ 792,700	$ 1,853,235	36	$ 2,142,586	$ 6,065,801	55	$ 2,935,285	$ 7,919,036
MD 47A	14	$ 588,051	$ 1,371,191	1	$ 46,956	$ 134,780	15	$ 635,007	$ 1,505,971
MD 47B	3	$ 121,947	$ 284,481	0	$ 2,677	$ 7,225	3	$ 124,624	$ 291,706
Total	754	$ 31,920,916	$ 74,604,657	313	$ 18,913,275	$ 55,245,447	1,067	$ 50,834,191	$ 129,850,105

Economic Impact Methodology

The economic impact of the beverage retailing industry begins with an accounting of the direct employment in the various sectors – grocery stores, supermarkets and package stores.

It is sometimes mistakenly thought that initial spending accounts for all of the impact of an economic activity or a product. For example, at first glance it may appear that consumer expenditures for a product are the sum total of the impact on the local economy. However, one economic activity always leads to a ripple effect whereby other sectors and industries benefit from this initial spending. This inter-industry effect of an economic activity can be assessed using multipliers from regional input-output modeling.



The economic activities of events are linked to other industries in the state and national economies. The activities required to sell a bottle of wine, from storage, to customer service, to ensuring that sales are made to legal age consumers, generate the direct effects on the economy. Regional (or indirect) impacts occur when these activities require purchases of goods and services such as building materials from local or regional suppliers. Additional, induced impacts occur when workers involved in direct and indirect activities spend their wages in the region. The ratio between total economic impact and direct impact is termed the multiplier. The framework in the chart illustrates these linkages.

This method of analysis allows the impact of local production activities to be quantified in terms of final demand, earnings, and employment in the states and the nation as a whole.

Once the direct impact of the industry has been calculated, the input-output methodology discussed below is used to calculate the contribution of the supplier sector and of the re-spending in the economy by employees in the industry and its suppliers. This induced impact is the most controversial part of economic impact studies and is often quite inflated. In the case of this model, only the most conservative estimate of the induced impact has been used.

This analysis utilizes the IMPLAN model (2022 Tables) in order to quantify the economic impact of the beverage alcohol retailing industry in Maryland.[32] The model adopts an accounting framework through which the relationships between different inputs and outputs across industries and sectors are computed. This model can show the impact of a given economic decision – such as a factory opening or other operation of a sports facility – on a pre-defined, geographic region. It is based on the national income accounts generated by the US Department of Commerce, Bureau of Economic Analysis (BEA). [33]

The analysis begins with the identification of companies and facilities engaged in the retail sales of beverage alcohol. Individual store data are gathered from the 2020 analysis, Data Axle, and from alcohol licensing agencies in Anne Arundel and Montgomery counties.

All of the data sources were combined and duplicate records, or records for companies that did not handle beverage alcohol were eliminated. These data were used for facility-based employment estimates where they existed, with missing data replaced by either jobs per square foot figures, or median job numbers.

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[32] IMPLAN® model, 2022 Data, using inputs provided by the user and IMPLAN Group LLC, IMPLAN System (2024), 16905 Northcross Dr., Suite 120, Huntersville, NC 28078, www.IMPLAN.com.

[33] RIMS II is a product developed by the U.S. Department of Commerce, Bureau of Economic Analysis as a policy and economic decision analysis tool. IMPLAN was originally developed by the US Forest Service, the Federal Emergency Management Agency and the Bureau of Land Management. It was converted to a user-friendly model by the Minnesota IMPLAN Group in 1993.

Once the initial direct employment figures have been established, they are entered into a model linked to the IMPLAN database. The IMPLAN data are used to generate estimates of direct wages and output in each of the retail sectors, as well as the supplier and induced impacts of the industry on the larger economy. IMPLAN was originally developed by the US Forest Service, the Federal Emergency Management Agency and the Bureau of Land Management. It was converted to a user-friendly model by the Minnesota IMPLAN Group in 1993. The IMPLAN data and model closely follow the conventions used in the "Input-Output Study of the US Economy," which was developed by the BEA.

- Wages: Data from the US Department of Labor's ES-202 reports are used to provide annual average wage and salary establishment counts, employment counts and payrolls at the county level. Since this data only covers payroll employees, it is modified to add information on independent workers, agricultural employees, construction employees, and certain government employees. Data are then adjusted to account for counties where non-disclosure rules apply. Wage data include not only cash wages, but health and life insurance payments, retirement payments and other non-cash compensation. It includes all income paid to workers by employees. Further details are available from the IMPLAN at http://www.implan.com.

- Output: Total output is the value of production by industry in a given state. It is estimated by IMPLAN from sources similar to those used by the BEA in its RIMS II series. Where no Census or government surveys are available, IMPLAN uses models such as the Bureau of Labor Statistics Growth model to estimate the missing output.

- Taxes: The model also includes information on income received by the Federal, state and local governments, and produces estimates for the following taxes at the Federal level: Corporate income; payroll, personal income, estate and gift, and excise taxes, customs duties; and fines, fees, etc. State and local tax revenues include estimates of: Corporate profits, property, sales, severance, estate and gift and personal income taxes; licenses and fees and certain payroll taxes.

While IMPLAN is used to calculate the state level impacts, Data Axle data provide the basis for congressional and state legislative district, and county level estimates. Publicly available data at the county and Congressional district level is limited by disclosure restrictions, especially for smaller sectors of the economy. The model uses actual physical location data provided by Data Axle in order to allocate jobs – and the resulting economic activity – by physical address or when that is not available, zip code. For zips entirely contained in a single congressional district, jobs are allocated based on the percentage of total sector jobs in each zip. For zips that are broken by congressional districts, allocations are based on the percentage of total jobs physically located in each segment of the zip. Physical locations are based on either the actual address of the facility, or the zip code of the facility, with facilities placed randomly throughout the zip code area. All supplier and indirect jobs are allocated based on the percentage of a state's employment in that sector in each of the districts. Again, these percentages are based on Infogroup data.

IMPLAN Methodology[34]

Francois Quesnay, one of the fathers of modern economics, first developed the analytical concept of inter-industry relationships in 1758. The concept was actualized into input-output analysis by Wassily Leontief during the Second World War, an accomplishment for which he received the 1973 Nobel Prize in Economics.

Input-Output analysis is an econometric technique used to examine the relationships within an economy. It captures all monetary market transactions for consumption in a given period and for a specific geography. The IMPLAN model uses data from many different sources such as published government

[34] This section is paraphrased from IMPLAN Professional: Users Guide, Analysis Guide, Data Guide, Version 2.0, MIG, Inc., June 2000.

data series, unpublished data, sets of relationships, ratios, or as estimates. The Minnesota IMPLAN group gathers this data, converts it into a consistent format, and estimates the missing components.

There are three different levels of data generally available in the United States: federal, state and county. Most of the detailed data is available at the county level, and as such there are many issues with disclosure, especially in the case of smaller industries. IMPLAN overcomes these disclosure problems by combining a large number of datasets and by estimating those variables that are not found from any of them. The data is then converted into national input-output matrices (Use, Make, By-products, Absorption and Market Shares) as well as national tables for deflators, regional purchase coefficients and margins.

The IMPLAN Make matrix represents the production of commodities by industry. The Bureau of Economic Analysis (BEA) Benchmark I/O Study of the US Make Table forms the basis of the IMPLAN model. The Benchmark Make Table is updated to current year prices and rearranged into the IMPLAN sector format. The IMPLAN Use matrix is based on estimates of final demand, value-added by sector and total industry and commodity output data as provided by government statistics or estimated by IMPLAN. The BEA Benchmark Use Table is then bridged to the IMPLAN sectors. Once the re-sectoring is complete, the Use Tables can be updated based on the other data and model calculations of interstate and international trade.

In the IMPLAN model, as with any input-output framework, all expenditures are in terms of producer prices. This allocates all expenditures to the industries that produce goods and services. As a result, all data not received in producer prices is converted using margins which are derived from the BEA Input-Output model. Margins represent the difference between producer and consumer prices. As such, the margins for any good add to one. If, for example, 10 percent of the consumer price of a bottle of wine is from the purchase of electricity, then the electricity margin would be 0.1.

Deflators, which account for relative price changes during different time periods, are derived from the Bureau of Labor Statistics (BLS) Growth Model. The BLS model is mapped to the 546 sectors of the IMPLAN model. Where data are missing, deflators from BEA's Survey of Current Businesses are used.

Finally, one of the most important parts of the IMPLAN model, the Regional Purchase Coefficients (RPCs) must be derived. IMPLAN is derived from a national model, which represents the "average" condition for a particular industry. Since national production functions do not necessarily represent particular regional differences, adjustments need to be made. Regional trade flows are estimated based on the Multi-Regional Input-Output Accounts, a cross-sectional database with consistent cross interstate trade flows developed in 1977. These data are updated and bridged to the 546 sector IMPLAN model.

Once the databases and matrices are created, they go through an extensive validation process. IMPLAN builds separate state and county models and evaluates them, checking to ensure that no ratios are outside of recognized bounds. The final datasets and matrices are not released before extensive testing takes place.

About John Dunham & Associates

John Dunham & Associates is a leading Florida-based economic consulting firm specializing in the economics of fast-moving issues. JDA is an expert at translating complex economic concepts into clear, easily understandable messages that can be transmitted to any audience. Its clients include a wide variety of businesses and organizations, including some of the largest Fortune 500 companies in America.

John Dunham is a professional economist with over 30 years of experience. He has worked as a manager and an analyst in both the public and private sectors, conducting cost-benefit modeling, industry analysis, transportation analysis, economic research and tax and fiscal analysis.

As a senior economist for Philip Morris, he developed tax-analysis programs, increased cost-center productivity and created economic research operations. He has presented testimony on economic and technical issues in federal court and before state and federal agencies. Prior to Phillip Morris, Dunham was an economist with the Port Authority of New York and New Jersey, the Philadelphia Regional Port Authority, and the City of New York's Department of Ports & Trade.

He earned a Master of Arts degree in economics from the New School for Social Research and a Master of Business Administration degree from Columbia University. He also has a professional certificate in logistics from New York University.