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

Prepared for the:



Prepared by:



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Introduction and Executive Summary

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.

Table 1 Grocery Store Alcohol Sales by Restrictions

	Number of	
	States	Percent
No Sales	7	13.7%
Beer Only	9	17.6%
Beer and Wine	15	29.4%
Total Beverage Alcohol	20	39.2%
Total	51	100.0%

While all of Maryland's counties allow for the sale of beer and wine in stores beyond package liquor stores, the majority of Maryland's 24 county-equivalent jurisdictions limit the number of retailers allowed to sell alcohol, and access to beer and wine is quite limited. Equivalently stringent restrictions exist in only 6 other states.¹

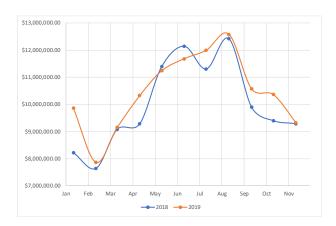
Over the last several years, states have been loosening the restrictions on grocery store sales of beer and wine. In 2016, the Commonwealth of Pennsylvania, a state with some of the most restrictive beverage alcohol sales laws in the country, began allowing certain grocers to sell up to four bottles 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.²

http://www.revenue.pa.gov/GeneralTaxInformation/News%20 and %20 Statistics/Pages/Reports%20 and %20 Statistics/MRR/2016%20 Monthly%20 Revenue%20 Reports.aspx#.WHj0ZhsrKUk

¹ Alaska, Delaware, Minnesota, New Jersey, North Dakota, and Rhode Island

Monthly Revenue Report, Pennsylvania Department of Revenue, at:

Figure 1 Colorado Growth in Beer Excise Tax Collection



At the beginning of 2019, the state of Colorado loosened its restrictions on sales of beer by grocery retailers. 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. While the law has only been in place for a year, data collected by the Colorado Department of Revenue has demonstrated an increase in beer sales in the period following the passage of the law, with growth near 7.5 percent over the years prior.³

According to the Food Marketing Institute, consumers average 1.6 trips to the supermarket per week.⁴ Maryland's restrictions on beer and wine sales at these stores limit taxable sales, and cost the state jobs and tax revenues. Based on this analysis of the Maryland retail economy, allowing beer and wine to be sold in additional food retailers (as is allowed in 15 states) would increase overall alcohol sales in Maryland by \$192.8 million resulting in 760 net additional retail jobs and \$24.1 million in increased tax revenues.⁵

Table 2
Potential Impact of Allowing Non-Package Store Beer and Wine Sales in Maryland

	Net Sales	Net Job	Net Tax
	Increase	Increase	Increase
Allowing Beers Sales	\$146,262,000	576	\$18,270,000
Allowing Wine Sales	\$46,611,000	184	\$5,903,000
Total Impact	\$192,873,000	760	\$24,173,000

Beverage Alcohol Retailing in Maryland

While the regulations and licensing governing firms involved in distributing and selling alcoholic products is handled primarily by county governments in Maryland, the State Comptroller maintains a database of licensed businesses for the purpose of tracking collection of excise taxes. This includes licenses for retailers that sell for on-premise consumption, 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.

³ Liquor Excise Taxes, Colorado Department of Revenue, at:https://www.colorado.gov/pacific/revenue/colorado-liquor-excise-taxes

⁴ 2016 figures. See: http://www.fmi.org/research-resources/supermarket-facts

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

As of February of 2020, a total of 929 package stores in Maryland had been authorized to sell liquor, wine and beer, and 603 additional stores had also been licensed to sell beer and 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 25 government-controlled establishments. Other counties with significant percentages of retailers allowed to sell beer and wine include: Worcester (56 percent), Dorchester (34 percent), Somerset (33 percent), Garrett (32 percent) and Wicomico (31 percent). Table 3 on the following page shows the number of retailers by county.

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

County	Package	Food Beer/Wine	Total Alcohol	Food No Beer Wine
Allegany MD	3	14	17	49
Anne Arundel MD	84	25	109	276
Baltimore City MD	175	61	236	521
Baltimore MD	167	25	192	487
Calvert MD	26	14	40	33
Caroline MD	7	6	13	27
Carroll MD	34	4	38	81
Cecil MD	20	11	31	67
Charles MD	24	17	41	71
Dorchester MD	9	18	27	26
Frederick MD	53	33	86	124
Garrett MD	-	15	15	32
Harford MD	39	11	50	133
Howard MD	55	7	62	117
Kent MD	10	5	15	20
Montgomery MD	1	167	168	407
Prince George's MD	125	33	158	544
Queen Anne's MD	16	6	22	25
Somerset MD	2	10	12	18
St. Mary's MD	33	9	42	50
Talbot MD	6	7	13	31
Washington MD	32	8	40	91
Wicomico MD	5	43	48	91
Worcester MD	3	54	57	40
Total	929	603	1,532	3,361

Based on data from the State, a total of 108 million gallons of beer and wine were sold in Maryland through off-premise retailers and on-premise establishments like hotels, restaurants, taverns, and stadiums in FY 2019, generating a total of \$14.7 million in excise tax payments.⁶

Table 4
Total Beverage Alcohol Sales and Tax Collections in Maryland

	Volume Sales	Excise Tax Collections
Beer	92,821,408	\$8,353,927
Wine	15,932,914	\$6,373,165
Subtotal	108,754,321	\$14,727,092
Spirits	11,620,969	\$17,431,453
Total	229,129,612	\$46,885,637

⁶ Comptroller of Maryland, General Accounting Division, https://www.marylandtaxes.gov/finances/revenue/detailview/default.aspx

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

While the state of Maryland identifies the company that is licensed to sell alcohol, the licensee is not always the same as the name of the store. In addition, the state does not differentiate between licensees in terms of size and provides no employment data. Licenses were therefore linked to detailed business data provided by Infogroup.⁷ The Infogroup database provides information on the address of businesses in the United States, along with data on total full-time equivalent employment and estimates of sales. 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 over 3,700 food retailers in the Old Line State.

Table 5 Current and Potential Off-Premise Beverage Alcohol Retailers in Maryland

-		Stores	Jobs	Jobs/Store
Stores Currently	Package Stores	929	4,519	4.86
Selling Alcohol	Other Stores	603	3,437	5.70
	Convenience Stores	1,627	15,002	9.22
Potential	Variety Stores	370	3,571	9.65
Off-Premise	Grocery Stores	1,019	17,993	17.66
Alcohol Retailers	Supermarkets and Superstores	317	47,992	151.39
	Warehouse Clubs	34	5,695	167.50

Table 5 shows the current number of licensed stores (and their associated employment) as well as the number of additional stores that could be licensed to sell wine and spirits under an expansion of the licensing regime.

Table 6
Economic Impact of the Food Retailing Industry in Maryland

	Direct	Supplier	Induced	Total
Jobs	91,682	16,994	22,300	130,976
Wages	\$3,539,855,000	\$1,120,689,000	\$1,237,684,000	\$5,898,228,000
Economic Output	\$7,822,444,000	\$3,047,441,000	\$3,703,714,000	\$14,573,598,000
Federal Taxes				\$1,261,296,000
State and Local Taxes				\$1,379,338,000

Overall, food retailers in Maryland provide over 91,600 full-time equivalent jobs, paying \$3.5 billion in wages and benefits. In addition, nearly 17,000 jobs are generated in Maryland based firms that supply

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Job numbers are from Infogroup, the leading provider of business and consumer data for the top search engines and leading in-car navigation systems in North America. Infogroup gathers data from a variety of sources, by sourcing, refining, matching, appending, filtering, and delivering the best quality data. Infogroup 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.

grocery retailers with services and equipment that they need to operate like shelving, electricity, or accounting services. The re-spending of wages received by the 91,682 food retail employees and the 16,994 people working in supplier firms generates an additional 22,300 jobs in the Maryland economy.

All told, the grocery retailing industry creates nearly \$14.6 billion in economic activity in the state, and generates \$1.4 billion in various state and local taxes (not including excise and sales taxes on the products sold to consumers). Table 6 on the prior page outlines the overall economic impact of the grocery industry in the state. ¹⁰

Table 7
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	7,956	1,459	2,026	11,441
Wages	\$330,226,000	\$93,111,000	\$112,439,000	\$535,775,000
Economic Output	\$690,036,000	\$262,391,000	\$336,426,000	\$1,288,853,000
Federal Taxes				\$111,643,000
State and Local Taxes				\$105,800,000

While grocery retailers are responsible for over 91,600 full-time equivalent jobs in Maryland, the off-premise alcohol retailing industry is much smaller. The 1,532 stores in the state employ about 7,960 full-time equivalent workers, and pay just over \$330.2 million in wages and benefits. In total, about 11,441 full-time equivalent positions in the state are dependent on off-premise alcohol sales. These stores generate just under \$1.29 billion in economic activity and drive about \$105.8 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 3,360 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 sales of beer and wine in Maryland can be calculated by multiplying the average prices by the volume data shown in Table 4.

Table 8
Current Beer and Wine Sales in Maryland

	Volume (gallons)	Average Price (per gallon)	Sales
Beer	92,821,408	\$18.07	\$1,676,939,000
Wine	15,932,914	\$59.74	\$951,793,000
Total	108,754,321	n/a	\$2,628,732,000

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

Job numbers are from Infogroup. Where jobs are not available estimated using median job numbers.

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.

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

These numbers represent the current sales of beer and wine by package stores and other retailers currently licensed to sell beer and wine in Maryland. A mathematical model is used to derive the impact of a 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. The tables on the following page are the output of seasonally adjusted semi-logarithmic regression models to measure such changes.

Table 9
Regression Outputs Measuring Impact of Policy Changes in Colorado and Oklahoma

Percent Effect on Pack	age Store Emplo	oyment		Percent Effect on Sales	s Volume		
Variable Name	Coeffecient	P-Value	Signficance	Variable Name	Coeffecient	P-Value	Signficance
Year	2.04%	0.00	0.99	Year	0.67%	0.01	0.98
Policy Change	-3.71%	0.00	0.99	Policy Change	7.34%	0.00	0.99
January	1.45%	0.31	Not significant	January	-11.79%	0.01	0.99
February	0.80%	0.57	Not significant	February	-17.76%	0.00	0.99
March	1.49%	0.29	Not significant	March	-0.58%	0.89	Not significant
April (baseline)	0.00%	0.00	0.99	April (baseline)	2.99%	0.00	1.00
May	1.13%	0.43	Not significant	May	10.52%	0.02	0.98
June	2.74%	0.06	0.94	June	19.75%	0.00	0.99
July	1.60%	0.29	Not significant	July	15.79%	0.00	0.99
August	0.97%	0.52	Not significant	August	22.51%	0.00	0.99
September	2.61%	0.09	0.91	September	6.76%	0.11	Not significant
October	4.74%	0.00	0.99	October	0.59%	0.89	Not significant
November	5.35%	0.00	0.99	November	-5.58%	0.19	Not significant
December	5.96%	0.00	0.99	December	-2.70%	0.55	Not significant
Model F Statistic:	6.446	R^2 :	0.6769	Model F Statistic	17.04	R^2 :	0.8164
Model Signficance:	0.99	Adjusted R ² :	0.5719	Model Signficance	0.99	Adjusted R ² :	0.7685

Using data collected over the last half decade on employment in package stores in Oklahoma and Colorado, two states which recently passed similar measures to the policy change advocated for in Maryland, it is possible to model the percent change that occurs due to opening sales of beer and wine to retail food stores. The model shows that, despite beer and wine sales constituting a core part of package store's business, there is only a 3.7 percent decline in employment in that sector.¹²

Table 10
Estimated New Off-Premise Beverage Alcohol Sales from Food Retailers in Maryland

	Beer	Wine	Total
Food Retailer Sales	\$196,877,000	\$93,548,000	\$290,425,000
"Cannibalized" Package Store Sales	-\$50,615,000	-\$46,937,000	-\$97,552,000
Net Change in Sales	\$146,262,000	\$46,611,000	\$192,873,000

Multiplying the sales figures in Table 8 by the rates from the regression models, provides an estimate of additional sales of about \$290.4 million for food retailers, with an associated \$97.6 million decline in sales for current retailers of alcohol, netting \$192.8 million in additional sales for retailers across the state of Maryland. In volume terms, the net sales increase in Maryland is estimated to be 86.3 million additional bottles of beer and about 3.9 million bottles of wine. (See Table 11 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,

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

there is a significant 7.3 percent increase in overall sales of beer and wine in these states. 13,14 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, 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. 15

Table 11 Estimated Effect of Proposal on Beer and Wine Sales by Volume, Sales and Excise Tax Collection

	Net Volume Increase	Net Volume Increase	Net Sales	Net Tax
	(gallons)	(bottles)	Increase	Increase
Beer Sales	8,096,000	86,311,000	\$146,262,000	\$18,270,000
Wine Sales	780,000	3,939,000	\$46,611,000	\$5,903,000
Total Impact	8,876,000	90,250,000	\$192,873,000	\$24,173,000

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 86.3 million 12 oz bottles (or 18.4 bottles per adult in the state), and wine sales by 3.9 million 750 ml bottles (or 0.84 bottles per adult).¹⁶

Table 12 **Estimated New Revenue from Wine Sales in Food Retailers**

Revenue Source	From Beer	From Wine	Total
Sales Taxes	\$8,776,000	\$2,797,000	\$11,573,000
Excises Taxes	\$729,000	\$312,000	\$1,041,000
Corporate Taxes	\$8,765,000	\$2,794,000	\$11,559,000
Total	\$18,270,000	\$5,903,000	\$24,173,000

¹³ Colorado Department of Revenue, Liquor Excise Taxes, https://www.colorado.gov/pacific/revenue/colorado-liquor-excise-taxes

¹⁴ Oklahoma Tax Commission, Oklahoma Taxpayer Access Point, https://oktap.tax.ok.gov/OkTAP/Web/_/#12

¹⁵ Malt. Beverages. Distributors. Ass'n. v. PA Liquor Control Board, 8 A. 3d 885 (Pa. 2010) ("Wegmans").

Based on US Census Estimates, https://www.census.gov/quickfacts/MD

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 \$18.3 million in new taxes from beer sales and \$5.9 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 \$24.2 million.

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 analyses¹⁷. As Table 13 below shows, JDA estimates that 760 new jobs (on net) would be directly created in the retailing sectors as a result of the change in sales, with supermarkets gaining about 1,144 jobs and package stores losing 384 jobs.

Table 13
Estimated Direct Economic Impact in Terms of Jobs

	Food Retailers	Package Stores	Total
Jobs from Beer Sales	775	(199)	576
Jobs from Wine Sales	368	(185)	184
Total Job Change	1,144	(384)	760

These new retailing jobs will also create new supplier and induced economic activity in the state. In addition to the 760 new jobs created in retailing locations, this loosening of sales restrictions will create 135 additional jobs in firms that supply those retailers with the goods and services that they need to operate, and an additional 175 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 \$45.6 million in additional wages and benefits as a result of this change and the state economy will grow by \$114.2 million.

Table 14 Estimated Economic Impact from Change

	Direct	Supplier	Induced	Total
Jobs	760	135	175	1,069
Wages	\$27,017,800	\$9,034,545	\$9,572,049	\$45,624,394
Economic Output	\$61,555,690	\$24,015,806	\$28,631,801	\$114,203,297
Federal Taxes				\$9,942,951
State and Local Taxes				\$11,559,749

In addition to the \$12.6 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 \$11.6 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.

Conclusions

Maryland has an opportunity to 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

See the appendix titled "Economic Impact Methodology" for more detail on input-output analysis and IMPLAN

consumers gain convenience and greater access to lower-priced products. All told, as many as 1,069 new jobs could be created in Maryland simply by eliminating these prohibition era restrictions.

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 could receive as much as \$12.6 million in new excise and sales 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.

Appendix A Economic Impact of Package Stores by State Senate District

		Package Stor	·e			Multiplier			Total	
District	Jobs	Wages		Output	Jobs	Wages	Output	Jobs	Wages	Output
MD 1	33	\$ 1,369,720	\$	2,862,140	39	\$ 2,418,490	\$ 7,334,410	72	\$ 3,788,210	\$ 10,196,550
MD 2	129	\$ 5,354,350	\$	11,188,360	40	\$ 2,322,850	\$ 6,660,150	169	\$ 7,677,200	\$ 17,848,510
MD 3	142	\$ 5,893,930	\$	12,315,870	38	\$	\$ 6,079,840	180	\$ 8,048,020	\$ 18,395,710
MD 4	126	\$ 5,229,830	\$	10,928,170	38	\$	\$ 5,691,690	164	\$ 7,357,080	\$ 16,619,860
MD 5	107	\$ 4,441,200	\$	9,280,270	29	\$	\$ 4,370,980	136	\$ 6,007,130	\$ 13,651,250
MD 6	91	\$ 3,777,100	\$	7,892,570	31	\$	\$ 5,122,890	122	\$ 5,698,200	\$ 13,015,460
MD 7	96	\$ 3,963,880	\$	8,282,860	25	\$	\$ 4,569,290	121	\$ 5,392,890	\$ 12,852,150
MD 8	74	\$ 3,071,490	\$	6,418,130	37	\$ 1,892,920	\$ 5,279,760	111	\$ 4,964,410	\$ 11,697,890
MD 9	117	\$ 4,856,270	\$	10,147,590	32	\$	\$ 4,992,180	149	\$ 6,581,510	\$ 15,139,770
MD 10	97	\$ 4,026,140	\$	8,412,960	28	\$	\$ 4,979,410	125	\$ 5,621,850	\$ 13,392,370
MD 11	98	\$ 4,067,640	\$	8,499,690	67	\$ 4,339,430	\$ 12,630,380	165	\$ 8,407,070	\$ 21,130,070
MD 12	208	\$ 8,633,360	\$	18,040,150	53	\$	\$ 8,972,780	261	\$ 11,843,700	\$ 27,012,930
MD 13	159	\$ 6,599,540	\$	13,790,310	82	\$	\$ 13,805,350	241	\$ 11,729,780	\$ 27,595,660
MD 14	-	\$ -	\$	-	30	\$ 1,627,360	\$ 4,617,170	30	\$ 1,627,360	\$ 4,617,170
MD 15	-	\$ -	\$	-	42	\$	\$ 7,860,160	42	\$ 2,432,130	\$ 7,860,160
MD 16	-	\$ -	\$	-	82	\$ 5,189,690	\$ 17,630,940	82	\$ 5,189,690	\$ 17,630,940
MD 17	-	\$ -	\$	-	58	\$ 3,431,830	\$ 10,891,950	58	\$ 3,431,830	\$ 10,891,950
MD 18	4	\$ 166,030	\$	346,930	59	\$	\$ 10,575,020	63	\$ 3,718,990	\$ 10,921,950
MD 19	-	\$ -	\$	-	27	\$	\$ 4,358,950	27	\$ 1,377,210	\$ 4,358,950
MD 20	-	\$ -	\$	-	36	\$	\$ 6,205,020	36	\$ 2,210,210	\$ 6,205,020
MD 21	116	\$ 4,814,760	\$	10,060,860	58	\$ 3,227,000	\$ 8,472,790	174	\$ 8,041,760	\$ 18,533,650
MD 22	66	\$ 2,739,430	\$	5,724,280	38	\$ 2,326,180	\$ 6,760,090	104	\$ 5,065,610	\$ 12,484,370
MD 23	65	\$ 2,697,930	\$	5,637,550	30	\$ 1,673,260	\$ 5,494,990	95	\$ 4,371,190	\$ 11,132,540
MD 24	104	\$ 4,316,680	\$	9,020,080	25	\$	\$ 4,075,060	129	\$ 5,780,040	\$ 13,095,140
MD 25	130	\$ 5,395,850	\$	11,275,100	25	\$	\$ 4,289,140	155	\$ 6,754,710	\$ 15,564,240
MD 26	107	\$ 4,441,200	\$	9,280,270	22	\$	\$ 3,996,960	129	\$ 5,641,120	\$ 13,277,230
MD 27	119	\$ 4,939,280	\$	10,321,050	30	\$ 1,715,320	\$ 6,086,500	149	\$ 6,654,600	\$ 16,407,550
MD 28	99	\$ 4,109,150	\$	8,586,420	34	\$	\$ 5,512,280	133	\$ 5,818,350	\$ 14,098,700
MD 29	156	\$ 6,475,020	\$	13,530,120	26	\$ 1,528,510	\$ 5,156,960	182	\$ 8,003,530	\$ 18,687,080
MD 30	196	\$ 8,135,290	\$	16,999,380	47	\$	\$ 7,261,550	243	\$ 10,679,630	\$ 24,260,930
MD 31	107	\$ 4,441,200	\$	9,280,270	29	\$	\$ 4,453,350	136	\$ 5,918,900	\$ 13,733,620
MD 32	73	\$ 3,029,980	\$	6,331,400	65	\$	\$ 10,689,270	138	\$ 6,715,100	\$ 17,020,670
MD 33	81	\$ 3,362,030	\$	7,025,250	52	\$	\$ 7,624,590	133	\$ 6,036,690	\$ 14,649,840
MD 34	132	\$ 5,478,870	\$	11,448,560	26	\$	\$ 4,316,410	158	\$ 7,069,600	\$ 15,764,970
MD 35	115	\$ 4,773,250	\$	9,974,120	50	\$	\$ 7,208,700	165	\$ 7,566,620	\$ 17,182,820
MD 36	200	\$ 8,301,310	\$	17,346,300	49	\$ 2,990,550	\$ 10,178,690	249	\$ 11,291,860	\$ 27,524,990
MD 37	83	\$ 3,424,290	\$	7,155,350	73	\$ 4,415,510	\$ 11,872,000	155	\$ 7,839,800	\$ 19,027,350
MD 38	61	\$ 2,531,900	\$	5,290,620	48	\$ 2,702,090	\$ 7,859,500	109	\$ 5,233,990	\$ 13,150,120
MD 39	-	\$ -	\$	-	25	\$ 1,500,580	\$ 5,022,590	25	\$ 1,500,580	\$ 5,022,590
MD 40	192	\$ 7,969,260	\$	16,652,450	58	\$	\$ 9,730,770	250	\$ 11,793,150	\$ 26,383,220
MD 41	57	\$ 2,365,870	\$	4,943,700	29	\$ 1,871,630	\$ 4,708,370	86	\$ 4,237,500	\$ 9,652,070
MD 42	203	\$ 8,425,830	\$	17,606,500	67	\$	\$ 12,188,740	270	\$ 12,554,790	\$ 29,795,240
MD 43	110	\$ 4,565,720	\$	9,540,470	23	\$	\$ 3,606,230	133	\$ 6,033,330	\$ 13,146,700
MD 44	114	\$ 4,731,750	\$	9,887,390	27	\$ 1,583,970	\$ 4,492,310	141	\$ 6,315,720	\$ 14,379,700
MD 45	107	\$ 4,441,200	\$	9,280,270	45	\$ 2,996,030	\$ 8,158,830	152	\$ 7,437,230	\$ 17,439,100
MD 46	104	\$ 4,316,680	\$	9,020,080	85	\$ 5,463,260	\$ 14,843,490	189	\$ 9,779,940	\$ 23,863,570
MD 47	142	\$ 5,893,930	\$	12,315,870	21	\$ 1,186,210	\$ 3,439,090	163	\$ 7,080,140	\$ 15,754,960
Total	4,519	\$ 187,568,140	\$	391,939,710	1,979	\$ 116,751,810	\$ 340,127,570	6,498	\$ 304,319,950	\$ 732,067,280

Appendix B Economic Impact of Package Stores by State Delegate District

			Package Sto	re				Multiplier					Total	_	
District	Jobs		Wages		Output	Jobs		Wages		Output	Jobs		Wages		Output
MD 1A	-	\$	-	\$	-	13	\$	775,090	\$	2,381,680	13	\$	775,090	\$	2,381,680
MD 1B	13	\$	539,585	\$	1,127,510	13	\$	802,091	\$	2,428,307	26	\$	1,341,677	\$	3,555,817
MD 1C	20	\$	830,131	\$	1,734,630	14	\$	841,308	\$	2,524,423	34	\$	1,671,439	\$	4,259,053
MD 2A MD 2B	68 61	\$ \$	2,822,446 2,531,900	\$ \$	5,897,743 5,290,622	35 5	\$ \$	2,048,610 274,238	\$ \$	5,836,443 823,711	103 66	\$ \$	4,871,056 2,806,138	\$ \$	11,734,186 6,114,333
MD 3A	103	\$	4,275,175	\$	8,933,346	18	۶ \$	1,020,893	\$	2,918,396	121	۶ \$		\$	11,851,742
MD 3B	39	\$	1,618,756	\$	3,382,529	21	\$	1,133,201	\$	3,161,447	60	\$	2,751,957	\$	6,543,976
MD 4	126	\$	5,229,826	\$	10,928,170	38	\$	2,127,254	\$	5,691,684	164	\$	7,357,080	\$	16,619,855
MD 5	107	\$	4,441,202	\$	9,280,272	29	\$	1,565,934	\$	4,370,979	136	\$	6,007,135	\$	13,651,251
MD 6	91	\$	3,777,097	\$	7,892,568	31	\$	1,921,105	\$	5,122,885	122	\$		\$	13,015,453
MD 7	96	\$	3,963,876	\$	8,282,859	25	\$	1,429,011	\$	4,569,289	121	\$	5,392,887	\$	12,852,148
MD 8	74	\$	3,071,485	\$	6,418,132	37	\$	1,892,915	\$	5,279,755	111	\$	4,964,400	\$	11,697,887
MD 9A	98	\$	4,067,643	\$	8,499,688	23	\$	1,197,937	\$	3,373,066	121	\$	5,265,579	\$	11,872,754
MD 9B	19	\$	788,625	\$	1,647,899	9	\$	527,298	\$	1,619,113	28	\$	1,315,922	\$	3,267,012
MD 10	97	\$	4,026,136	\$	8,412,957	28	\$	1,595,708	\$	4,979,411	125	\$		\$	13,392,368
MD 11	98	\$	4,067,643	\$	8,499,688	67	\$	4,339,435	\$	12,630,377	165	\$	8,407,077	\$	21,130,065
MD 12	208	\$	8,633,364	\$	18,040,154	53	\$	3,210,338	\$	8,972,780	261	\$	11,843,702	\$	27,012,935
MD 13	159	\$	6,599,543	\$	13,790,310	82	\$	5,130,239	\$	13,805,353	241	\$		\$	27,595,663
MD 14	-	\$	-	\$	-	30	\$	1,627,357	\$	4,617,168	30	\$	1,627,357	\$	4,617,168
MD 15	-	\$ \$	-	\$ \$	-	42 82	\$ \$	2,432,128	\$ \$	7,860,160 17,630,944	42 82	\$ \$	2,432,128	\$ \$	7,860,160
MD 16 MD 17	-	۶ \$	-	\$	-	58	\$ \$	5,189,694 3,431,829	\$	10,891,948	58	۶ \$	5,189,694 3,431,829	\$ \$	17,630,944 10,891,948
MD 18	4	\$	166,026	\$	346,926	59	\$	3,552,956	\$	10,575,020	63	\$	3,718,983	\$	10,921,946
MD 19		\$	-	\$	340,320	27	\$	1,377,212	\$	4,358,953	27	\$	1,377,212		4,358,953
MD 20	_	\$	_	\$	_	36	\$	2,210,211	\$	6,205,016	36	\$		\$	6,205,016
MD 21	116	\$	4,814,761	\$	10,060,855	58	\$	3,226,997	\$	8,472,788	174	\$	8,041,757	\$	18,533,644
MD 22	66	\$	2,739,433	\$	5,724,280	38	\$	2,326,185	\$	6,760,086	104	\$	5,065,617	\$	12,484,366
MD 23A	14	\$	581,092	\$	1,214,241	6	\$	348,875	\$	997,597	20	\$	929,967	\$	2,211,838
MD 23B	51	\$	2,116,834	\$	4,423,307	23	\$	1,324,380	\$	4,497,392	74	\$	3,441,214	\$	8,920,699
MD 24	104	\$	4,316,682	\$	9,020,077	25	\$	1,463,362	\$	4,075,056	129	\$	5,780,044	\$	13,095,133
MD 25	130	\$	5,395,852	\$	11,275,097	25	\$	1,358,861	\$	4,289,140	155	\$	6,754,713	\$	15,564,237
MD 26	107	\$	4,441,202	\$	9,280,272	22	\$	1,199,922	\$	3,996,961	129	\$		\$	13,277,233
MD 27A	18	\$	747,118	\$	1,561,167	10	\$	556,732	\$	2,082,726	28	\$	1,303,850	\$	3,643,894
MD 27B	42	\$	1,743,275	\$	3,642,723	10	\$	611,778	\$	2,249,593	52	\$	2,355,054	\$	5,892,317
MD 27C	59	\$	2,448,887	\$	5,117,159	10	\$	546,806	\$	1,754,178	69	\$	2,995,693	\$	6,871,337
MD 28 MD 29A	99 47	\$ \$	4,109,149 1,950,808	\$ \$	8,586,420 4,076,381	34 5	\$ \$	1,709,203 369,531	\$ \$	5,512,280	133 52	\$ \$		\$ \$	14,098,700 5,471,706
MD 29B	57	۶ \$	2,365,874	\$	4,070,381	10	۶ \$	541,308	\$	1,395,325 1,489,481	67	۶ \$	2,320,339 2,907,182	\$	6,433,177
MD 29C	52	\$	2,158,341	\$	4,510,039	11	\$	617,674	\$	2,272,158	63	\$	2,776,015	\$	6,782,196
MD 30A	129	\$	5,354,346	\$	11,188,365	37	\$	2,049,460	\$	5,870,974	166	\$	7,403,806	\$	17,059,339
MD 30B	67	\$	2,780,939	\$	5,811,011	10	\$	494,885	\$	1,390,575	77	\$	3,275,824	\$	7,201,586
MD 31A	25	\$	1,037,664	\$	2,168,288	9	\$	451,102	\$	1,352,598	34	\$	1,488,766	\$	3,520,886
MD 31B	82	\$	3,403,538	\$	7,111,984	20	\$	1,026,601	\$	3,100,744	102	\$	4,430,139	\$	10,212,728
MD 32	73	\$	3,029,979	\$	6,331,400	65	\$	3,685,124	\$	10,689,273	138	\$	6,715,103	\$	17,020,673
MD 33	81	\$	3,362,031	\$	7,025,252	52	\$	2,674,659	\$	7,624,590	133	\$	6,036,690	\$	14,649,843
MD 34A	78	\$	3,237,511	\$	6,765,058	17	\$	1,002,394	\$	2,705,769	95	\$	4,239,906	\$	9,470,827
MD 34B	54	\$	2,241,354	\$	4,683,502	10	\$	588,340	\$	1,610,639	64	\$		\$	6,294,141
MD 35A	33	\$	1,369,716	\$	2,862,140	26	\$	1,508,578	\$	3,607,506	59		2,878,295	\$	6,469,645
MD 35B	82 200	\$	3,403,538	\$	7,111,984	24	\$	1,284,792	\$	3,601,205	106		4,688,330		10,713,189
MD 36	200	\$	8,301,311	\$	17,346,302	49 10	\$	2,990,550	\$	10,178,686	249 26	\$ \$	11,291,861		27,524,989
MD 37A MD 37B	16 67	\$ \$	664,105 2,760,186	\$ \$	1,387,704 5,767,646		\$ \$	705,626 3,709,883	\$ \$	1,939,379 9,932,620	129		1,369,731 6,470,070	\$ \$	3,327,083 15,700,266
MD 38A	15	\$	622,598	\$	1,300,973	9	۶ \$	586,218	\$	1,647,833	24	۶ \$	1,208,816	\$	2,948,806
MD 38B	34	\$	1,411,223	\$	2,948,871		\$	727,965	\$	1,985,223	45	\$	2,139,188	\$	4,934,094
MD 38C	12		498,079	\$	1,040,778		\$	1,387,909	\$	4,226,439	39	\$	1,885,987		5,267,217
MD 39	-	\$	-	\$	-	25	\$	1,500,581	\$	5,022,587	25	\$	1,500,581	\$	5,022,587
MD 40	192	\$	7,969,259	\$	16,652,450	58	\$	3,823,892	\$	9,730,771	250	\$	11,793,151		26,383,221
MD 41	57	\$	2,365,874	\$	4,943,696	29	\$	1,871,630	\$	4,708,365	86	\$	4,237,504	\$	9,652,061
MD 42A	23	\$	954,651	\$	1,994,825	13	\$	836,468	\$	2,236,327	36	\$	1,791,119	\$	4,231,151
MD 42B	180	\$	7,471,180	\$	15,611,672	53	\$	3,292,494	\$	9,952,413	233	\$	10,763,674	\$	25,564,086
MD 43		\$	4,565,721	\$	9,540,466	23	\$	1,467,608	\$	3,606,230	133		6,033,329	\$	13,146,696
MD 44A	54	\$	2,241,354	\$	4,683,502	7	\$	422,309	\$	1,121,699	61		2,663,663	\$	5,805,201
MD 44B	60	\$	2,490,393	\$	5,203,891	20	\$	1,161,664	\$	3,370,614	80	\$	3,652,058	\$	8,574,505
MD 45	107		4,441,202	\$	9,280,272		\$		\$	8,158,826	152			\$	17,439,098
MD 46	104	\$	4,316,682	\$	9,020,077	85	\$	5,463,257	\$	14,843,488	189	\$	9,779,939	\$	23,863,566
MD 47A	115	\$	4,773,254	\$	9,974,124	18	\$	1,009,775	\$	2,882,696	133		5,783,029	\$	12,856,820
MD 47B	27	\$	1,120,677	\$	2,341,751	1.070	\$	176,431	\$	556,396	6 409	\$	1,297,108	\$	2,898,147
Total	4,519	\$	187,568,130	\$	391,939,701	1,979	\$	116,751,828	\$	340,127,537	6,498	\$	304,319,958	>	732,067,238

Appendix C Economic Impact of Food Retailers by State Senate District

			Food Store					Multiplier					Total		
District	Jobs		Wages		Output	Jobs		Wages		Output	Jobs		Wages		Output
MD 1	2,456	-	94,807,710	\$	209,508,050	767	\$	48,521,990	\$	144,132,320	3,222	\$	143,329,700	\$	353,640,370
MD 2	2,803	\$	108,224,810	\$	239,157,420	785	\$	46,521,560	\$	131,807,300	3,588	\$	154,746,370	\$	370,964,720
MD 3	3,818	\$	147,395,010	\$	325,716,540	753	\$	43,113,750	\$	119,833,990	4,570	\$	190,508,760	\$	445,550,530
MD 4	1,322	\$	51,042,880	\$	112,795,620	744	\$	42,635,020	\$	112,539,150	2,066	\$	93,677,900	\$	225,334,770
MD 5	2,208	\$	85,251,650	\$	188,390,860	572	\$	31,802,590	\$	87,182,550	2,780	\$	117,054,240	\$	275,573,410
MD 6	2,273	\$	87,742,020	\$	193,894,130	630	\$	39,156,830	\$	102,477,540	2,903	\$	126,898,850	\$	296,371,670
MD 7	1,799	\$	69,460,020	\$	153,494,190	501	\$	28,508,850	\$	89,494,420	2,300	\$	97,968,870	\$	242,988,610
MD 8	2,205	\$	85,135,820	\$	188,134,900	719	\$	37,469,770	\$	103,682,710	2,924	\$	122,605,590	\$	291,817,610
MD 9	1,519	\$	58,629,820	\$	129,561,380	629	\$	34,948,640	\$	99,007,870	2,148	\$	93,578,460	\$	228,569,250
MD 10	1,033	\$	39,865,190	\$	88,094,910	558	\$	32,165,980	\$	98,638,430	1,591	\$	72,031,170	\$	186,733,340
MD 11	3,366	\$	129,943,130	\$	287,151,020	1,352	\$	89,468,590	\$	253,661,590	4,717	\$	219,411,720	\$	540,812,610
MD 12	1,734	\$	66,950,350	\$	147,948,260	1,060	\$	64,849,310	\$	178,793,600	2,794	\$	131,799,660	\$	326,741,860
MD 13	2,088	\$	80,618,410	\$	178,152,230	1,631	\$	102,927,800	\$	273,500,790	3,719	\$	183,546,210	\$	451,653,020
MD 14	1,494	\$	57,683,860	\$	127,470,990	598	\$	33,182,040	\$	92,285,820	2,092	\$	90,865,900	\$	219,756,810
MD 15	664	\$	25,617,970	\$	56,611,110	825	\$	48,117,320	\$	153,904,970	1,489	\$	73,735,290	\$	210,516,080
MD 16	2,016	\$	77,819,160	\$	171,966,390	1,621	\$	103,409,060	\$	344,703,040	3,637	\$	181,228,220	\$	516,669,430
MD 17	2,606	\$	100,618,570	\$	222,349,000	1,136	\$	67,952,000	\$	213,243,930	3,742	\$	168,570,570	\$	435,592,930
MD 18	2,186	\$	84,382,920	\$	186,471,120	1,159	\$	70,696,220	\$	207,643,780	3,344	\$	155,079,140	\$	394,114,900
MD 19	1,006	\$	38,842,010	\$	85,833,880	521	\$	27,109,440	\$	84,583,100	1,527	\$	65,951,450	\$	170,416,980
MD 20	1,873	\$	72,317,190	\$	159,808,010	703	\$	43,590,380	\$	121,297,290	2,576	\$	115,907,570	\$	281,105,300
MD 21	1,561	\$	60,270,760	\$	133,187,560	1,170	\$	65,925,070	\$	170,456,110	2,731	\$	126,195,830	\$	303,643,670
MD 22	2,189	\$	84,518,060	\$	186,769,750	751	\$	47,557,750	\$	135,530,160	2,940	\$	132,075,810	\$	322,299,910
MD 23	2,034	\$	78,514,150	\$	173,502,180	585	\$	33,897,320	\$	108,478,650	2,618	\$	112,411,470	\$	281,980,830
MD 24	2,170	\$	83,765,150	\$	185,105,970	493	\$	29,652,170	\$	81,408,250	2,662	\$	113,417,320	\$	266,514,220
MD 25	1,590	\$	61,390,460	\$	135,661,900	497	\$	27,117,810	\$	84,556,530	2,087	\$	88,508,270	\$	220,218,430
MD 26	1,243	\$	47,992,660	\$	106,055,180	426	\$	23,897,970	\$	78,763,680	1,669	\$	71,890,630	\$	184,818,860
MD 27	2,565	\$	99,035,550	\$	218,850,800	582	\$	33,620,320	\$	117,650,830	3,147	\$	132,655,870	\$	336,501,630
MD 28	2,158	\$	83,321,130	\$	184,124,770	655	\$	33,515,310	\$	106,969,780	2,813	\$	116,836,440	\$	291,094,550
MD 29	1,600	\$	61,776,560	\$	136,515,120	515	\$	30,352,340	\$	100,247,990	2,115	\$	92,128,900	\$	236,763,110
MD 30	2,416	\$	93,282,610	\$	206,137,830	939	\$	52,237,550	\$	145,896,190	3,355	\$	145,520,160	\$	352,034,020
MD 31	2,744	\$	105,946,800	\$	234,123,430	565	\$	29,594,660	\$	87,747,770	3,309	\$	135,541,460	\$	321,871,200
MD 32	2,932	\$	113,205,550	\$	250,163,960	1,275	\$	73,875,660	\$	211,854,120	4,207	\$	187,081,210	\$	462,018,080
MD 33	1,504	\$	58,050,660	\$	128,281,550	1,023	\$	54,349,950	\$	152,018,890	2,527	\$	112,400,610	\$	280,300,440
MD 34	3,151	\$	121,641,910	\$	268,806,800	524	\$	31,637,450	\$	85,074,240	3,674	\$	153,279,360	\$	353,881,040
MD 35	1,344	\$	51,892,310	\$	114,672,700	1,019	\$	57,493,370	\$	146,845,530	2,363	\$	109,385,680	\$	261,518,230
MD 36	1,809	\$	69,826,820	\$	154,304,750	1,006	\$	62,146,540	\$	203,269,740	2,815	\$	131,973,360	\$	357,574,490
MD 37	2,330	\$	89,962,110	\$	198,800,140	1,473	\$	91,588,420	\$	240,924,070	3,803	\$	181,550,530	\$	439,724,210
MD 38	3,411	\$	131,699,900	\$	291,033,170	936	\$	54,220,470	\$	154,859,400	4,347	\$	185,920,370	\$	445,892,570
MD 39	2,146	\$	82,838,510	\$	183,058,240	487	\$	29,684,060	\$	98,770,080	2,632	\$	112,522,570	\$	281,828,320
MD 40	783	\$	30,212,600	\$	66,764,430	1,160	\$	78,521,320	\$	196,632,900	1,942	\$	108,733,920	\$	263,397,330
MD 41	923	\$	35,637,350	\$	78,752,160	574	\$	38,086,730	\$	94,267,760	1,497	\$	73,724,080	\$	173,019,920
MD 42	2,801	\$	108,147,590	\$	238,986,780	1,323	\$	84,107,170	\$	243,432,010	4,124	\$	192,254,760	\$	482,418,790
MD 43	738	\$	28,494,440	\$	62,967,600	453	\$	29,278,210	\$	71,177,920	1,191	\$	57,772,650	\$	134,145,520
MD 44	897	\$	34,614,180	\$	76,491,130	539	\$	31,998,910	\$	89,820,830	1,435	\$	66,613,090	\$	166,311,960
MD 45	786	\$	30,347,730	\$	67,063,050	896	\$	60,366,570	\$	162,100,210	1,682	\$	90,714,300	\$	229,163,260
MD 46	1,689	\$	65,212,880	\$	144,108,770	1,744	\$	113,964,460	\$	302,276,570	3,433	\$	179,177,340	\$	446,385,340
MD 47	1,707	\$	65,907,870	\$	145,644,570	420	\$	23,538,100	\$	67,709,700	2,127	\$	89,445,970	\$	213,354,270
Total	91,682	_	3,539,854,800	_	7,822,444,300	39,294	_	2,358,372,800	_	6,751,154,100	130,976	_	5,898,227,600	_	14,573,598,400

Appendix D Economic Impact of Package Stores by State Delegate District

			Food Store	:				Multiplier					Total		
District	Jobs		Wages		Output	Jobs		Wages		Output	Jobs		Wages		Output
MD 1A	847	\$		\$	72,225,030	254	\$	16,204,690	\$	47,913,600		\$		\$	120,138,630
MD 1B	889	\$		\$	75,808,552	244	\$	15,727,590	\$	46,993,861	1,132	\$		\$	122,802,413
MD 1C	721	\$	27,818,757		61,474,464	269	\$	16,589,695	\$	49,224,786	990	\$	44,408,452		110,699,251
MD 2A	1,240	\$	47,857,529	\$	105,756,556	692	\$	40,997,589	\$	115,475,042	1,931	\$	88,855,117		221,231,598
MD 2B	1,564	\$, ,	\$	133,400,868	93	\$	5,523,968	\$	16,332,259	1,657	\$	65,891,250		149,733,127
MD 3A	2,583	\$	99,730,533	\$	220,386,595	349	\$	20,463,237	\$	57,517,915	2,932	\$	120,193,770	\$	277,904,510
MD 3B	1,235	\$ \$	47,664,477		105,329,946	404	\$ \$	22,650,506	\$	62,316,046	1,639	\$ \$	70,314,983	\$	167,645,992
MD 4 MD 5	1,322 2,208	\$ \$	51,042,882 85,251,652	\$	112,795,617	744 572	۶ \$	42,635,019	\$ \$	112,539,125 87,182,548	2,066 2,780	\$	93,677,901	۶ \$	225,334,742
MD 6	2,208	\$	87,742,020	\$	188,390,864 193,894,130	630	۶ \$	31,802,588 39,156,830	\$	102,477,542	2,780	\$		\$	275,573,412 296,371,672
MD 7	1,799	\$		\$	153,494,187	501	\$	28,508,853	\$	89,494,419	2,300	\$		\$	242,988,606
MD 8	2,205	\$	85,135,821		188,134,898	719	\$	37,469,775	\$	103,682,706	2,924	\$, ,	\$	291,817,604
MD 9A	1,148	\$		\$	97,906,937	446	\$	24,318,284	\$	67,089,488	1,593	\$		\$	164,996,425
MD 9B	371	\$	14,324,440		31,654,443	184	\$	10,630,345	\$	31,918,349	555	\$		\$	63,572,792
MD 10	1,033	\$	39,865,186	\$	88,094,913	558	\$	32,165,984	\$	98,638,430	1,591	\$		\$	186,733,343
MD 11	3,366	\$			287,151,020	1,352		89,468,587	\$	253,661,594	4,717	\$		\$	540,812,615
MD 12	1,734	\$	66,950,347	\$	147,948,260	1,060	\$	64,849,313	\$	178,793,601	2,794	\$	131,799,659	\$	326,741,861
MD 13	2,088	\$			178,152,230	1,631		102,927,803	\$	273,500,780	3,719	\$		\$	451,653,010
MD 14	1,494	\$	57,683,863	\$	127,470,992	598	\$	33,182,035	\$	92,285,821	2,092	\$	90,865,898	\$	219,756,814
MD 15	664	\$	25,617,967	\$	56,611,113	825	\$	48,117,323	\$	153,904,970	1,489	\$	73,735,290	\$	210,516,083
MD 16	2,016	\$	77,819,160	\$	171,966,389	1,621	\$	103,409,056	\$	344,703,042	3,637	\$	181,228,216	\$	516,669,431
MD 17	2,606	\$	100,618,572	\$	222,349,000	1,136	\$	67,951,995	\$	213,243,930	3,742	\$	168,570,567	\$	435,592,930
MD 18	2,186	\$	84,382,919	\$	186,471,120	1,159	\$	70,696,217	\$	207,643,776	3,344	\$	155,079,137	\$	394,114,896
MD 19	1,006	\$	38,842,012	\$	85,833,881	521	\$	27,109,436	\$	84,583,100	1,527	\$	65,951,448	\$	170,416,981
MD 20	1,873	\$		\$	159,808,011	703	\$	43,590,378	\$	121,297,283	2,576	\$	115,907,564	\$	281,105,294
MD 21	1,561	\$	60,270,756	\$	133,187,563	1,170	\$	65,925,076	\$	170,456,114	2,731	\$	126,195,832		303,643,677
MD 22	2,189	\$	84,518,056		186,769,747		\$	47,557,747	\$	135,530,156	2,940	\$	132,075,803		322,299,903
MD 23A	145	\$		\$	12,329,022	126	\$	7,315,366	\$	20,162,667	270	\$	12,894,561		32,491,688
MD 23B	1,889	\$	72,934,951		161,173,162	459	\$	26,581,958	\$	88,315,982	2,348	\$	99,516,908		249,489,144
MD 24	2,170	\$	83,765,154	\$	185,105,969	493	\$	29,652,178	\$	81,408,260	2,662	\$	113,417,332		266,514,229
MD 25	1,590	\$	61,390,456	\$	135,661,899	497	\$	27,117,809	\$	84,556,532	2,087	\$		\$	220,218,431
MD 26 MD 27A	1,243 1,216	\$ \$	47,992,665 46,930,880	\$ \$	106,055,183	426 195	\$ \$	23,897,973 10,902,114	\$	78,763,684	1,669 1,411	\$ \$	71,890,638 57,832,994	\$ \$	184,818,867
MD 27B	475	\$ \$	18,320,611		103,708,829 40,485,265	200	۶ \$	10,902,114	\$ \$	39,980,716 43,669,278	675	\$		\$	143,689,545 84,154,542
MD 276	875	\$		\$	74,656,706	186	۶ \$	10,679,663	\$	34,000,863	1,061	\$	44,463,719	\$	108,657,569
MD 28	2,158	\$	83,321,135		184,124,767	655	\$	33,515,315	\$	106,969,784	2,813	\$		\$	291,094,551
MD 29A	373	\$	14,401,660	\$	31,825,087	106	\$	7,314,398	\$	26,842,900	479	\$		\$	58,667,987
MD 29B	870	\$	33,591,004	\$	74,230,096	198	\$	11,057,951	\$	29,925,651	1,068	\$		\$	104,155,747
MD 29C	357	\$	13,783,895	\$	30,459,936	210	\$	11,979,996	\$	43,479,435	567	\$	25,763,891		73,939,371
MD 30A	1,964	\$		\$	167,572,308		\$	42,374,029	\$	118,304,863	2,705	\$		\$	285,877,171
MD 30B	452	\$	17,451,878	\$	38,565,521	198	\$	9,863,522	\$	27,591,326	650	\$	27,315,400	\$	66,156,847
MD 31A	1,272	\$	49,093,060	\$	108,486,859	172	\$	8,883,745	\$	26,382,526	1,443	\$	57,976,805	\$	134,869,385
MD 31B	1,473	\$	56,853,740	\$	125,636,570	393	\$	20,710,887	\$	61,365,159	1,866	\$	77,564,627	\$	187,001,729
MD 32	2,932	\$	113,205,546	\$	250,163,955	1,275	\$	73,875,700	\$	211,854,225	4,207	\$	187,081,246	\$	462,018,180
MD 33	1,504	\$	58,050,661	\$	128,281,551	1,023	\$	54,349,950	\$	152,018,894	2,527	\$	112,400,611		280,300,445
MD 34A	1,345	\$	51,911,615	\$	114,715,361	337	\$	20,050,822	\$	53,564,044	1,682	\$	71,962,437	\$	168,279,404
MD 34B	1,806		69,730,292	\$	154,091,440		\$	11,586,633	\$	31,510,201	1,992		81,316,924	\$	185,601,641
MD 35A	549	\$	21,177,777		46,799,089	538			\$	75,912,540	1,087		53,163,102		122,711,629
MD 35B	796	\$	30,714,533		67,873,611	481		25,508,097		70,933,205	1,276	\$	56,222,630		138,806,816
MD 36	1,809	\$	69,826,818		154,304,745	1,006			\$	203,269,740		\$	131,973,356		357,574,486
MD 37A	976		37,664,396		83,231,562	205			\$	38,211,847	1,180	\$	51,759,719		121,443,409
MD 37B	1,355	\$	52,297,719		115,568,580	1,268		77,493,058	\$	202,712,140	2,623	\$	129,790,777		318,280,721
MD 38A	706	\$	27,258,907		60,237,296	181		11,662,480	\$	32,279,927	887	\$	38,921,387		92,517,223
MD 38B	2,025	\$ \$	78,185,958		172,776,947	224 531		14,414,848	\$ \$	38,953,186 83,626,281	2,249	\$	92,600,806		211,730,133
MD 38C MD 39	680 2,146		26,255,038 82,838,505		58,018,926 183,058,242	487		28,143,145 29,684,064	\$ \$	98,770,078	1,211 2,632	\$ \$	54,398,183 112,522,569		141,645,206 281,828,320
MD 40	783	\$		\$	66,764,425	1,160		78,521,320	\$	196,632,903	1,942	\$	108,733,919		263,397,329
MD 41	923		35,637,353		78,752,159	574			\$	94,267,757	1,497		73,724,082		173,019,916
MD 42A	570	\$	22,007,899		48,633,511		\$		\$	44,470,309	830	\$	38,875,079		93,103,820
MD 42B	2,231		86,139,690		190,353,269	1,063			\$	198,961,672	3,294	\$	153,379,669		389,314,940
MD 43		\$	28,494,438		62,967,599	453		29,278,212		71,177,926		\$	57,772,650		134,145,525
MD 44A	150	\$	5,791,552		12,798,292	147		8,721,777		22,684,527	297		14,513,330		35,482,819
MD 44B	747		28,822,626		63,692,835	392			\$	67,136,283	1,138	\$	52,099,754		130,829,118
MD 45	786	\$	30,347,735		67,063,052	896		60,366,572	\$	162,100,212	1,682	\$	90,714,307		229,163,264
MD 46	1,689		65,212,881		144,108,772	1,744		113,964,459	\$	302,276,570		\$	179,177,340		446,385,342
MD 47A	1,252			\$	106,823,081	351		20,043,583	\$	56,821,234	1,603	\$	68,383,741		163,644,315
MD 47B		\$	17,567,709		38,821,487	69	\$	3,494,524		10,888,484		\$	21,062,234		49,709,971
Total	91,682	\$	3,539,854,783	\$	7,822,444,295	39,294	\$	2,358,372,815	\$	6,751,154,093	130,976	\$	5,898,227,597	\$	14,573,598,388

Appendix E Economic Impact of All Current Alcohol Retailers by State Senate District

		Package Stor	re			Multiplier					Total		
District	Jobs	Wages		Output	Jobs	Wages		Output	Jobs		Wages		Output
MD 1	160	\$ 6,641,050	\$	13,877,040	68	\$ 4,257,910	\$	12,912,720	228	\$	10,898,960	\$	26,789,760
MD 2	166	\$ 6,890,090	\$	14,397,430	70	\$ 	\$	11,725,640	236	\$	10,979,620	\$	26,123,070
MD 3	248	\$ 10,272,870	\$	21,466,050	67	\$ 3,792,430	\$	10,703,970	315	\$	14,065,300	\$	32,170,020
MD 4	197	\$ 8,176,790	\$	17,086,110	67	\$ 3,745,170	\$	10,020,590	264	\$	11,921,960	\$	27,106,700
MD 5	138	\$ 5,727,900	\$	11,968,950	51	\$ 2,756,930	\$	7,695,400	189	\$	8,484,830	\$	19,664,350
MD 6	123	\$ 5,105,310	\$	10,667,970	55	\$	\$	9,019,180	178	\$	8,487,540	\$	19,687,150
MD 7	141	\$ 5,831,670	\$	12,185,780	45	\$ 2,515,870	\$	8,044,540	185	\$	8,347,540	\$	20,230,320
MD 8	107	\$ 4,441,200	\$	9,280,270	65	\$ 3,332,600	\$	9,295,360	172	\$	7,773,800	\$	18,575,630
MD 9	138	\$ 5,727,900	\$	11,968,950	56	\$ 3,037,390	\$	8,789,070	194	\$	8,765,290	\$	20,758,020
MD 10	100	\$ 4,150,660	\$	8,673,150	50	\$ 2,809,350	\$	8,766,580	150	\$	6,960,010	\$	17,439,730
MD 11	204	\$ 8,467,340	\$	17,693,230	119	\$ 7,639,860	\$	22,236,620	323	\$	16,107,200	\$	39,929,850
MD 12	208	\$ 8,633,360	\$	18,040,150	94	\$ 5,652,010	\$	15,797,170	302	\$	14,285,370	\$	33,837,320
MD 13	181	\$ 7,512,690	\$	15,698,400	145	\$ 9,032,130	\$	24,305,240	326	\$	16,544,820	\$	40,003,640
MD 14	126	\$ 5,229,830	\$	10,928,170	53	\$ 2,865,070	\$	8,128,830	179	\$	8,094,900	\$	19,057,000
MD 15	55	\$ 2,262,110	\$	4,726,870	74	\$ 4,281,920	\$	13,838,330	129	\$	6,544,030	\$	18,565,200
MD 16	130	\$ 5,395,850	\$	11,275,100	145	\$ 9,136,800	\$	31,040,450	275	\$	14,532,650	\$	42,315,550
MD 17	161	\$ 6,661,800	\$	13,920,410	102	\$ 6,041,960	\$	19,176,000	262	\$	12,703,760	\$	33,096,410
MD 18	125	\$ 5,167,570	\$	10,798,070	104	\$ 6,255,220	\$	18,618,020	228	\$	11,422,790	\$	29,416,090
MD 19	61	\$ 2,531,900	\$	5,290,620	47	\$ 2,424,670	\$	7,674,230	108	\$	4,956,570	\$	12,964,850
MD 20	100	\$ 4,150,660	\$	8,673,150	63	\$ 3,891,220	\$	10,924,340	163	\$	8,041,880	\$	19,597,490
MD 21	193	\$ 8,010,760	\$	16,739,180	103	\$ 5,681,340	\$	14,916,910	296	\$	13,692,100	\$	31,656,090
MD 22	157	\$ 6,516,530	\$	13,616,850	66	\$ 4,095,400	\$	11,901,580	223	\$	10,611,930	\$	25,518,430
MD 23	102	\$ 4,233,670	\$	8,846,610	52	\$ 2,945,880	\$	9,674,290	154	\$	7,179,550	\$	18,520,900
MD 24	169	\$ 6,993,850	\$	14,614,260	44	\$ 2,576,350	\$	7,174,410	212	\$	9,570,200	\$	21,788,670
MD 25	130	\$ 5,395,850	\$	11,275,100	44	\$ 2,392,360	\$	7,551,320	174	\$	7,788,210	\$	18,826,420
MD 26	128	\$ 5,312,840	\$	11,101,630	38	\$ 2,112,540	\$	7,036,920	166	\$	7,425,380	\$	18,138,550
MD 27	203	\$ 8,425,830	\$	17,606,500	53	\$ 3,019,930	\$	10,715,680	256	\$	11,445,760	\$	28,322,180
MD 28	189	\$ 7,844,740	\$	16,392,250	59	\$ 3,009,170	\$	9,704,730	248	\$	10,853,910	\$	26,096,980
MD 29	216	\$ 8,965,420	\$	18,734,000	46	\$ 2,691,050	\$	9,079,180	262	\$	11,656,470	\$	27,813,180
MD 30	245	\$ 10,169,110	\$	21,249,220	83	\$	\$	12,784,440	328	\$	14,648,600	\$	34,033,660
MD 31	118	\$ 4,897,770	\$	10,234,320	50	\$ 2,601,600	\$	7,840,410	168	\$	7,499,370	\$	18,074,730
MD 32	164	\$ 6,807,070	\$	14,223,970	114	\$ 6,487,900	\$	18,819,160	278	\$	13,294,970	\$	33,043,130
MD 33	145	\$ 6,018,450	\$	12,576,070	91	\$ 4,708,910	\$	13,423,600	236	\$	10,727,360	\$	25,999,670
MD 34	164	\$ 6,807,070	\$	14,223,970	47	\$ 2,800,590	\$	7,599,320	211	\$	9,607,660	\$	21,823,290
MD 35	194	\$ 8,052,270	\$	16,825,910	88	\$	\$	12,691,390	282	\$	12,970,180	\$	29,517,300
MD 36	284	\$ 11,787,860	\$	24,631,750	87	\$ 5,265,060	\$	17,920,250	371	\$	17,052,920	\$	42,552,000
MD 37		\$ 15,004,620	\$	31,353,440	128	\$	\$	20,901,450	490	\$	22,778,420	\$	52,254,890
MD 38	536	\$ 22,226,760	\$	46,444,720	84	\$	\$	13,837,160	619	\$	26,983,970	\$	60,281,880
MD 39	101	\$ 4,171,410	\$	8,716,520	44	\$	\$	8,842,600	144	\$	6,813,280	\$	17,559,120
MD 40	262	\$ 10,853,960	\$	22,680,290	101	\$	\$	17,131,670	363	\$	17,586,180	\$	39,811,960
MD 41	102	\$ 4,212,920	\$	8,803,250	51	\$	\$	8,289,390	152	\$	7,508,050	\$	17,092,640
MD 42	209	\$ 8,674,870	\$	18,126,880	117	\$ 	\$	21,459,090	326	\$	15,944,180	\$	39,585,970
MD 43	134	\$ 5,541,120	\$	11,578,660	41	\$	\$	6,349,010	174	\$	8,124,940	\$	17,927,670
MD 44	131	\$ 5,437,360	\$	11,361,830	48	\$ 	\$	7,909,020	179	\$	8,226,050	\$	19,270,850
MD 45	141	\$ 5,852,420	\$	12,229,140	79	\$	\$	14,364,160	220	\$	11,127,120	\$	26,593,300
MD 46	169	\$ 7,014,610	\$	14,657,620	150	\$ 	\$	26,132,950	319	\$	16,633,040	\$	40,790,570
MD 47	145	\$ 6,018,450	\$	12,576,070	38	\$ 	\$	6,054,750	183	\$	8,106,840	\$	18,630,820
Total	7,956	\$ 330,226,140	\$	690,035,880	3,485	\$ 	_	598,817,120	11,441	_	535,775,460	_	1,288,853,000

Appendix F Economic Impact of All Current Alcohol Retailers by State Delegate District

		Package Sto	re				Multiplier					Total		
District	Jobs	Wages		Output	Jobs		Wages		Output	Jobs		Wages		Output
MD 1A	79	\$ 3,279,020	\$	6,851,790	22	\$	1,364,590	\$	4,193,110	101	\$	4,643,610	\$	11,044,900
MD 1B	38	\$ 1,577,249	\$	3,295,797	22	\$	1,412,135	\$	4,275,195	60	\$	2,989,384	\$	7,570,993
MD 1C	43	\$ 1,784,782	\$	3,729,455	24	\$ \$	1,481,179	\$	4,444,414	67 147	\$	3,265,960	\$	8,173,868 17,647,623
MD 2A MD 2B	85 81	\$ 3,528,057 3,362,031	\$ \$	7,372,178 7,025,252	62 8	\$	3,606,713 482,815	\$ \$	10,275,446 1,450,198	147 89	\$ \$	7,134,770 3,844,846	\$	8,475,450
MD 3A	174	\$ 7,201,387	\$	15,047,916	31	\$	1,797,349	\$	5,138,030	205	\$	8,998,736	\$	20,185,945
MD 3B	74	\$ 3,071,485	\$	6,418,131	36	\$	1,995,076	\$	5,565,937	110	\$	5,066,561	\$	11,984,069
MD 4	197	\$ 8,176,791	\$	17,086,106	67	\$	3,745,172	\$	10,020,588	264	\$	11,921,963	\$	27,106,694
MD 5	138	\$ 5,727,904	\$	11,968,947	51	\$	2,756,930	\$	7,695,399	189	\$	8,484,835	\$	19,664,347
MD 6	123	\$ 5,105,306	\$	10,667,975	55	\$	3,382,232	\$	9,019,180	178	\$	8,487,538	\$	19,687,155
MD 7	141	\$ 5,831,671	\$	12,185,776	45	\$	2,515,868	\$	8,044,536	185	\$	8,347,539	\$	20,230,313
MD 8	107	\$ 4,441,201	\$	9,280,271	65	\$	3,332,602	\$	9,295,359	172	\$	7,773,804	\$	18,575,630
MD 9A MD 9B	108 30	\$ 4,482,708 1,245,197	\$ \$	9,367,002 2,601,945	40 16	\$	2,109,047 928,342	\$ \$	5,938,507 2,850,556	148 46	\$ \$	6,591,755 2,173,539	\$	15,305,509 5,452,501
MD 10	100	\$ 4,150,655	۶ \$	8,673,150	50	۶ \$	2,809,349	\$	8,766,584	150	\$	6,960,005	\$	17,439,734
MD 11	204	\$ 8,467,337	\$	17,693,227	119	\$	7,639,863	\$	22,236,616	323	\$	16,107,200	\$	39,929,842
MD 12	208	\$ 8,633,363	\$	18,040,153	94	\$	5,652,013	\$	15,797,175	302	\$	14,285,376	\$	33,837,328
MD 13	181	\$ 7,512,686	\$	15,698,402	145	\$	9,032,126	\$	24,305,240	326	\$	16,544,812	\$	40,003,642
MD 14	126	\$ 5,229,826	\$	10,928,169	53	\$	2,865,070	\$	8,128,830	179	\$	8,094,896	\$	19,056,999
MD 15	55	\$ 2,262,107	\$	4,726,867	74	\$	4,281,923	\$	13,838,333	129	\$	6,544,030	\$	18,565,200
MD 16	130	\$ 5,395,852	\$	11,275,095	145	\$	9,136,800	\$	31,040,447	275	\$	14,532,652	\$	42,315,542
MD 17	161	\$ 6,661,802	\$	13,920,406	102	\$	6,041,962	\$	19,175,997	262	\$	12,703,764	\$	33,096,404
MD 18 MD 19	125 61	\$ 5,167,566 2,531,900	\$ \$	10,798,072 5,290,622	104 47	\$ \$	6,255,215 2,424,673	\$ \$	18,618,025 7,674,227	228 108	\$ \$	11,422,781 4,956,572	\$ \$	29,416,097 12,964,848
MD 20	100	\$ 4,150,655	۶ \$	8,673,150	63	۶ \$	3,891,223	\$	10,924,342	163	\$	8,041,878	\$	19,597,492
MD 21	193	\$ 8,010,765	\$	16,739,180	103	\$	5,681,342	\$	14,916,906	296	\$	13,692,107	\$	31,656,086
MD 22	157	\$ 6,516,529	\$	13,616,846	66	\$	4,095,402	\$	11,901,580	223	\$	10,611,931	\$	25,518,426
MD 23A	21	\$ 871,638	\$	1,821,362	11	\$	614,218	\$	1,756,335	32	\$	1,485,856	\$	3,577,696
MD 23B	81	\$ 3,362,031	\$	7,025,252	41	\$	2,331,659	\$	7,917,956	122	\$	5,693,690	\$	14,943,208
MD 24	169	\$ 6,993,854	\$	14,614,258	44	\$	2,576,345	\$	7,174,406	212	\$	9,570,200	\$	21,788,665
MD 25	130	\$ 5,395,852	\$	11,275,095	44	\$	2,392,364	\$	7,551,316	174	\$	7,788,216	\$	18,826,411
MD 26	128	\$ 5,312,839	\$ \$	11,101,632	38	\$	2,112,543 980,164	\$ \$	7,036,916	166	\$	7,425,381	\$ \$	18,138,548
MD 27A MD 27B	44 56	\$ 1,826,288 2,324,367	\$ \$	3,816,186 4,856,964	18 18	\$	1,077,076	\$ \$	3,666,778 3,960,558	62 74	\$ \$	2,806,453 3,401,443	۶ \$	7,482,964 8,817,522
MD 27C	103	\$ 4,275,175	\$	8,933,345	17	\$	962,689	\$	3,088,346	120	\$	5,237,864	\$	12,021,691
MD 28	189	\$ 7,844,739	\$	16,392,254	59	\$	3,009,166	\$	9,704,735	248	\$	10,853,904	\$	26,096,989
MD 29A	93	\$ 3,860,109	\$	8,066,030	10	\$	650,584	\$	2,456,561	103	\$	4,510,694	\$	10,522,591
MD 29B	59	\$ 2,448,887	\$	5,117,159	17	\$	953,009	\$	2,622,330	76	\$	3,401,896	\$	7,739,489
MD 29C	64	\$ 2,656,419	\$	5,550,816	19	\$	1,087,456	\$	4,000,284	83	\$	3,743,876	\$	9,551,100
MD 30A	145	\$ 6,018,450	\$	12,576,068	66	\$	3,608,210	\$	10,336,239	211	\$	9,626,660	\$	22,912,307
MD 30B	100	\$ 4,150,655	\$	8,673,150	18	\$	871,277	\$	2,448,199	118	\$	5,021,932	\$	11,121,349
MD 31A MD 31B	33 85	\$ 1,369,716 3,528,057	\$ \$	2,862,140 7,372,178	15 35	\$ \$	794,194 1,807,400	\$ \$	2,381,338 5,459,065	48 120	\$ \$	2,163,911 5,335,457	\$ \$	5,243,478 12,831,243
MD 32	164	\$ 6,807,075	\$	14,223,967	114	\$	6,487,906	\$	18,819,173	278	\$	13,294,981	\$	33,043,140
MD 33	145	\$ 6,018,450	\$	12,576,068	91	\$	4,708,914	\$	13,423,597	236	\$	10,727,364	\$	25,999,665
MD 34A	106	\$ 4,399,695	\$	9,193,539	30	\$		\$	4,763,685	136	\$		\$	13,957,225
MD 34B	58	\$ 2,407,380	\$	5,030,427	17	\$	1,035,811	\$	2,835,637	75	\$	3,443,191	\$	7,866,065
MD 35A	94	\$ 3,901,616		8,152,761	45	\$	2,655,952		6,351,253	139	\$	6,557,568	\$	14,504,014
MD 35B	100	\$	\$	8,673,150	43	\$	2,261,962		6,340,160	143	\$	6,412,618		15,013,311
MD 36	284	\$ 11,787,861		24,631,747	87	\$	5,265,061		17,920,252	371		17,052,923	\$	42,551,999
MD 37A	124	\$ 5,146,813		10,754,706	18	\$	1,242,301		3,414,406	142		6,389,114		14,169,112 38,085,769
MD 37B MD 38A	238 129	\$ 9,857,806 5,333,592	\$	20,598,732 11,144,998	110 16	\$ \$		\$ \$	17,487,037 2,901,119	347 145	\$	16,389,302 6,365,668	۶ \$	14,046,117
MD 38B	130	\$ 5,395,852		11,275,095	20	\$	1,281,631		3,495,116	150	\$	6,677,483	\$	14,770,212
MD 38C	277	\$ 11,497,315		24,024,626	47	\$		\$	7,440,927		\$	13,940,821	\$	31,465,553
MD 39	101	\$ 4,171,409	\$	8,716,516	44	\$	2,641,872		8,842,598	144	\$	6,813,280	\$	17,559,114
MD 40	262	\$ 10,853,964	\$	22,680,288	101	\$	6,732,216	\$	17,131,667	363	\$	17,586,179	\$	39,811,956
MD 41	102	\$	\$	8,803,248	51	\$		\$	8,289,389	152			\$	17,092,637
MD 42A	25	\$ 1,037,664		2,168,288	23	\$	1,472,658		3,937,201	48	\$	2,510,322		6,105,489
MD 42B	184	\$ 7,637,206		15,958,597	94	\$	5,796,654		17,521,884	278			\$	33,480,481
MD 43	134	\$	\$	11,578,656	41	\$	2,583,821		6,349,007	174	\$	8,124,946	\$	17,927,662
MD 44A	64 67	\$ 2,656,419		5,550,816 5,811,011	13	\$			1,974,825	77 102	\$ \$		\$	7,525,642
MD 44B MD 45	67 141	\$ 2,780,939 5,852,424		5,811,011 12,229,142	35 79	\$ \$	2,045,187 5,274,703		5,934,190 14,364,155	102 220	\$	4,826,126 11,127,127		11,745,201 26,593,297
MD 45	169	\$ 7,014,607		14,657,624	150	\$ \$		\$	26,132,946	319	\$	16,633,034	۶ \$	40,790,570
MD 47A	118	\$	\$	10,234,317	31	\$		\$	5,075,178	149	\$	6,675,550	\$	15,309,495
MD 47B	27	\$	\$	2,341,751	6	\$	310,618	\$	979,573	33	\$	1,431,295	\$	3,321,323
Total	7,956	\$ 330,226,138	\$	690,035,843	3,485	\$	205,549,331	\$	598,817,095	11,441	\$	535,775,468	\$	1,288,852,938

Appendix G Economic Impact of Proposed Change in Laws by State Senate District

			Package Stor	e				Multiplier				Total	
District	Jobs		Wages		Output	Jobs		Wages	Output	Jobs		Wages	Output
MD 1	22	\$	791,410	\$	1,803,100	6	\$	382,360	\$ 1,117,560	28	\$	1,173,770	\$ 2,920,660
MD 2	13	\$	472,060	\$	1,075,520	6	\$	365,830	\$ 1,027,720	19	\$	837,890	\$ 2,103,240
MD 3	32	\$	1,146,740	\$	2,612,670	6	\$	337,890	\$ 928,770	38	\$	1,484,630	\$ 3,541,440
MD 4	3	\$	120,420	\$	274,360	6	\$	334,580	\$ 874,980	9	\$	455,000	\$ 1,149,340
MD 5	16	\$	561,200	\$	1,278,610	5	\$	252,470	\$ 683,480	20	\$	813,670	\$ 1,962,090
MD 6	20	\$	714,630	\$	1,628,160	5	\$	310,020	\$ 801,110	25	\$	1,024,650	\$ 2,429,270
MD 7	17	\$	598,200	\$	1,362,900	4	\$	222,450	\$ 688,930	21	\$	820,650	\$ 2,051,830
MD 8	18	\$	628,790	\$	1,432,590	6	\$	291,120	\$ 801,990	23	\$	919,910	\$ 2,234,580
MD 9	8	\$	282,150	\$	642,820	5	\$	276,520	\$ 772,180	13	\$	558,670	\$ 1,415,000
MD 10	4	\$	140,040	\$	319,060	4	\$	253,630	\$ 768,490	8	\$	393,670	\$ 1,087,550
MD 11	29	\$	1,037,800	\$	2,364,450	11	\$	719,280	\$ 2,001,230	40	\$	1,757,080	\$ 4,365,680
MD 12	16	\$	567,250	\$	1,292,390	8	\$	510,950	\$ 1,397,730	24	\$	1,078,200	\$ 2,690,120
MD 13	6	\$	231,050	\$	526,420	13	\$	802,120	\$ 2,120,030	19	\$	1,033,170	\$ 2,646,450
MD 14	21	\$	761,990	\$	1,736,070	5	\$	263,580	\$ 722,930	26	\$	1,025,570	\$ 2,459,000
MD 15	9	\$	313,410	\$	714,060	6	\$	373,290	\$ 1,189,120	15	\$	686,700	\$ 1,903,180
MD 16	30	\$	1,060,060	\$	2,415,160	13	\$	808,850	\$ 2,662,940	43	\$	1,868,910	\$ 5,078,100
MD 17	33	\$	1,174,140	\$	2,675,080	9	\$	527,610	\$ 1,645,880	42	\$	1,701,750	\$ 4,320,960
MD 18	24	\$	838,950	\$	1,911,420	9	\$	553,280	\$ 1,610,030	33	\$	1,392,230	\$ 3,521,450
MD 19	16	\$	568,170	\$	1,294,470	4	\$	209,880	\$ 648,930	20	\$	778,050	\$ 1,943,400
MD 20	28	\$	978,900	\$	2,230,260	5	\$	339,740	\$ 938,090	33	\$	1,318,640	\$ 3,168,350
MD 21	9	\$	329,970	\$	751,780	9	\$	521,380	\$ 1,335,770	19	\$	851,350	\$ 2,087,550
MD 22	22	\$	771,230	\$	1,757,130	6	\$	379,270	\$ 1,067,960	28	Ś	1,150,500	\$ 2,825,090
MD 23	17	\$	608,100	\$	1,385,450	5	\$	268,510	\$ 844,700	22	\$	876,610	\$ 2,230,150
MD 24	16	\$	575,510	\$	1,311,210	4	\$	234,330	\$ 638,040	20	\$	809,840	\$ 1,949,250
MD 25	7	\$	237,490	\$	541,080	4	\$	212,160	\$ 656,990	11	\$	449,650	\$ 1,198,070
MD 26	7	\$	242,970	\$	553,570	3	\$	187,300	\$ 614,000	10	\$	430,270	\$ 1,167,570
MD 27	21	\$	745,790	\$	1,699,160	5	\$	259,710	\$ 899,450	26	\$	1,005,500	\$ 2,598,610
MD 28	17	\$	597,300	\$	1,360,850	5	\$	259,040	\$ 820,570	22	\$	856,340	\$ 2,181,420
MD 29	9	\$	309,190	\$	704,430	4	\$	236,250	\$ 767,310	13	\$	545,440	\$ 1,471,740
MD 30	14	\$	493,220	\$	1,123,710	7	\$	417,920	\$ 1,149,920	21	\$	911,140	\$ 2,273,630
MD 31	21	\$	730,760	\$	1,664,930	4	\$	231,780	\$ 679,750	25	\$	962,540	\$ 2,344,680
MD 32	24	\$	869,580	\$	1,981,200	10	\$	580,370	\$ 1,651,580	34	\$	1,449,950	\$ 3,632,780
MD 33	16	\$	556,610	\$	1,268,160	8	\$	431,000	\$ 1,189,930	24	\$	987,610	\$ 2,458,090
MD 34	29	\$	1,025,510	\$	2,336,450	4	\$	246,000	\$ 658,110	33	\$	1,271,510	\$ 2,994,560
MD 35	12	\$	416,610	\$	949,170	8	\$	455,940	\$ 1,157,570	20	\$	872,550	\$ 2,106,740
MD 36	13	\$	464,920	\$	1,059,240	8	\$	496,890	\$ 1,582,000	21	\$	961,810	\$ 2,641,240
MD 37	23	\$	834,200	\$	1,900,590	12	\$	734,690	\$ 1,904,590	35	\$	1,568,890	\$ 3,805,180
MD 38	31	\$	1,105,120	\$	2,517,840	7	\$	427,510	\$ 1,202,900	38	\$	1,532,630	\$ 3,720,740
MD 39	28	\$	992,520	\$	2,261,300	4	\$	230,040	\$ 763,950	32	\$	1,222,560	\$ 3,025,250
MD 40	1	\$	51,200	\$	116,650	9	\$	627,930	\$ 1,554,560	11	\$	679,130	\$ 1,671,210
MD 41	8	\$	292,810	\$	667,130	5	\$	303,350	\$ 740,560	13	\$	596,160	\$ 1,407,690
MD 42	18	\$	629,100	\$	1,433,300	10	\$	670,850	\$ 1,917,870	28	\$	1,299,950	\$ 3,351,170
MD 43	2	\$	70,060	\$	159,610	4	\$	229,010	\$ 552,840	6	\$	299,070	\$ 712,450
MD 44	1	\$	41,100	\$	93,640	4	\$ \$	253,400	\$ 705,860	5	\$ \$	294,500	\$ 712,450
MD 44 MD 45	3	\$	90,810	\$	206,890	7	\$	475,970	\$ 1,267,140	10	\$	566,780	\$ 1,474,030
MD 46	18	\$	633,360	\$	1,443,000	14	\$	917,210	\$ 2,396,360	32	\$	1,550,570	\$ 3,839,360
		\$	•					,					
MD 47	9	<u> </u>	315,420	\$	718,640	3	\$	183,310	\$ 525,200	12	\$	498,730	\$ 1,243,840
Total	760	\$	27,017,820	\$	61,555,680	310	\$	18,606,570	\$ 52,647,600	1,069	\$	45,624,390	\$ 114,203,280

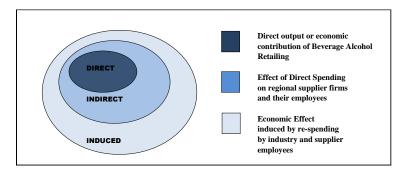
Appendix H Economic Impact of Proposed Change in Laws by State Delegate District

			Package Sto	re				Multiplier					Total		
District	Jobs		Wages		Output	Jobs		Wages		Output	Jobs		Wages		Output
MD 1A	7	\$	257,210	\$	586,010	2	\$	131,440	\$	378,310	9	\$	388,650	\$	964,320
MD 1B	8	\$	290,536	\$	661,939	2	\$	121,821	\$	359,814	10	\$	412,357	\$	1,021,753
MD 1C	7	\$	243,666	\$	555,154	2 5	\$	129,090	\$	379,438	9	\$	372,756	\$	934,592
MD 2A MD 2B	5 8	\$ \$	186,377 285,684	\$ \$	424,631 650,886	1	\$ \$	322,139 43,691	\$ \$	900,015 127,709	11 9	\$ \$	508,516 329,375	\$ \$	1,324,646 778,595
MD 3A	21	۶ \$	757,714	\$	1,726,329	3	۶ \$	160,676	\$	446,339	24	\$	918,391	\$	2,172,669
MD 3B	11	\$	389,030	\$	886,341	3	\$	177,214	\$	482,427	14	\$	566,244	\$	1,368,768
MD 4	3	\$	120,422	\$	274,363	6	\$	334,579	\$	874,977	9	\$	455,002	\$	1,149,340
MD 5	16	\$	561,205	\$	1,278,614	5	\$	252,474	\$	683,481	20	\$	813,679	\$	1,962,095
MD 6	20	\$	714,626	\$	1,628,161	5	\$	310,021	\$	801,105	25	\$	1,024,648	\$	2,429,266
MD 7	17	\$	598,197	\$	1,362,896	4	\$	222,452	\$	688,926	21	\$	820,649	\$	2,051,822
MD 8	18	\$	628,787	\$	1,432,590	6	\$	291,119	\$	801,990	23	\$	919,906	\$	2,234,580
MD 9A	5	\$	164,776	\$	375,415	4	\$	192,661	\$	524,294	8	\$	357,437	\$	899,710
MD 9B	3	\$	117,370	\$	267,408	1	\$	83,856	\$	247,882	5	\$	201,225	\$	515,290
MD 10	4	\$	140,042	\$	319,064	4	\$	253,632	\$	768,494	8	\$	393,674	\$	1,087,557
MD 11	29	\$	1,037,797	\$	2,364,452	11	\$	719,283	\$	2,001,226	40	\$	1,757,080	\$	4,365,679
MD 12	16	\$	567,251	\$	1,292,390	8	\$	510,951	\$	1,397,726	24	\$	1,078,202	\$	2,690,116
MD 13	6	\$	231,052	\$	526,415	13	\$	802,123	\$	2,120,028	19	\$	1,033,175	\$	2,646,443
MD 14	21	\$	761,990	\$	1,736,070	5	\$	263,575	\$	722,930	26	\$	1,025,565	\$	2,459,000
MD 15	9 30	\$ \$	313,412 1,060,055	\$ \$	714,059 2,415,164	6 13	\$ \$	373,292	\$ \$	1,189,122	15 43	\$	686,704 1,868,900	\$ \$	1,903,181
MD 16 MD 17	33	\$ \$	1,060,055	\$	2,415,164 2,675,082	13	\$ \$	808,845 527,615	\$ \$	2,662,936 1,645,877	43 42	\$ \$	1,868,900	\$	5,078,100 4,320,959
MD 17	24	\$ \$	838,951	\$ \$	1,911,415	9	\$ \$	553,282	۶ \$	1,645,877	33	۶ \$	1,392,234	۶ \$	3,521,446
MD 19	16	\$	568,166	\$	1,294,474	4	\$	209,883	\$	648,929	20	\$	778,049	\$	1,943,403
MD 20	28	\$	978,896	\$	2,230,257	5	\$	339,737	\$	938,085	33	\$	1,318,633	\$	3,168,342
MD 21	9	\$	329,967	\$	751,777	9	\$	521,385	\$	1,335,774	19	\$	851,352	\$	2,087,551
MD 22	22	\$	771,233	\$	1,757,129	6	\$	379,267	\$	1,067,962	28	\$	1,150,499	\$	2,825,091
MD 23A	(0)		(16,421)		(37,414)	1	\$	59,326	\$	159,442	1	\$	42,904	\$	122,029
MD 23B	18	\$	624,520	\$	1,422,867	4	\$	209,185	\$	685,253	21	\$	833,704	\$	2,108,120
MD 24	16	\$	575,510	\$	1,311,207	4	\$	234,334	\$	638,043	20	\$	809,844	\$	1,949,250
MD 25	7	\$	237,487	\$	541,075	4	\$	212,165	\$	656,986	11	\$	449,652	\$	1,198,062
MD 26	7	\$	242,970	\$	553,568	3	\$	187,301	\$	614,003	10	\$		\$	1,167,572
MD 27A	11	\$	373,785	\$	851,609	2	\$	84,012	\$	303,205	12	\$	457,797	\$	1,154,814
MD 27B	3	\$	111,264	\$	253,497	2	\$	93,216	\$	335,230	5	\$	204,480	\$	588,727
MD 27C	7	\$	260,740	\$	594,054	1	\$	82,484	\$	261,017	9	\$	343,224	\$	855,071
MD 28	17 3	\$	597,299	\$	1,360,849	5 1	\$	259,042	\$	820,570	22 4	\$ \$	856,341	\$	2,181,419
MD 29A MD 29B	5	\$ \$	119,153 166,067	\$ \$	271,471 378,357	2	\$ \$	57,084 87,322	\$ \$	204,175 233,767	6	۶ \$	176,237 253,389	\$ \$	475,646 612,124
MD 29C	1	\$	23,966	\$	54,603	2	\$	91,845	\$	329,373	2	\$	115,811	\$	383,976
MD 30A	13	\$	461,471	\$	1,051,388	6	\$	341,256	\$	935,991	19	\$	802,727	\$	1,987,379
MD 30B	1	\$	31,745	\$	72,326	2	\$	76,660	\$	213,930	2	\$	108,405	\$	286,255
MD 31A	10	\$	346,976	\$	790,528	1	\$	68,876	\$	203,254	11	\$	415,852	\$	993,782
MD 31B	11	\$	383,788	\$	874,400	3	\$	162,905	\$	476,499	14	\$	546,693	\$	1,350,898
MD 32	24	\$	869,581	\$	1,981,201	10	\$	580,368	\$	1,651,584	34	\$	1,449,949	\$	3,632,785
MD 33	16	\$	556,614	\$	1,268,155	8	\$	431,001	\$	1,189,933	24	\$	987,615	\$	2,458,088
MD 34A	15	\$	538,877	\$	1,227,743	3	\$	156,508	\$	415,526	18	\$	695,384	\$	1,643,270
MD 34B	14	\$		\$	1,108,712	1	\$	89,495	\$	242,580	15	\$	576,126		1,351,292
MD 35A	5	\$	168,702	\$	384,360	4	\$	257,617	\$	608,684	9	\$	426,318		993,044
MD 35B	7	\$	247,906	\$	564,813	4	\$	198,328	\$	548,890	11	\$	446,234		1,113,704
MD 36	13	\$	464,916	\$	1,059,236	8	\$	496,895	\$	1,581,998	21	\$	961,811		2,641,234
MD 37A	11	\$	387,825	\$	883,595	2	\$	110,759	\$	297,435	13	\$	498,584	\$	1,181,031
MD 37B	13 5	\$ \$	446,375 174,567	\$	1,016,994	10 1	\$ \$	623,931	\$	1,607,155	23 6	\$ \$	1,070,306 266,073	\$	2,624,148
MD 38A MD 38B	5 17	\$ \$	174,567 622,075	\$ \$	397,724 1,417,297	2	\$ \$	91,506 112,442	\$ \$	249,723 301,837	19	\$	734,517	\$ \$	647,447 1,719,134
MD 38C	9	\$ \$	308,481	\$ \$	702,824	4	\$ \$	223,559	۶ \$	651,340	13	۶ \$	532,040		1,719,134
MD 39	28	\$		\$	2,261,299	4	\$		\$	763,947	32	\$		\$	3,025,247
MD 40	1	\$	51,199	\$	116,649	9	\$	627,928	\$	1,554,561		\$	679,128		1,671,210
MD 41	8	\$	292,813		667,127	5	\$		\$	740,561	13	\$	596,160		1,407,688
MD 42A	5	\$	164,875	\$	375,642	2	\$	133,625	\$	348,937	7	\$	298,500		724,578
MD 42B	13	\$	464,223	\$	1,057,656	8	\$	537,227	\$	1,568,935	21	\$	1,001,450	\$	2,626,591
MD 43	2	\$	70,056	\$	159,612	4	\$	229,006	\$	552,838	6	\$	299,062		712,450
MD 44A	(2)		(81,261)	\$	(185,140)	1	\$	69,772	\$	178,831	(1)		(11,489)		(6,309)
MD 44B	3	\$	122,363	\$	278,784	3	\$	183,631	\$	527,033	7	\$	305,994	\$	805,816
MD 45	3	\$	90,809	\$	206,893	7	\$	475,973	\$	1,267,145	10	\$	566,781		1,474,037
MD 46	18	\$	633,358	\$	1,443,004	14	\$	917,208	\$	2,396,365	32	\$	1,550,567		3,839,369
MD 47A	6	\$	219,599	\$	500,320	3	\$	156,074	\$	440,935	9	\$	375,672		941,255
MD 47B	3	\$	95,823	\$	218,317	1	\$	27,237	\$	84,269	3	\$	123,060	\$	302,586
Total	760	\$	27,017,801	\$	61,555,689	310	\$	18,606,589	\$	52,647,607	1,069	\$	45,624,390	\$	114,203,296

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 (2014 Tables) in order to quantify the economic impact of the beverage alcohol retailing industry in Maryland. 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). ¹⁸

The analysis begins with the identification of companies and facilities engaged in the retail sales of beverage alcohol. Individual store data are gathered from both Infogroup, and from the State of Connecticut Department of Consumer Protection

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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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, Infogroup 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 Infogroup 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 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: 19

Francois Quesnay, one of the fathers of modern economics, first developed the analytical concept of interindustry 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

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

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 224 sector BLS model is mapped to the 536 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 536 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.