Economic Impact of the Craft Beer Industry in Maryland

Prepared by the
Maryland Bureau of Revenue Estimates
October 25, 2017

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EXECUTIVE SUMMARY

An economic impact study conducted by the Bureau of Revenue Estimates (BRE) found that in 2016, Maryland's craft brewing industry had an overall economic impact of $637.6 million, supported or created 6,541 jobs, and generated $228.3 million in wages as well as $53.1 million in state and local revenue.

It's worth noting that the aforementioned figures are limited to the economic impact resulting from craft beer exclusively produced by Maryland craft breweries. However, the distribution and sale of non-Maryland brand craft beer to consumers within the state also positively impacts the economy. When the sale and distribution activity of non-Maryland craft beer is included in the projection, the estimated economic impact of craft beer rises to $802.7 million within Maryland in 2016. The positive impact on Maryland is 54% greater when the beer is produced by a Maryland craft brewery.

The report found that in 2016, Maryland craft breweries directly employed 430 Marylanders, and had an indirect and induced effect on 264 jobs – yielding a total of $28.4 million in labor income and generating $143.7 million in economic output. Maryland craft brewers supported more than 693 Maryland jobs.

Additionally, alcohol distributors in Maryland greatly benefited from the economic activity generated by Maryland craft brewers. Maryland craft brewers directly impacted 201 jobs in Maryland's alcohol distribution industry, indirectly impacted 114, and had an induced effect on 137. $32.1 million in labor income and $91.0 million in economic activity in the distribution industry were impacted by Maryland craft brewers.

Retailers, restaurants, and bars – which directly employ 4,322 Marylanders – are also positively impacted by Maryland craft brewers. In 2016, the Maryland craft beer industry had a direct, indirect, and induced effect on 5,395 jobs, $167.7 million in labor income, and $402.9 million in economic output on the alcohol retail and sale industry.

The report also analyzed the impact of revenue generated by craft beer production and sales. Craft beer production is fundamentally a labor-intensive industry, resulting in a high degree of local economic impact. The report found that for every $20,000 in revenue that is generated or received by Maryland craft brewers (e.g., product sales, private investments, government subsidies), 1.36 jobs, $47,410 in wages, and $132,405 in economic output are created.

The economic impact of Maryland's craft beer industry has not reached its full potential. This is demonstrated most clearly by Maryland's status as a net importer of craft beer. While consuming an estimated 275,000 barrels of craft beer per year, Maryland produces only 247,000 barrels.

The report found that economic impact grows considerably if Maryland beer production is increased to being export neutral (amount of beer produced in Maryland is the same as the amount of beer consumed in Maryland); on par with the average rate of the neighboring states of Virginia, Pennsylvania, Delaware, and the District of Columbia; as well as the highest observed state rate of craft beer production per capita, Vermont. Table 9 on page 11 highlights the potential increases in employment, labor income, and economic output that will result from increasing craft beer barrel production in Maryland.

BACKGROUND

At the request of the Comptroller's Reform on Tap Task Force, the BRE conducted a comprehensive study determining the economic impact of Maryland's craft beer industry, and examined the potential benefits from stimulating growth in the industry. This report quantifies the current economic output of Maryland's craft beer industry, compares these outlays to Maryland's top five industries, and projects the potential increased impact of the industry through quantifying the economic output under various heightened production scenarios.

Maryland is not currently a powerhouse in the craft beer industry when compared with other states. The National Brewer's Association finds that Maryland is ranked 47th in economic impact, 36th in number of breweries, and 25th in gallons produced per adult aged 21 years and over.

While craft beer production among Maryland craft brewers has increased steadily over the past five years, it has lagged behind the national average, only increasing at an annual rate of 15%, compared to 18% for the country as a whole.

The manufacturing, distribution, and sale of beer in Maryland are subject to a three-tier system. As prescribed by Maryland statute, craft brewers are required to sell their products to licensed distributors, who then sell to licensed retailers (e.g., bars, restaurants, liquor and beer stores), which sell alcohol products to consumers.

In general, craft brewers may not sell directly to either retail stores or to consumers, distributors may not brew beer or sell directly to consumers, and retail stores may not brew beer or buy directly from craft brewers.

It is outside the scope of this study to discuss and analyze the various policy and historical impetuses behind this regulatory segregation of the market. However, it is important to note because it results in the production of Maryland craft beer spurring a large degree of economic activity in all three of these industries, rather than exclusively within the brewing industry. The production of craft beer also spurs economic activity in many additional industries.

On top of quantifying the direct economic impact from the jobs, wages, and value added in the brewing, distribution, and consumer sales industries, the study also estimates indirect gains in industries that provide input products to these industries, such as producers of hops and malt, as well as the induced economic activity that is spurred when the workers in the direct and indirect industries spend their wages. Furthermore, this study includes the upstream and downstream impact and ensures that the full ripple effect of the craft beer industry is measured.

METHODOLOGY

The study is driven by self-reported data from Maryland craft breweries. BRE developed a survey that asked breweries to answer questions regarding employment, payroll, revenues, and expenditure patterns. 32 of the 67 licensed Maryland craft breweries that produced beer in calendar year 2016 responded to the survey, providing a representative sample of Maryland's overall craft brewing industry. The information from the respondents was then aggregated and grown in order to estimate the entire brewing population.

The number of total barrels produced by all breweries, as reported to the Comptroller's Office's Revenue Administration Division, was divided by the total barrels produced by the breweries that responded to form the multiplier. This multiplier is different from that of other studies which used the total number of breweries divided by the number of respondents. Using that multiplier would have resulted in a production estimate that is 33% greater than the number of barrels actually produced in Maryland, leading to an inflated economic impact estimate.

After growing the survey response data to estimate the total population, the information was then inputted into IMPLAN – a widely-used econometric modeling software. IMPLAN is able to identify the industry-specific flows of trade to identify the total economic impact of an industry. This includes the direct, indirect, and induced effect. The direct effect of Maryland's craft beer industry is a measurement of the productive activities in the brewing, wholesaling, retailing, restaurant, and bar industries attributable to the brewing or selling of Maryland-produced craft beer. The indirect effect is the economic activity in the upstream or backward supply chain (e.g. hop farmers, glass producers, etc.) that provide input products in the production of beer. The induced effect is the economic activity generated through the increased household spending that result from the income earned by employees and owners in these direct and indirect industries.

DEFINITIONS

The following terms are used in the tables and analyses contained within this report:

- **Direct Effect:** Economic activity generated in the industries that brew, distribute and sell beer.
- **Indirect Effect:** Economic activity generated through the upstream or backward supply chain.
- **Induced Effect:** Economic activity generated through household income spending.
- **Employment:** Average headcount (full time and part time) over the course of the year.
- **Labor Income:** All forms of employment income, including Employee Compensation (wages and benefits) and proprietor income.
- **Value Added:** The value of output less the value of intermediate inputs.
- **Output:** Total revenues, sales, or the total value of the output.

MARYLAND CRAFT BREWERS' ECONOMIC FOOTPRINT

In 2016, Maryland craft brewers generated more than $637.6 million in total economic output, supported 6,541 jobs, and generated $228.3 million in wages.

Marylanders also consume craft beer that is produced outside of the State. The economic activity generated by the distribution and sale of out-of-state craft beer is not included in the figures above; however, when including this economic activity into the study's projections, the BRE estimates the total impact of craft beer (produced in-state and out-of-state) at $802.7 million in Maryland. While there is an economic benefit from consuming craft beer produced outside the state, the impact is 54% greater when brewed in Maryland.

As outlined in Table 1, Maryland's craft beer industry directly supported 4,953 jobs, generated $140 million in labor income, and had a total economic output of $375.4 million. Indirectly, the industry supported 613 jobs, generated $40.4 million in labor income, with a total economic output of $119.5 million. Lastly, the industry's induced effect supported 975 jobs, generated $47.9 million in labor income, and had a total economic output of $142.7 million.

TABLE 1: ECONOMIC IMPACT OF MARYLAND'S CRAFT BEER INDUSTRY

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Direct Effect	4,953	$140,021,976	$198,640,863	$375,406,424
Indirect Effect	613	$40,416,044	$70,431,981	$119,509,714
Induced Effect	975	$47,868,945	$86,448,362	$142,688,516
Total Effect	**6,541**	**$228,306,965**	**$355,521,206**	**$637,604,654**

Maryland craft breweries had a direct, indirect, or induced effect on 693 jobs – yielding $28.4 million in labor income and generating $143.7 million in economic output. Most notably, 430 jobs were created or supported by Maryland craft breweries.

The alcohol distribution industry in Maryland greatly benefits from the economic activity generated by Maryland craft brewers. Maryland craft brewers directly impacted 201 jobs in Maryland's alcohol distribution industry, indirectly impacted 114, and had an induced effect on 137. $32.1 million in labor income and $91.0 million in economic activity in the distribution industry were impacted by Maryland craft brewers.

Retailers, restaurants, and bars – which directly employ 4,322 Marylanders – are also positively impacted by Maryland craft brewers. In 2016, the Maryland craft beer industry had a direct, indirect, and induced effect on 5,395 jobs, $167.7 million in labor income, and $402.9 million in economic output on the alcohol retail and sale industry.

TABLE 2: ECONOMIC IMPACT ON PRODUCTION BREWERIES

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Direct Effect	430	$12,377,191	$34,451,551	$94,845,325
Indirect Effect	142	$10,125,968	$16,488,189	$31,080,424
Induced Effect	121	$5,963,911	$10,771,098	$17,777,307
Total Effect	**693**	**$28,467,070**	**$61,710,838**	**$143,703,056**

TABLE 3: ECONOMIC IMPACT ON BEER DISTRIBUTORS

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Direct Effect	201	$18,056,998	$33,509,274	$51,924,506
Indirect Effect	114	$7,337,620	$11,799,546	$19,023,828
Induced Effect	137	$6,734,960	$12,163,138	$20,075,671
Total Effect	**452**	**$32,129,578**	**$57,471,958**	**$91,024,005**

TABLE 4: ECONOMIC IMPACT ON RETAILERS, RESTAURANTS, & BARS

IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Direct Effect	4,322	$109,587,787	$130,680,038	$228,636,593
Indirect Effect	357	$22,952,456	$42,144,246	$69,405,462
Induced Effect	717	$35,170,074	$63,514,126	$104,835,538
Total Effect	**5,396**	**$167,710,317**	**$236,338,410**	**$402,877,593**

Additionally, as shown in Tables 5 & 6 on the next two pages, Maryland's craft beer industry contributed $53.1 million in state and local and $55.3 million in federal tax revenues. These revenues – attributable to taxes on personal and corporate income, sales, property value, employee benefits, and motor vehicle licensing – directly supports local and state government investments in public programs such as education, environmental protection, public safety, among others.

TABLE 5: STATE & LOCAL TAX REVENUES

DESCRIPTION	EMPLOYEE COMPENSATION	PROPRIETOR INCOME	TAX ON PRODUCTION AND IMPORTS	HOUSEHOLDS	CORPORATIONS	TOTAL
Dividends					$34,681	**$34,681**
Social Ins Tax- Employee Contribution	$119,218	$0				**$119,218**
Social Ins Tax- Employer Contribution	$240,876					**$240,876**
Tax on Production and Imports: Sales Tax			$19,823,156			**$19,823,156**
Tax on Production and Imports: Property Tax			$18,955,473			**$18,955,473**
Tax on Production and Imports: Motor Vehicle License			$409,694			**$409,694**
Tax on Production and Imports: Severance Tax			$0			**$0**
Tax on Production and Imports: Other Taxes			$3,763,703			**$3,763,703**
Tax on Production and Imports: S/L NonTaxes			$120,703			**$120,703**
Corporate Profits Tax					$663,860	**$663,860**
Personal Tax: Income Tax				$7,549,048		**$7,549,048**
Personal Tax: NonTaxes (Fines- Fees				$1,021,746		**$1,021,746**
Personal Tax: Motor Vehicle License				$190,281		**$190,281**
Personal Tax: Property Taxes				$85,002		**$85,002**
Personal Tax: Other Tax (Fish/Hunt)				$97,944		**$97,944**
Total	**$360,094**	**$0**	**$43,072,729**	**$8,944,020**	**$698,541**	**$53,075,384**

TABLE 6: FEDERAL TAX REVENUES

DESCRIPTION	EMPLOYEE COMPENSATION	PROPRIETOR INCOME	TAX ON PRODUCTION AND IMPORTS	HOUSEHOLDS	CORPORATIONS	TOTAL
Social Ins Tax- Employee Contribution	$12,215,259	$866,511				**$13,081,770**
Social Ins Tax- Employer Contribution	$11,924,180					**$11,924,180**
Tax on Production and Imports: Excise Taxes			$3,909,777			**$3,909,777**
Tax on Production and Imports: Custom Duty			$1,471,992			**$1,471,992**
Tax on Production and Imports: Fed NonTaxes			$239,006			**$239,006**
Corporate Profits Tax					$6,188,526	**$6,188,526**
Personal Tax: Income Tax				$18,482,984		**$18,482,984**
Total	**$24,139,439**	**$866,511**	**$5,620,775**	**$18,482,984**	**$6,188,526**	**$55,298,235**

The five industries that receive the greatest amount of indirect value from Maryland's brewing operations are shown below.

TABLE 7: INPUT INDUSTRIES WITH TOP FIVE INDIRECT EMPLOYMENT GAINS

INDUSTRY	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Real estate	68	$1,903,402	$13,134,708	$16,757,442
Management of companies and enterprises	63	$7,873,113	$9,772,297	$15,536,641
Wholesale trade	41	$3,726,678	$6,915,784	$10,716,396
Services to buildings	25	$605,931	$689,263	$1,064,082
Employment services	24	$1,139,156	$1,688,191	$2,062,055

CRAFT BREWING RELATIVE TO MARYLAND'S TOP INDUSTRIES

Craft beer production is fundamentally a labor-intensive industry, resulting in a high degree of local economic impact. For every $20,000 in revenue that is generated or received by Maryland craft brewers (e.g., product sales, private investments, government subsidies), 1.36 jobs, $47,410 in wages, and $132,405 in economic output are created. On average, the same amount of revenue creates 0.17 jobs, $12,378 wages and $27,121 economic output in Maryland's top five industries. The gains per $20,000 in revenue from Maryland's top five industries are shown below.

TABLE 8: ECONOMIC IMPACT PER $20,000 REVENUE IN BREWING VS. MARYLAND'S TOP FIVE INDUSTRIES BY EMPLOYMENT

INDUSTRY	JOBS	WAGES	VALUE ADDED	OUTPUT
Local Government, Education	0.30	22,304	28,467	33,979
Federal Government, Non-Military	0.16	16,487	26,259	30,333
Real estate	0.13	4,813	20,261	27,614
Hospitals	0.24	16,094	22,204	37,474
Wholesale trade	0.03	2,190	3,918	6,206
Average	**0.17**	**12,378**	**20,222**	**27,121**
Brewing	***1.36***	***47,410***	***73,827***	***132,405***

DIFFERENT SCENARIOS

The economic impact of Maryland's craft beer industry has not reached its full potential. This is demonstrated most clearly by Maryland's status as a net importer of craft beer. While consuming an estimated 275,000 barrels of craft beer per year, Maryland produces only 247,000 barrels. The economic impact grows considerably if Maryland production increased to being export neutral; on par with the average rate of the neighboring states of Virginia, Pennsylvania, Delaware, and the District of Columbia; as well as the highest observed state rate of craft beer production per capita, Vermont.

The potential impact on Maryland's economy with elevated craft beer production levels are detailed in Table 9.

TABLE 9: CRAFT BEER ECONOMIC IMPACT WITH ELEVATED PRODUCTION LEVELS

PRODUCTION LEVEL	BARRELS PRODUCED	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
Current [1]	247,151	6,541	$228,306,965	$355,521,207	$637,604,654
Export Neutral [2]	275,139	6,620	$233,569,810	$366,600,468	$659,717,521
Par w/ Neighbors [3]	803,478	8,043	$327,930,166	$566,824,851	$1,063,018,044
Highest State [4]	2,348,173	12,205	$603,809,769	$1,152,217,126	$2,242,140,229

[1] The amount of barrels Maryland breweries produced in 2016.
[2] Level of production where Maryland breweries produce the same amount of beer that is consumed in Maryland.
[3] Level of production where Maryland breweries produce at the average per capita barrel rate of the neighboring states of Virginia, the District of Columbia, Pennsylvania, and Delaware.
[4] Level of production where Maryland breweries produce at the average per capita barrel rate of Vermont, the state with the highest per capita barrel production rate.