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An Exploration of Craft Beer in South Carolina

John Fitzgerald Denise Jr

Director of Thesis: Dr. Sandra Strick

Second Reader: Dr. Scott Taylor Jr.

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John Denise

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Introduction & Abstract:

Here in the United States, in 2018, there are more breweries currently in operation than ever before, with a majority of these operating as “craft” breweries. New craft breweries continue to open at an alarming rate and consumers are increasingly aware of this abundance of new beer to sample. Along with the number of breweries opening, awareness and knowledge of craft beer has also continued to rise. What was once an interest reserved for the home-brewing geeks on the West Coast, craft beer is now of interest to the masses. Beer-centric tourism has also exploded, with people traveling hundreds and sometimes thousands of miles to drink at some of the world’s best craft breweries. Summed up, there has never been a better time to be a beer enthusiast in the United States.

This senior thesis project, prepared for the University of South Carolina Honors College, seeks to compile information on the craft beer industry in South Carolina at time of writing. The creative portion of this thesis takes the shape of a “guidebook”, with photographs and information about beers and breweries compiled into a single source that displays a snapshot of the South Carolina craft beer industry (see sample pages below). The significance of the project results from original, high quality photographs and information compiled and arranged in a way which is increasingly rare in the age of the internet. To accompany the creative portion of this

project, the written portion serves to outline and provide greater detail on the information included in the guidebook.

Thomas Creek Brewery	Holy City Brewing
<div>Upstate</div> <div>  </div> <div> <p>Dockside Pilsner Style: German Pilsner ABV: 5.0% IBU: 26 Profile: Crisp, clean</p> </div> <div>  </div> <div> <p>Class Five IPA Style: American IPA ABV: 5.5% IBU: 87 Profile: Earthy, bitter</p> </div> <div>15</div>	<div>Low-country</div> <div>  </div> <div> <p>Chucktown Follicle Brown Style: American Brown Ale ABV: 6.5% IBU: n/a Profile: Crisp, dark, malty</p> </div> <div>  </div> <div> <p>Overly Friendly IPA Style: American IPA ABV: 6.9% IBU: n/a Profile: Herbal, bitter</p> </div> <div>26</div>

Craft Beer in the United States:

The history of beer in America begins with the very first European settlers, who brought beer with them on the journey across the Atlantic and began looking for a way to brew in their new surroundings shortly after they landed. However, the history of craft beer begins several hundred years later in the 1960s. Fritz Maytag purchased San Francisco's Anchor brewery in 1965 and "invested his life in making it mean something again" (Mosher, 25). This is now seen by many as the beginning of the craft beer movement in the United States. In the 1970s

American beer was at a low point, with less than 50 brewing companies in existence.

Homebrewing was still illegal, but many Americans were exposed to European beers for the first time while traveling and came home looking for more than the current domestic beer market had to offer (Mosher 24-25). Michael Jackson's *World Beer Guide* was first published in 1977, and President Jimmy Carter legalized homebrewing in 1978, allowing homebrewers across the country to experiment. Homebrewing especially took hold on the West Coast of the United States and several of the "founding fathers" of craft beer were founded in the following years (Oliver, 272). Sierra Nevada opened its doors in Chico, California in 1981, Boston Beer opened in Boston in 1984, Bell's Brewing opened in Kalamazoo, Michigan in 1985, and Abita Brewing Co. opened in Abita Springs, Louisiana in 1986. By the 1990s craft beer was growing at a significant rate and this growth has continued to the present day.

The last several years have seen incredible growth in the number of breweries in the US. According to the Brewers Association, there were approximately 6,372 breweries in 2017, which is a 16.0% increase from 2016 numbers. This consisted of more than 3,800 microbreweries and more than 2,200 brewpubs: meaning that more than 98% of all breweries in the US are craft breweries. Even more impressive is how quickly the number of breweries has grown to its current mark. The table below displays the percent growth from year-to-year as well as the total number of breweries in each year from 2013 to present ("Historical US Brewery Count").

Year:	2013	2014	2015	2016	2017
% Change:	19.3%	28.2%	21.2%	19.7%	16.0%
# of Breweries:	2,952	3,785	4,588	5,491	6,372

In addition to the increasing number of breweries, craft beer showed strong growth in both sales and production in 2017. In a beer market that was down -1.2% overall, craft beer was up +5% in overall sales. The craft beer market represented \$26.0 billion in sales, which was an increase of +8% dollar sales growth, and represented a 12.7% share of the overall market by dollars sold.

Production tells much the same story: an overall market down -1% in which craft grew by +5% for the year. Within the craft beer segment, 70.6% of beer was produced by a regional craft brewer, 22.4% was produced by a microbrewery, 5.9% was produced by a brewpub, and 1.1% was produced by a contract brewing company (“National Beer Sales & Production Data”).

Definitions for each category of craft brewery above are as follows, as per the Brewers

Association:

- **Regional Craft Brewer** - ‘An independent regional brewery with a majority of volume in “traditional” or “innovative” beer(s).’ (“Craft Beer Industry Market Segments”)
- **Microbrewery** - “A brewery that produces less than 15,000 barrels (17,600 hectoliters) of beer per year with 75 percent or more of its beer sold off-site. Microbreweries sell to the public by one or more of the following methods: the traditional three-tier system (brewer to wholesaler to retailer to consumer); the two-tier system (brewer acting as wholesaler to retailer to consumer); and, directly to the consumer through carry-outs and/or on-site tap-room or restaurant sales.” (“Craft Beer Industry Market Segments”)
- **Brewpub** - “A restaurant-brewery that sells 25 percent or more of its beer on site. The beer is brewed primarily for sale in the restaurant and bar. The beer is often dispensed directly from the brewery’s storage tanks. Where allowed by law, brewpubs often sell beer “to go” and /or distribute to off site accounts. Note: BA re-categorizes a company as a microbrewery if its off-site (distributed) beer sales exceed 75 percent.” (“Craft Beer Industry Market Segments”)
- **Contract Brewing Company** - “A business that hires another brewery to produce its beer. It can also be a brewery that hires another brewery to produce additional beer. The contract brewing company handles marketing, sales and distribution of its beer, while generally leaving the brewing and packaging to its producer-brewery (which,

confusingly, is also sometimes referred to as a contract brewery).” (“Craft Beer Industry Market Segments”)

Additionally, it is estimated that the craft beer industry contributed \$67.8 billion to the US Economy and equivalent to 456,000 full-time jobs in 2016. (“Economic Impact”). Please see Appendix C: Brewers Association Sales & Production Graphics for visual representations of the above statistics.

What is “Craft Beer”?

“Craft beer” is a catch-all term that is loosely thrown around by brewers, marketers, and drinkers alike to describe beers and breweries which are different than the light beers which have historically dominated the American beer market. The best selling beers in the United States (Budweiser, Bud Light, Busch, Busch Light, Michelob, Natural Light, Coors Lite, Miller Lite, Keystone Light, etc.) are brewed by two massive conglomerates: Anheuser-Busch InBev and MillerCoors. Garrett Oliver, brewmaster at Brooklyn Brewing, offers his own thoughts on the definition of craft beer in *The Oxford Companion to Beer*:

“Craft brewing is an evolving culture, and in many ways the definition is in the eye of the beholder. Within decades it is entirely possible that beers and breweries that are currently seen as “craft” will simply be looked upon as normal or even classic.” (273)

While the definition of craft beer may very well be subjective, the Brewers Association has defined the term to so as to be able to provide accurate statistics on the industry. The Brewers Association (BA) is a: “501(c)(6) not-for-profit trade association. The association is an organization of brewers, for brewers and by brewers. More than 4,100 U.S. brewery members and 46,000 members of the American Homebrewers Association are joined by members of the

allied trade, beer wholesalers, retailers, individuals, other associate members and the Brewers Association staff” (“Brewers Association Purpose”) and is the preeminent authority on the craft beer industry in the United States. The Brewers Association has defined a craft brewer as follows: “An American craft brewer is *small*, *independent* and *traditional*.” (“Craft Brewer Defined”).

By *small*, the BA means: “Annual production of 6 million barrels of beer or less (approximately 3 percent of U.S. annual sales). Beer production is attributed to a brewer according to the rules of alternating proprietorships.” By *independent* the BA means: “Less than 25 percent of the craft brewery is owned or controlled (or equivalent economic interest) by a beverage alcohol industry member which is not itself a craft brewer.” By *traditional* the BA means: “A brewer that has a majority of its total beverage alcohol volume in beers whose flavors derive from traditional or innovative brewing ingredients and their fermentation. Flavored Malt Beverages (FMBs) are not considered beers.” (Craft Brewer Defined).

The Brewers Association's definition allows it to “provide statistics on the growing craft brewery segment, which currently makes up 98 percent of all breweries in the U.S.” (Mestorey). For many brewers and consumers alike, independence is the most important part of the craft beer designation. A majority of breweries in the US (of which there are now more than 6,000) will never come close to producing 6 million barrels per year, and these breweries are all focused primarily around the use of traditional ingredients and brewing methods, hence the “small” and “traditional” portions of the definition. This leaves independence as the battleground where brewers fight their battles and consumers make their purchase decisions. The most recent Nielsen statistics on the craft beer industry indicate that independence is one of the most important

buzzwords that influences consumer purchase decisions (“The Sales Buzz on Craft Beer Terminology”). However, independence has become increasingly difficult to determine for many consumers as the large conglomerates continue to purchase craft breweries, thus making them non-craft breweries often without consumers being aware. Many “craft” brands no longer meet the BA’s definition of independence because of ownership by larger breweries: Ballast Point Brewing (Constellation Brands), Goose Island Beer Company (Anheuser-Busch InBev), Lagunitas Brewing (Heineken), Redhook Brewery (Anheuser-Busch InBev), Shock Top Brewing (Anheuser-Busch InBev), and Terrapin Beer Company (MillerCoors) are several of the well known brands that are no longer independently owned (“Top 50 Brewing Companies by Sales Volume”).

To help consumers more easily identify true craft breweries, the Brewers Association launched the Independent Craft Brewer seal in June, 2017 to much acclaim. The seal (pictured right) depicts: “an iconic beer bottle shape flipped upside down, the seal captures the spirit with which craft brewers have upended beer, *while informing beer lovers they are choosing a beer from a brewery that is independently owned*” (“Brewers Association Launches New Seal to Designate Independent Beers”). As of the time of writing, over 3200 microbreweries have adopted the seal and have begun to use it in packaging and marketing materials (“Independent Craft Brewer Seal”). The BA seal has helped to push the term “independent craft” to the forefront of the conversation about craft beer. It seems that for consumers now and in the future there will continue to be a distinction between “**craft**” breweries - which are partially or wholly owned by a non-craft



brewer (Goose Island, Lagunitas, Ballast Point) and “**independent craft**” breweries - which are independently owned.

Craft Beer in South Carolina

South Carolina may lack the deep craft beer tradition of states like California, but is not the beer wasteland it once was. Laws regarding the production and sale of alcohol have long affected SC consumers, such as “blue laws” that prevent the sale and service of alcohol on Sundays still existing in some places throughout the state. Laws have played a particularly important role in the craft brewing industry, and the story of SC craft beer is intertwined with the repeal and passage of several new laws that have made the state a more attractive place to open a brewery than it was several years ago. The first of these laws stated that beer could not be produced or sold in excess of 5% Alcohol by Weight (ABW), equivalent to 6.25% Alcohol by Volume (ABV). This limited brewers in the number of styles they could produce and excluded now-popular styles like Double IPAs and Imperial Stouts. To address this, the “Pop the Cap South Carolina” campaign was organized in 2005. By 2007, Pop the Cap had garnered enough support to pass House Bill 3812, raising the limit from 5% ABW (6.25% ABV) to 14% ABW (17.5% ABV) to the joy of brewers and the South Carolina Brewers Association (Pettigrew, ch. 6).

Other important legislation decisions were made in the following years. In 2010 House Bill 3693 passed, allowing breweries to offer four 4 oz. samples alongside brewery tours and also direct sales of 288 ounces per person, per day; equivalent to twenty-four 12 oz. bottles, twelve 22 oz. bombers, or four 64 oz. growlers for *off-premise consumption* (Pettigrew, ch. 8). Following in the footsteps of Bill 3693, the “Pint Law”, or House Bill 3554 passed in 2013. This

allowed breweries to sell up to 48 ounces of beer to a customer for *on-premise* consumption, whereas before this had been limited to the four 4 oz. samples that had to accompany a brewery tour. (McCary). This bill made it feasible for breweries to open their own taprooms, which is an increasingly important part of the craft beer industry for both consumers and brewers. In 2014 the “Stone Bill”, or House Bill 3512, was passed which allowed breweries to sell food on premise (“South Carolina's ‘Stone Bill’ Signed into Law”) which further enhanced the taproom environment and experience. Thanks to these law changes, South Carolina has gone from being behind the times to being an attractive state to own and operate a brewery in. There are several craft brewers that have been in operation for 20+ years in the state: Palmetto Brewing, which opened in 1993, RJ Rockers Brewing Co., which opened in 1997, and Thomas Creek Brewery, which opened in 1998. However, a majority of the breweries included in this project and in the state overall have opened in the last several years thanks in no small part to the legislation above.

At the time of writing, South Carolina is home to a total of 64 craft breweries, according to the Brewers Association. This number includes 44 microbreweries and 20 brewpubs: full lists can be found below in Appendix A and Appendix B, as well as several more breweries that are currently in planning (“Official Brewery Directory”). 2016 statistics indicated that South Carolina ranked 30th in the nation in the number of breweries, with 1.4 breweries per capita, which ranked 37th. (Breweries per capita is calculated per 100,000 21+ adults.) SC Breweries produced approximately 101,194 barrels of craft beer in 2016, equal to 0.9 gallons per 21+ adults, ranking 34th and 40th respectively. Craft breweries also had a significant economic impact on the state in 2016, equal to approximately \$650 million and over 4,000 jobs, ranking 28th in the country (“Craft Beer Sales by State”). What all this means for the consumer is that it

has never been a better time to be a craft beer drinker in South Carolina. New breweries are opening every year in the upstate, midlands, and the lowcountry and the quality of SC craft beer continues to rise year after year.

Methodology

Brewery Selection:

Breweries were selected for inclusion in this thesis project based on several factors to allow for a finished product that was focused and meaningful. Of the 64 craft breweries in the state, the 44 microbreweries were selected to be the focus of this project. As per the Brewers Association definitions laid out in earlier in this paper, microbreweries produce a majority of their beer for distribution, thus the beers they produce are usually available throughout the state and often in other states as well. Microbreweries package most of their beers in 12 oz. bottles or 12 oz. cans, with 16 oz. cans becoming more popular in recent years. To narrow down which microbreweries and beers to include, it was decided that it would be appropriate to focus on microbreweries which produce a “core” line of beers, often referred to as “year-round” beers. As the name implies, these beers are generally produced year-round and make up the “core” of a brewery’s beer lineup, as opposed to seasonal beers which are only produced at certain times of the year and in smaller quantities. Finally, in order to keep the project feasible from both a time and financial standpoint, it was decided to focus on breweries with a “core” lineup of *three or more beers*. At the time the decision was made (Fall, 2017), a number of newer breweries were only distributing one or two beers on an inconsistent basis, which would have made them exceedingly difficult to find and include in this project. Requiring a core lineup of three or more

beers has allowed this project to focus on South Carolina's most established microbreweries. In total, 15 breweries from across the state were included with a total of 66 beers.

Brewery & Beer Information:

To accompany the photographs in this project, key information about each brewery and each beer had to be acquired. Each beer is accompanied by the following information: name of the beer, beer style category, Alcohol by Volume (ABV) - the standard measure of alcoholic strength, International Bitterness Units (IBUs) - the standard for measuring bitterness in beer, and "profile" which contains basic tasting notes for each beer. Information on each beer included was acquired from the website of each brewery. When certain information was unavailable, breweries were contacted either via email or social media (Instagram message) to attempt to acquire any additional information.. The tasting notes "profile" came from tasting each beer after it was photographed while referencing CraftBeer.com's "Beer Flavors Six Pack" guide and utilizing prior experience with beer tastings. This prior experience comes from completing the University of South Carolina's HRTM 476 Craft Beer course and acquiring the distinction of Certified Beer Server in the Cicerone Program, the first level of the Cicerone Program: "the industry standard for identifying those with significant knowledge and professional skills in beer sales and service" ("About Cicerone"). In addition to the information about each beer, information about each brewery (address, hours of operation, contact information, background information when available) was acquired from their respective websites.

Beer Acquisition:

Each of the 60 bottles and cans included in this project was acquired as a single package (not as part of a 6-pack) from either retail stores or breweries. A large majority of the beers were

purchased in the Columbia, SC area from the following beer/liquor stores: Green's Beverages, Morganelli's Party Store, Bottles, and Craft and Draft. These stores represent the same establishments that consumers venture to when looking for and purchasing craft beer in the Columbia area. In a few instances beers were bought from the breweries themselves, for example from Thomas Creek Brewery and Benford Brewing Co.; this often occurred during travel when time allowed and when breweries were willing to allow the purchase of single bottles/cans.

Photography:

Being able to visually analyze beer is an important aspect when evaluating taste and describing a beer overall, and is something that consumers engage in almost every time they drink a new beer. Additionally, a recent Nielsen study found that:

“66% of American craft beer buyers say that a beer's package/label is “very” or “extremely” important for getting them to notice it. Additionally, 60% say that the package/label is “very” or “extremely” important in convincing them to give it a try and buy it. Overall, 71% of craft beer buyers say they like to try brands with bold and interesting packaging” (“Craft Beer Drinkers Often Judge a Beer by Its Packaging”).

Therefore, by including photographs of each beer poured into a glass and presented with its packaging, this project provides both important visual aspects. For glassware, a Belgian ale glass/snifter glass was used to provide consistency and also an aesthetically pleasing presentation of each beer. All photographs were taken using a Sony a6000 digital mirrorless camera equipped with a Sigma 19mm F/2.8 lens and a tripod. All photographs were shot in the largest file size for the highest possible resolution and were not edited so as to show the true color of each beer. The creative portion of this project was compiled and produced using Pages for Mac which results in a guidebook full of quality photography and information.

Limitations:

There were several limitations throughout the course of the project that had to do with both beer acquisition and information acquisition. As per the “Brewery Selection” section above, there were 66 beers that qualified for inclusion in this project. Out of those 66 beers, 60 were acquired and included in the final project. The six beers which were not included could not be acquired and this has been noted in the sections devoted to each brewery below. The exact reasons these beers were unavailable are difficult to determine with any certainty, but breweries sometimes experience production issues, or distributors/retailers may choose not to carry a product. Some information was also unavailable for inclusion in this project: the malt composition and hop composition of each beer was originally intended to be included. However, a majority of breweries do not publicize this information. Therefore, for the sake of continuity it was not included with the few beers for which this information was available. In addition, IBU measurements for several beers were unavailable on the brewery’s website and these breweries were unreachable via email/social media, and this has been noted in the sections below.

Upstate Breweries:**Benford Brewing Co.**

Benford Brewing Co., founded in 2012 by Bryan O’Neal, is located at 2271 Boxcar Road in Lancaster, SC 29720. Their beers are distributed in select markets throughout North Carolina and South Carolina. The brewery is open to the public from 12:00-5:00 pm on Saturdays and they can be reached at (704) 506-7806. They brew on a 30 barrel system and produce six core beers: Old Nitrolee, Irish Honey Ale, 77 South, O’Soo Oyster Stout, World’s Problem Solver, and The Problem Solver. (*Benford Brewing Co.*)

- Old Nitrolee is a Hefeweizen that measures 4.8% ABV and 12 IBUs. Its profile displays fruity, spicy, and bright yeast notes.
- Irish Honey Ale is an American Blonde Ale brewed with fresh honey that measures 5.1% ABV and 19 IBUs. Its profile displays crisp, malty, and sweet notes.
- 77 South is an American Pale Ale that measures 5.1% ABV and 12 IBUs. Its profile displays herbal and bitter notes.
- O'SOO Oyster Stout is an Oatmeal Stout brewed with oysters that measures 5.9% ABV and 33 IBUs. Its profile displays crisp, dark, and malty notes.
- World's Problem Solver is an American IPA that measures 6.8% ABV and 83 IBUs. Its profile displays earthy and bitter notes.
- The Problem Solver is an American Double IPA that measures 11.5% ABV and 109 IBUs. Its profile displays strong hop bitter and malt forward notes.

Brewery 85

Brewery 85 “specializes in marrying Southern culture with craft beer spirit while using traditional German brewing techniques” (CITE) and is located at 6 Whitlee Ct. in Greenville, SC 29607. Their brewery and tap room is open Wednesdays, Thursdays, and Fridays from 4:00pm-9:00pm and on Saturdays and Sundays from 12:00pm-8:00pm and they can be reached at (864) 558-0104. Brewery 85 brews four core beers: Southern Style, Yeoman's Brown, GVL IPA, and Quittin' Time. (*Brewery 85*)

- Southern Style is an American Pale Ale that measures 5.0% ABV and 36 IBUs. Its profile displays earthy and bitter notes.
- Yeoman's Brown is an American Brown Ale that measures 6.4% ABV and 16 IBUs. Its profile displays crisp, dark, and malty notes.
- GVL IPA is an American IPA that measures 7.0% ABV and 66 IBUs. Its profile displays earthy and bitter notes.
- Quittin' Times is a Helles Bock that measures 7.4% ABV and 13 IBUs. Its profile displays crisp, clean, and malty notes.

Full Spectrum Brewing Co.

Full Spectrum Brewing Co., founded in 2015 by Charles Bergman, is located at 2180 Carolina Place Drive, Suite 101 in Fort Mill, SC 29708. Their brewery and tap room is open on

Thursdays and Fridays from 4:00pm-9:00pm and on Saturdays from 12:00pm-9:00pm and they can be reached at (803) 620-4078. Full Spectrum brews on a 30 barrel system and produces four core beers: Crimson Amber, Infrared IPA, Upstate Orange Wheat, and Reaper Roast Amber.

(Full Spectrum Brewing)

- Crimson Amber is an American Amber Ale that measures 6.2% ABV. An IBU measurement was unavailable for this beer. This beer was unavailable for inclusion in this project.
- Infrared IPA is an American IPA that measures 6.3% ABV. An IBU measurement was unavailable for this beer. Its profile displays earthy and bitter notes.
- Upstate Orange Wheat is an American Wheat Ale that measures 6.5% ABV. An IBU measurement was unavailable for this beer. This beer was unavailable for inclusion in this project.
- Reaper Roast Amber is an American Amber Ale brewed with coffee and Carolina Reaper peppers that measures 7.4% ABV. An IBU measurement was unavailable for this beer. Its profile displays crisp, malty, and spicy notes.

Quest Brewing Company

Quest Brewing Company is located at 55 Airview Drive in Greenville, SC 29607. Their brewery and tap room is open on Tuesdays from 4:00pm-8:00pm, Wednesdays and Thursdays from 4:00pm-9:00pm, Fridays from 3:00-9:00pm, Saturdays from 12:00pm-9:00pm, and Sundays from 1:00pm-7:00pm and they can be reached at (864) 272-6232. Quest brews four core beers: Golden Fleece, Smoking Mirror, Ellida IPA, and Kaldi Coffee Stout. *(Quest Brewing Co.)*

- Golden Fleece is a Belgian Pale Ale that measures 4.5% ABV and 35 IBUs. Its profile displays herbal, bitter, and bright yeast notes.
- Smoking Mirror is a smoked American Porter that measures 5.5% ABV and 30 IBUs. Its profile displays crisp, dark, and malty notes.
- Ellida IPA is an American IPA that measures 6.9% ABV and 82 IBUs. Its profile displays earthy and bitter notes.
- Kaldi Coffee Stout is an Imperial Stout brewed with coffee that measures 8.0% ABV and 32 IBUs. Its profile displays crisp, dark, and dry notes.

RJ Rockers Brewing Co.

RJ Rockers Brewing Co., founded in 1997 by Mark Johnson, is located at 226-A West Main St. in Spartanburg, SC 29306. Their brewery and tap room is open on Tuesday-Fridays from 3:00pm-10:00pm and on Saturdays from 11:00am-10:00pm and they can be reached at (864) 585-2337. Free tours are offered every Wednesday starting at 6:00pm. RJ Rockers brews four core beers: Son of a Peach, Brown Eyed Squirrel, Hop Quake, and Bell Ringer. (*RJ Rockers Brewing Company*)

- Son of a Peach is an American Wheat Ale brewed with peaches that measures 5.6% ABV and 16 IBUs. Its profile displays crisp and fruity notes.
- Brown Eyed Squirrel is an American Brown Ale that measures 5.6% ABV and 18 IBUs. Its profile displays crisp, dark, and toasty notes.
- Hop Quake is an American IPA that measures 6.2% ABV and 67 IBUs. This beer was unavailable for inclusion in this project.
- Bell Ringer is an American Strong Ale that measures 8.0% ABV and 40 IBUs. Its profile displays strong earthy and bitter notes.

Thomas Creek Brewery

Thomas Creek Brewery, founded in 1998, is located at 2054 Piedmont Highway in Greenville, SC 29605. Their brewery and tap room is open on Mondays-Saturdays from 10:00am-8:00pm, Sundays from 1:00pm-8:00pm, and they can be reached at (864) 605-1166. Thomas Creek operates both a 60 barrel and a 10 barrel system as well as a homebrew shop at their location. They brew seven core beers: Dockside Pilsner, Class Five IPA, River Falls Red Ale, Appalachian Amber Ale, Trifecta IPA, Deep Water Doppelbock, and Up the Creek Extreme Ale. (*Thomas Creek Brewery*)

- Dockside Pilsner is a German Pilsner that measures 5.0% ABV and 26 IBUs. Its profile displays crisp and clean notes.
- Class Five IPA is an American IPA that measures 5.5% ABV and 87 IBUs. Its profile displays earthy and bitter notes.
- River Falls Red Ale is an Irish Red Ale that measures 6.2% ABV and 25 IBUs. Its profile displays malty and caramel notes.

- Appalachian Amber Ale is an American Amber Ale that measures 6.8% and 40 IBUs. Its profile displays hop bitter and malt forward notes.
- Trifecta IPA is an American IPA that measures 6.9% ABV and 86 IBUs. Its profile displays earthy and bitter notes.
- Deep Water Doppelbock is a German Doppelbock that measures 7.0% ABV and 30 IBUs. Its profile displays malty, toasty, and sweet notes.
- Up the Creek Extreme Ale is an American Double IPA that measures 12.5% and 143 IBUs. Its profile displays strong hop bitter and malt forward notes.

Midlands Breweries:

Conquest Brewing Co.

Conquest Brewing Co. is located at 947 South Stadium Road, Bay 1 in Columbia, SC 29201. Their brewery and tap room is open on Mondays-Thursdays from 4:00pm-9:00pm,

Fridays from 4:00pm-10:00pm, Saturdays from 11:00am-10:00pm, Sundays from

1:00pm-6:00pm, and they can be reached at (803) 814-1992. Conquest brews four core beers:

Artemis Blonde, Medusa Stout, Sacred Heart IPA, and Warrior Heart IPA. (*Conquest Brewing*)

- Artemis Blonde is a Blonde Ale that measures 4.2% ABV and 25 IBUs. Its profile displays crisp and clean notes.
- Medusa Stout is a Stout that measures 5.2% ABV and 21 IBUs. This beer was unavailable for inclusion in this project.
- Sacred Heart IPA is an American IPA that measures 7.2% ABV and 75 IBUs. Its profile displays earthy and bitter notes.
- Warrior Heart IPA is an American IPA that measures 7.2% ABV and 98 IBUs. This beer was unavailable for inclusion in this project.

River Rat Brewery

River Rat Brewery, founded in 2013 by Mike Tourville, is located at 1231 Shop Road in Columbia, SC 29201. Their brewery and taproom is open on Tuesdays-Thursdays from

4:00pm-9:00pm, Fridays from 12:00pm-10:00pm, Saturdays from 11:00am-10:00pm, Sundays

from 11:00am-8:00pm, and they can be reached at (803) 724-5712. River Rat brews five core

beers: American Kolsch Story, Broad River Red Ale, Hazelnut Brown Ale, My Morning Stout, and 803 IPA. (*River Rat Brewery*)

- American Kolsch Story is a Kolsch that measures 5.0% ABV and 25 IBUs. Its profile displays crisp and clean notes.
- Broad River Red Ale is an American Red Ale that measures 5.3% ABV and 24 IBUs. Its profile displays crisp and malty notes.
- Hazelnut Brown Ale is an American Brown Ale that measures 5.4 % ABV and 23 IBUs. Its profile displays crisp, dark, and malty notes.
- My Morning Stout is a Stout that measures 6.0% ABV and 30 IBUs. Its profile displays dark, malty, and dry notes.
- 803 IPA is an American IPA that measures 7.3% ABV and 60 IBUs. Its profile displays earthy and bitter notes.

Low-country Breweries:

COAST Brewing Co.

Coast Brewing Co., founded in 2007 by David Merritt, is located at 1250 North 2nd Street in North Charleston, SC 29405. Their brewery and tasting room is open on Thursdays and Fridays from 4:00pm-7:00pm, Saturdays from 12:00pm-5:00pm, and they can be reached at (843) 343-4727. COAST brews three core beers: 32/50 Kolsch, Dead Arm, and Hop Art. (COAST Brewing Co.)

- 32/50 Kolsch is a Kolsch that measures 4.8% ABV. An IBU measurement was unavailable for this beer. Its profile displays crisp and clean notes.
- Dead Arm is an American Pale Ale that measures 6.0% ABV. An IBU measurement was unavailable for this beer. Its profile displays herbal and bitter notes.
- Hop Art is an American IPA that measures 7.7% ABV. An IBU measurement was unavailable for this beer. Its profile displays earthy and bitter notes.

Holy City Brewing

Holy City Brewing, founded by several friends in 2011, is located at 4155 Dorchester Road in North Charleston, SC 29405. Their brewery and taproom is open on

Mondays-Thursdays from 11:00am-8:00pm, Fridays and Saturdays from 11:00am-9:00pm, Sundays from 11:00am-8:00pm, and they can be reached at (843) 225-5623. Holy City brews four core beers: Washout Wheat, Pluff Mud Porter, Chucktown Follicle Brown, and Overly Friendly IPA. (*Holy City Brewing*)

- Washout Wheat is a Hefeweizen that measures 5.3% ABV and 10 IBUs. Its profile displays fruity, spicy, and bright yeast notes.
- Pluff Mud Porter is an American Porter that measures 5.5% ABV and 21 IBUs. Its profile displays crispy, dark, and malty notes.
- Chucktown Follicle Brown is an American Brown Ale that measures 6.5% ABV. An IBU measurement was unavailable for this beer. Its profile displays crisp, dark, and malty notes.
- Overly Friendly IPA is an American IPA that measures 6.9% ABV. An IBU measurement was unavailable for this beer. Its profile displays herbal and bitter notes.

Palmetto Brewing Co.

Palmetto Brewing Co., founded in 1993 and making it South Carolina's oldest craft microbrewery, is located at 289 Huger Street in Charleston, SC 29403. Their brewery and tap room is open on Tuesdays-Thursdays from 4:00pm-8:00pm, Fridays and Saturdays from 12:00pm-10:00pm, and they can be reached at (843) 937-0903. Palmetto brews four core beers: Charleston Session IPA, Low Country Pilsner, Amber, and Huger Street IPA. (*Palmetto Brewery*)

- Charleston Session IPA is an American Session IPA that measures 4.2% ABV and 46 IBUs. Its profile displays earthy and bitter notes.
- Low Country Pilsner is a Pilsner that measures 4.5% ABV and 17 IBUs. Its profile displays crisp and clean notes.
- Amber is an American Amber Ale that measures 5.8% ABV and 27 IBUs. Its profile displays hop bitter and malt forward notes.
- Huger Street IPA is an American IPA that measures 7.2% ABV and 58 IBUs. Its profile displays earthy and bitter notes.

Revelry Brewing Co.

Revelry Brewing Co., founded in 2015, is located at 10 Conroy Street in Charleston, SC 29403. Their brewery and tap room is open on Mondays-Thursdays from 4:00pm-10:00pm, Fridays and Saturdays from 12:00pm-12:00am, Sundays from 12:00pm-10:00pm, and they can be reached at (843) 203-6194. Revelry brews three core beers: Gullah Cream Ale, Poke the Bear, and Lefty Loosey. (*Revelry Brewing Co.*)

- Gullah Cream Ale is an American Cream Ale that measures 5.0% ABV. An IBU measurement was unavailable for this beer. Its profile displays crisp and clean notes.
- Poke the Bear is an American Pale Ale that measures 5.5% ABV. An IBU measurement was unavailable for this beer. Its profile displays herbal and bitter notes.
- Lefty Loosey is an American IPA that measures 7.0% ABV. An IBU measurement was unavailable for this beer. Its profile displays citrusy and bitter notes.

Snafu Brewing Company

Snafu Brewing Company is located at 3280 Industry Drive in Charleston, SC 29418. Their brewery and tap room is open on Tuesdays and Wednesdays from 3:00pm-7:00pm, Thursdays and Fridays from 3:00pm-10:00pm, Saturdays from 2:00pm-10:00pm, and they can be reached at (843) 767-4121. Snafu brews three core beers: Snafu-Tang, IPA, and Shadow of Death. (*Snafu Brewing Company*)

- Snafu-Tang is an American Sour Ale that measures 5.3% ABV. An IBU measurement was unavailable for this beer. Its profile displays sour and tart notes.
- IPA is an American IPA that measures 6.8% ABV. An IBU measurement was unavailable for this beer. Its profile displays earthy and bitter notes.
- Shadow of Death is an Imperial Stout that measures 10.00% ABV. An IBU measurement was unavailable for this beer. This beer was unavailable for inclusion in this project.

Southern Barrel Brewing Company

Southern Barrel Brewing Company is located at 375 Buckwalter Place Blvd. in Bluffton, SC 29910. Their brewery and tavern is open on Mondays-Wednesdays from 4:00pm to 10:00pm, Thursdays from 11:30am-10:00pm, Friday and Saturdays from 11:30am-12:00am, Sundays from

11:30am-10:00pm, and they can be reached at (843) 837-2337. Southern Barrel brews six core beers: Kick Back Black Lager, Southern Helles Lager, Take Away IPA, Damn Yankee IPA, Saison N'on N'on, and Slippery Slope. (*Southern Barrel Brewing Co*)

- Kick Back Black Lager is a Schwartzbier/Black Lager that measures 4.0% ABV and 14 IBUs. Its profile displays crisp, malty, and toasty notes.
- Southern Helles Lager is a Helles Lager that measures 5.2% ABV and 22 IBUs. Its profile displays crisp, light, and malty notes.
- Take Away IPA is an American IPA that measures 6.1% ABV and 65 IBUs. This beer was unavailable for inclusion in this project.
- Damn Yankee IPA is an American IPA that measures 6.4% ABV and 55 IBUs. Its profile displays bitter and citrusy notes.
- Saison N'on N'on is a Saison that measures 7.0% ABV and 22 IBUs. Its profile displays crispy, bright yeast notes.
- Slippery Slope is an American Double IPA that measures 8.5% ABV and 80 IBUs. Its profile displays strong earthy and bitter notes.

Westbrook Brewing Co.

Westbrook Brewing Co. is located at 510 Ridge Road in Mount Pleasant, SC 29464.

Their brewery and tasting room is open on Tuesdays-Fridays from 4:00pm-8:00pm, Saturdays from 12:00pm-6:00pm, and they can be reached at (843) 654-9114. Westbrook is well known for their Mexican Cake series of imperial stouts and they brew five core beers: Gose, White Thai, One Claw, IPA, and Two Claw. (*Westbrook Brewing*)

- Gose is a Gose that measures 4.0% ABV and 5 IBUs. Its profile displays crisp and tart notes.
- White Thai is a Witbier that measures 5.0% ABV and 16 IBUs. Its profile displays fruity, spicy, and bright yeast notes.
- One Claw is an American Pale Ale that measures 5.5% ABV. An IBU measurement was unavailable for this beer. Its profile displays herbal and bitter notes.
- IPA is an American IPA that measures 6.8% ABV and 65 IBUs. Its profile displays herbal and bitter notes.
- Two Claw is an American IPA that measures 7.0% ABV. An IBU measurement was unavailable for this beer. Its profile displays floral and bitter notes.

Appendix A: List of All Craft Microbreweries (44) in SC - Obtained from the Brewers Association

- Benford Brewing Co.* - *Lancaster, SC*
- Birds Fly South Ale Project - *Greenville, SC*
- Brewery 85* - *Greenville, SC*
- Charles Towne Fermentory - *Charleston, SC*
- COAST Brewing Co* - *North Charleston, SC*
- Columbia Craft Brewing Company - *Columbia, SC*
- Commonhouse Aleworks - *North Charleston, SC*
- Conquest Brewing Co.* - *Columbia, SC*
- Cooper River Brewing Company - *Charleston, SC*
- Cotton Town Brew Lab - *Columbia, SC*
- Dead Eric Brewing Co. LLC - *Ridgeland, SC*
- Freehouse Brewery - *Charleston, SC*
- Frothy Beard Brewing Co - *Charleston, SC*
- Full Spectrum Brewing Co* - *Fort Mill, SC*
- Ghost Monkey Brewery - *Mount Pleasant, SC*
- Hilton Head Brewing Co - *Hilton Head Island, SC*
- Holy City Brewing* - *Charleston, SC*
- Hunter Gatherer Brewery and Alehouse - *Columbia, SC*
- Lo-Fi Brewing - *North Charleston, SC*
- Low Tide Brewing - *Johns Island, SC*
- Munkle Brewing Company - *Charleston, SC*
- New South Brewing Co - *Myrtle Beach, SC*
- Oak Road Brewery - *Summerville, SC*
- Palmetto Brewing Co* - *Charleston, SC*
- Pawleys Island Brewing Company - *North Charleston, SC*
- Quest Brewing Company* - *Greenville, SC*
- Rail Line Brewing - *Simpsonville, SC*
- Revelry Brewing Co.* - *Charleston, SC*
- River Dog Brewing Co - *Ridgeland, SC*
- River Rat Brewery* - *Columbia, SC*
- RJ Rockers Brewing Co* - *Spartanburg, SC*
- Rusty Bull Brewing Company - *North Charleston, SC*
- Seminar Brewing - *Florence, SC*
- Snafu Brewing Company* - *Charleston, SC*
- Southern Barrel Brewing Company* - *Bluffton, SC*
- Swamp Cabbage Brewing Company - *Columbia, SC*
- Swamp Rabbit Brewery and Taproom - *Travelers Rest, SC*

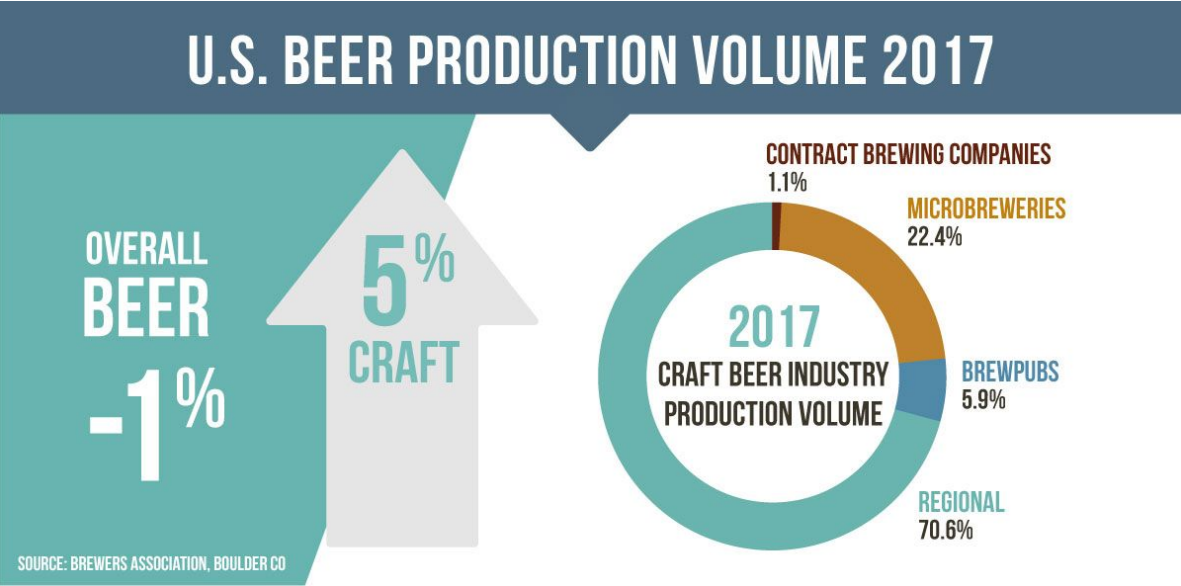
- The Hold by Revelry Brewing - *Charleston, SC*
- Thomas Creek Brewery* - *Greenville, SC*
- Tradesman Brewing Company - *Charleston, SC*
- Twisted Cypress Brewing Company - *Charleston, SC*
- Two Blokes Brewing Co. - *Mount Pleasant, SC*
- Westbrook Brewing Co* - *Mount Pleasant, SC*
- Wooden Skiff Beer Company - *Hilton Head Island, SC*

Note: * denotes inclusion in this thesis project as per the Methodology section above.

Appendix B: List of All Brewpubs (20) in SC - Obtained from the Brewers Association

- 13 Stripes Brewery - *Taylors, SC*
- Aiken Brewing Co - *Aiken, SC*
- Blue Ridge Brewing Co/Foothills Brewing - *Greer, SC*
- Carolina Bauernhaus Ales - *Anderson, SC*
- Ciclops Cyderi and Brewery - *Spartanburg, SC*
- Dockery's - *Charleston, SC*
- Edmund's Oast - *Charleston, SC*
- Good Times Brewing - *Greenwood, SC*
- Gordon Biersch Brewery Restaurant - *Myrtle Beach, SC*
- Hunter Gatherer Brewery and Alehouse - *Columbia, SC*
- Krafty Draft Brew Pub - *Lexington, SC*
- Legal Remedy Brewing - *Rock Hill, SC*
- Liberty Steakhouse and Brewery - *Myrtle Beach, SC*
- New Groove Artisan Brewery - *Boiling Springs, SC*
- Old Mill Brewpub - *Lexington, SC*
- Quigley's Pint and Plate - *Pawleys Island, SC*
- Salt Marsh Brewing - *Bluffton, SC*
- Southern Hops Brewing Co. - *Florence, SC*
- Twisted Spur Brewing - *Columbia, SC*
- Upstate Craft Beer Company - *Greenville, SC*

Appendix C: Brewers Association Sales & Production Graphics



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