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Consumer Perceptions of Craft Breweries in the American South

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Abstract

Regulatory changes related to alcohol consumption in the southern United States led to an increase in the number of craft breweries, whose success depends on consumers' perception of their performance. This research offers insights into which factors impact individuals' awareness and perception of the performance of local breweries. Using data obtained from surveys across 13 communities in the southern United States and probit and ordered probit models, we found that residents of rural communities are less aware and rank performance lower compared to urban residents. Among demographic characteristics, years of residency and gender had a statistically significant impact.

Keywords: Microbreweries, consumer, demand, food systems

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Introduction

The rise of craft beer in the United States over the past 30 years has been remarkable. While the first few craft beer breweries opened across the United States in the 1980s, many states only gained their first craft brewery in the 1990s. As the new millennium approached, the industry grew and evolved rapidly. By 1996, the United States boasted 1,000 craft breweries (Sparhawk, Baldwin, and Storey, 2020), a number that quintupled over the next 20 years. Today, with nearly 9,000 craft breweries in existence, 85% of adults in the United States live less than 10 miles from their nearest brewery (Brewer's Association, 2021b). The near ubiquity of craft breweries positions them as potential cornerstones for economic development. For example, according to the Brewer's Association (2022), small and independent breweries were responsible for 460,000 jobs and more than \$72 billion of economic impact.

The increased consumer appeal of craft beer has several motivations. First, many consumers appreciate products and brands that connect them with their locality via geographically specific ingredients, character, aesthetics, style, and variety (Long et al., 2018; Patterson and Hoalst-Pullen, 2020; Sanchez et al., 2022). Sensory attributes, such as flavor/taste, aroma, and alcohol content, are also mentioned as a reason for higher consumption (Gabrielyan et al., 2014; Malone and Lusk, 2018; Betancur et al., 2020; Staples, Malone, and Serrine, 2020; Steinbach, Burgardt, and Machado-Lunkes, 2023). Third, the context of beer consumption (i.e., food pairing, beer tourism) has also been identified as influencing craft beer consumption (Betancur et al., 2020; Capitello and Todirica, 2021).

Furthermore, although in previous generations, bars and other alcohol-serving establishments were associated with negative impacts on communities, today craft breweries are part of a broader cultural shift that sees local businesses and products as social goods. Craft breweries are now associated with revitalizing "Main Street," downtowns, and abandoned industrial areas, supporting other local businesses and providing character to and promoting unique aspects of local places (Feeney, 2017; Nilsson and Reid, 2019). At the industry level, many craft brewers have cooperative—rather than competitive—relationships with other brewers within and between regions (Kraus et al., 2018). Many craft breweries are "content to improve their own practices behind the scenes, helping out fellow brewers whenever asked" (Jones, 2017, p. 19). Overall, craft beer, as both a phenomenon and industry, seemingly serves as a counterpoint to the perceived homogenizing impulses of mass-produced consumer culture.¹

In some cases, breweries actively support local food businesses by offering space for start-up restaurants, food trucks, small-scale farmers' markets, and CSA drop-offs (Rossi and Hyden, 2015). These collaborations create opportunities to cross-promote farm brands, food businesses, and locally unique products. Further, establishing breweries can lead other businesses, such as

¹ We say "seemingly" because we do observe large, highly commercial beer companies rapidly buying up craft brands. We also see larger craft beer companies actively competing with much smaller breweries through litigation related to beer names and other aspects of branding.

farm-to-table restaurants, to locate nearby, sometimes revitalizing unused commercial or industrial spaces.

Consumers' positive perception of local breweries' performance is critical for the craft beer industry to continue being successful and, consequently, helping the local economies (Murray and Kline, 2015; Li et al., 2023). Nevertheless, the literature regarding customer satisfaction from local breweries is somewhat limited (Malone and Lusk, 2018; Tong, 2022). This research extends the literature by evaluating potential characteristics that can lead to higher customer satisfaction. Specifically, using survey data collected from 13 localities in the southeastern United States, we assess how demographic factors and other food system aspects affect consumer/residents' perceptions of the performance of local craft breweries.

The Role of Craft Breweries in the Local Food System

Research endeavors related to craft breweries have advanced because of the continued growth of the industry, its expansive prevalence, and its relationship to the local economy and other local businesses (Baiano, 2021; Nave et al., 2021). Part of this literature examines the sociodemographic characteristics of craft beer consumers across different countries. For example, previous research has often indicated that millennials are the most likely group to drink craft beer (Long et al., 2018; Malone and Lusk, 2018; Lerro, Marotta, and Nazzaro, 2020), although exceptions exist (Aqualini et al., 2015). Furthermore, although an increasing number of females purchase draft beer, the primary consumers are male (Chapman et al., 2018; Long et al., 2018; Baiano, 2021; Read, 2022). Lastly, craft beer consumers have higher incomes (Long et al., 2018; Baiano, 2021).

A limited strand of this literature examines consumers' willingness to pay for beer produced by local breweries. Results of these studies indicate that consumers are willing to pay a premium for local beer (Hart, 2018; Atallah et al., 2021). Other research endeavors evaluate the relationship between craft breweries and "neolocalism" (Taylor and Pietro, 2020; Nelson, 2021) and the function of breweries as "third places" (Reid, Gripshover, and Bell, 2020; Perry and Woolard, 2023), which refers to social gathering spaces outside of the home (first place) and work (second place). Furthermore, there is a growing literature that examines the role of craft breweries in a wide array of community, economic, and regional development contexts (Moore, Reid, and McLaughlin, 2016; Gatrell, Reid, and Steiger, 2018; Reid, 2018; Nilsson and Reid, 2019; Apardian and Reid, 2020; Reid, 2021; Reid and Gatrell, 2023).

Survey Design and Data Collection

The data for this study were obtained from a comprehensive survey instrument administered to residents from 13 communities of various sizes (see Table 1) in six southern states (Kentucky, South Carolina, North Carolina, Tennessee, Alabama, and Louisiana). These regions were selected in consultation with extension agents, university faculty, and local food experts who recommended different communities with observed, diversified local food activity. The southern states have been slower to join the craft beer movement (McLaughlin, Reid, and Moore, 2014; Zook and Poorthuis, 2014). However, following modifications in alcohol-related policies, these states also share the

common growth trend in the craft brewery industry (Elzinga, Tremblay, and Tremblay, 2015; Murray and Kline, 2015; Whitham and Leite, 2023). Consequently, learning more about consumers' perceptions is crucial as the industry expands.

Table 1. Demographics of Communities Surveyed

	N	HH Income (Median)		Other Survey Demographics		
		Survey	Census	Age	Sex (% Male)	% Med or High Interest
Upstate SC	408	\$50–\$75K	\$50K	50.3	33%	65%
Columbia, SC	263	\$50–\$75K	\$54K	50.5	36%	64%
York County, SC	146	\$50–\$75K	\$62K	52.4	43%	55%
Louisville, KY	541	\$50–\$75K	\$55K	48.0	32%	62%
Edgecombe County, NC	152	\$25–\$49K	\$43K	55.3	33%	60%
Little Rock, AR	234	\$25–\$49K	\$52K	46.3	31%	68%
Baton Rouge, LA	212	\$50–\$75K	\$57K	45.5	36%	58%
Nashville, TN	542	\$50–\$75K	\$63K	44.9	34%	58%
Knox County, TN	245	\$50–\$75K	\$55K	46.3	27%	71%
Montgomery, AL	164	\$50–\$75K	\$49K	42.1	25%	65%
Raleigh/Durham, NC	567	\$50–\$75K	\$67K	46.9	28%	64%
Boyd County, KY	121	\$50–\$75K	\$45K	50.8	38%	66%
Clark County, KY	69	\$50–\$75K	\$52K	44.0	37%	68%

The survey instrument was iteratively developed using a combination of focus groups with residents in the South, discussions with local food researchers across the United States, a pilot survey, and a smaller working group of extension-oriented researchers from four universities. Participants in the focus groups were asked to identify which aspects of their communities were critical to supporting a vibrant, active, and broadly inclusive food system (i.e., a system with high vitality). The survey designers workshopped these questions with various stakeholders and researchers to identify local food system (LFS) aspects important to supporting systemwide vitality.

Survey participants were recruited using: i) mailed surveys (1,500 per community), ii) online recruitment using Dynata (an online survey service), and iii) in-person events where surveys were distributed (limited to regions with poor broadband access and/or a high percentage of low-income residents). Paper surveys were distributed via mail using addresses purchased from PostcardMania, a commercial marketing service. For paper and online surveys, both services were asked to select addresses/respondents that accurately reflected income diversity (i.e., property values/household income) and population levels of the communities of selected Zip codes. The final sample includes 3,638 usable responses.

In the questionnaire, survey participants are asked to evaluate the performance of 29 aspects of their Local Food Systems using a 5-point Likert scale question (“Very Poor” to “Excellent”).² Performance measures how well different components of the food system meet the needs and expectations of community residents. The general question text for measuring performance for each aspect was “How would you rate the performance of the following aspects of your community’s local food environment?”

Each participant’s perception of performance may vary due to different experiences within and outside the food system. Consequently, the survey provides guidance for what is considered high performance among different LFS aspects. In this analysis, we only consider residents’ performance evaluations of craft breweries. A previous publication evaluates a larger set of LFS aspects using the same dataset (Rossi and Woods, 2023).

While there are several definitions of “craft beer” and “craft breweries” worldwide, we rely on a broad definition where craft brewers must be small, independent, cooperative, and locally based. This approach expands the Brewer’s Association’s definition by incorporating cultural and geographical elements alongside their numerical qualifications. According to the Association, a brewer must i) be “small,” producing at most 6 million barrels of beer per year,³ ii) be “independent,” meaning that “less than 25% of the craft brewery is owned or controlled (or equivalent economic interest) by a beverage alcohol industry member that is not itself a craft brewer (2021),” and iii) brew most of its total beverage alcohol volume from traditional or innovative brewing ingredients. In addition to being small, independent, and following traditional brewing practices, other definitions emphasize that cooperation amongst brewers is a critical element of the definition of a “craft brewery” (Baiano, 2021).

Approach

Our analysis involves two separate estimations. First, a probit model was utilized to understand which individuals in our sample are more likely to be aware of craft breweries in their area. To do this, we recoded the brewery performance score, our dependent variable, into a binary variable.⁴ We consider respondents to be aware of craft breweries if they provided a performance score other than “Don’t Know.” The independent variables included in the model are i) self-reported level of interest in local food systems, ii) standard demographic characteristics (gender, age, and income), iii) the number of years the person had been a resident of their community, and iv) the size of the respondent’s community. “Small” communities were defined as having a population under 100,000, “medium” communities were defined as having populations between 100,000 and

² All respondents also had an opportunity to answer “Don’t Know.” When we measure the overall performance scores for each LFS aspect of a community, we remove “Don’t Know” responses from the analysis since respondents were not aware of or not engaged with these particular aspects of their LFS.

³ This 6-million-barrel figure is somewhat controversial in the brewing community. It was created by the Brewer’s Association as a sort of “protection” against companies like Anheuser-Busch claiming to be a “craft” brand. Some brewers do not agree with this definition, but it is useful in drawing a line between “beer” and “craft beer” and will be used as such in this research. See Fisco (2019) for more details on the controversy.

⁴ All performance scores are originally on a 1–5 Likert scale, with “Don’t Know” responses considered a non-response. For the probit analysis, we re-coded “Don’t know” = 0, and any 1–5 performance score = 1.

500,000, and “large” communities had more than 500,000 residents. See Table 2 for definitions and codes for these variables.

Table 2. Definitions and Descriptions of Demographic Variables

Variable	Abbreviation	Description
Years of residence	Yrs resident	Number of years respondent has been a resident of their community
Sex	Sex	Binary: 0 = female, 1 = male
Age	Age	Age of consumer
Income	Income	Consumer income level: 12.5 = \$0–\$24,999 37.5 = \$25,000–\$49,999 62.5 = \$50,000–\$74,999 87.5 = \$75,000–\$99,999 112.5 = \$100,000–\$124,999 137.5 = \$125,000–\$149,999 162.5 = \$150,000–\$174,999 187.5 = \$175,000–\$199,999 250 = \$200,000 and up
Interest in local food	Lfs_interest	Interest in local food system: 0 = Not interested: low 1 = Somewhat interested: medium 2 = Very interested: high
Size	Size	Size of community: 0 = Urban, less than 500,000 residents: medium 1 = Rural, non-urban: small 2 = Urban, more than 500,000 residents: large

The probit equation is described below:

We assume the latent variable y^*_{ij} is a function of observed and unobserved variables behind the respondent i decision (i.e., j) to provide a performance score for craft breweries and can be described as:

$$y^*_{ij} = x'_i \beta + \varepsilon_{ij}, \tag{1}$$

where x_i is a vector of observable variables that could be correlated with the decision to provide a performance score for breweries, such as respondent demographics and interest in local food systems; β is a vector of coefficients capturing the correlation between the various observable variables and the respondent decisions; and ε_{ij} is the random disturbance term. We do not observe y^*_{ij} , but we only observe whether the respondent provides a performance score for breweries such that:

$$y_{ij} = \begin{cases} 1 & \text{if } y^*_{ij} \geq 0; \\ 0 & \text{otherwise} \end{cases} \quad (2)$$

where y^*_{ij} is the dependent variable to be used in the probit regressions identifying which factors influence the likelihood of a respondent providing a performance score for breweries. The probability of respondent i providing breweries with a performance score (i.e., decision j) is defined as (Greene, 2008),

$$\begin{aligned} P(y_{ij} = 1 \mid x_i) &= P(y^*_{ij} \geq 0 \mid x_i) = P(x'_i \beta + \varepsilon_{ij} \geq 0 \mid x_i) \\ &= P(\varepsilon_{ij} \geq -x_i \beta \mid x_i) = P(\varepsilon_{ij} \leq x_i \beta \mid x_i) \\ &= F(x'_i \beta) = \Phi(x'_i \beta), \end{aligned} \quad (3)$$

where $F(\cdot)$ is the cumulative distribution function for the random variable ε_{ij} . We assume ε_{ij} is normally distributed; therefore, $\Phi(\cdot)$ is the cumulative normal distribution.

Once we evaluated who is more likely to be aware of craft breweries, we then utilized an ordered logistic regression to understand how demographic and geographic variables impact a respondent's likelihood of evaluating breweries more or less positively. We maintained the same independent variables as in our probit model but allow the brewery performance score to retain its original coding on a 1–5 Likert scale. “Don't know” responses are coded and removed from this analysis to include only the subset of our initial sample that is aware of breweries. The total number of usable observations in the ordered logit of performance is 2,514.

Summary statistics of the variables included in this analysis are reported in Table 3. We compare the values (% of categorical variables, mean for continuous variables) between the two models to show any differences among the respondents who provided performance scores for craft breweries (i.e., the subset of respondents in the ordered logit) and all respondents sampled (i.e., the respondents included in the probit model). Those who provided performance scores for breweries were slightly younger, had higher household incomes, were more interested in local food, and were more likely to be male.

Table 3. Summary Statistics Performance Model Awareness Model

	Performance Model	Awareness Model
	%	%
Sex		
Male	35.1	32.5
Female	64.9	67.5
Interest in Local Foods		
Low	32.7	37.3
Medium	31.8	30.3
High	35.5	32.4
Community Size		
Small	15.0	17.2
Medium	29.4	30.0
Large	55.6	52.8
	Mean	Mean
Years of Residence	16.4	16.6
Age	45.6	47.3
Income	80.2	75.1

Note: N = 2514 for all variables in the performance model; N = 3,638 for all awareness variables. The average brewery performance score is 3.6 out of 5.0. The average awareness of breweries is 69.1%.

Results

Household income for survey participants⁵ generally matched the 2020 census data (see Table 1). The majority of the survey respondents, between 55% and 71%, indicated that they are either “somewhat interested” or “very interested” in one aspect of Local Food Systems. Thus, this sample provides insights into the perceptions of individuals who have some awareness of and experience with local food in their communities.

The results of the probit model are shown in Table 4. These results indicate which variables are associated with an increased likelihood that a respondent will provide a performance score other than “Don’t Know” for craft breweries. We consider these individuals to be “aware” of breweries. Regarding demographics, if a respondent is male, younger, and has a higher income, they are more likely to be aware of breweries. Those more interested in local food are also more likely to know about breweries. Additionally, individuals from smaller communities are less likely to be aware of breweries. Each rural community surveyed had at least one craft brewery. The marginal effects indicate that males are 10 percentage points more likely to be aware of craft breweries, compared to females. On the other hand, being a resident of a small rural community reduces the probability of awareness by 7.3 percentage points.

⁵ Participants chose a household income range.

Table 4. Probit Estimation for Awareness of Craft Breweries Coefficient Standard Error Marginal Effects

	Coefficient	Standard Error	Marginal Effects	
Years of residence	0.002	0.002		
Male	0.305	0.051	0.100	***
Age	-0.014	0.001	-0.004	***
Income	0.003	0.000	0.001	***
Community size				
Small	-0.212	0.066	-0.073	***
Large	0.048	0.052		
Interest in local				
Medium	0.356	0.054	0.122	***
High	0.129	0.054	0.160	***

Notes: ***, **, * represent significance at the 99%, 95%, and 90% levels. N = 3,638; Pseudo R2 = 0.063; Pearson GOF *p*-score = 0.074; model correctly classifies 70.4% of observations based on independent variables

The results of the ordered logistic regression of performance are included in Table 5. The first main observation is that fewer demographic variables were statistically significant, compared to the probit estimation. Higher income individuals were more likely to rate the performance of breweries higher. Newer residents were also likelier to give breweries a more positive performance score. Respondents in smaller communities were more likely to score local craft breweries lower than their larger community counterparts. They were also less likely to know about breweries. Respondents from the largest communities generally had a more positive perception of brewery performance than those from other community sizes. Finally, respondents who answered that they were somewhat or very interested in local foods were more likely to score breweries higher.

Table 5. Ordered Logistic Estimation for Performance of Craft Breweries

	Coefficient	Standard Error	
Years of Residence	-0.004	0.002	**
Male	-0.030	0.046	
Age	0.001	0.001	
Income	0.001	0.000	*
Community Size			
Small	-0.538	0.066	***
Large	0.126	0.048	***
Interest in Local			
Medium	0.291	0.053	***
High	0.503	0.052	***

Note: ***, **, * represent significance at the 99%, 95%, and 90% levels. N = 2514; Pseudo R2 = 0.028

Table 6 presents a demographic breakdown of individuals who rate brewery performance differently. For sex, community size, and interest in local, we present the percentage of individuals within each category to provide a particular brewery performance score.⁶ Residents providing lower performance scores often have lower incomes. Respondents in smaller communities have a higher percentage of lower performance scores than those in the two other size classes. Women have a larger share of high-performance scores than men, even though they are less likely to be aware of brewery performance. Individuals with a high interest in local food systems have a larger percentage of high-performance scores. This pattern is similar to what was observed in the awareness analysis, where higher interest in local foods is associated with a more heightened awareness of breweries.

Table 6. Demographic Breakdown of Brewery Performance Scores

	Low Performance	Medium Performance	High Performance
Years of Residence	16.5	16.8	15.7
Age (yrs)	44.8	47.7	44.0
Income (\$1,000s)	76.9	82.1	83.5
Sex			
Male (%)	42.3	38.1	19.6
Female (%)	39.6	38.2	22.2
Community size (%)			
Small	57.7	31.0	11.3
Medium	39.5	39.5	21.1
Large	36.4	39.5	24.1
Interest in local			
Low	51.8	35.6	12.5
Medium	37.9	44.3	17.8
High	32.4	35.1	32.5
N	1,019	960	535

Discussion and Conclusion

Craft breweries have become increasingly popular over the last 30 years, in parallel to consumers' rising preferences for different aspects of local food markets over the same period. The literature regarding consumers' willingness to pay for products at craft breweries and the characteristics of craft breweries' patrons is evolving. However, limited research has evaluated residents' perceptions of the performance of craft breweries. This study is an effort to expand this literature by utilizing survey data from 13 localities in the southern United States. This region is selected because of the substantial growth in the number of craft breweries that followed fairly recent regulatory changes related to alcohol consumption.

⁶ Low performance = 1–3; medium performance = 4; and high performance = 5

The results of this analysis indicate a relationship between consumers' perceptions of craft breweries and interest in local food systems across the American South. Those interested in local food systems are more likely to know about and give more positive performance scores to their local craft breweries. These results seem intuitive. For example, food trucks and nearby local restaurants might support breweries without food service. Breweries and these dining establishments often promote each other and hold collaborative events. Patrons of these institutions are likely interested in quality, local products, and, perhaps, unique experiences.

Breweries can also serve as spaces to promote and support unique, local agricultural (heritage) crops, and other community-supported agriculture endeavors. Similarly, breweries might host or sell at farmers' markets or services such as a CSA pickup station (Spence, 2017; Eat Local First, 2022; Graham, 2023; Jones, 2023).

According to this analysis, demographic aspects, such as age, sex, and income, were statistically significant in terms of residents' awareness of breweries but less predictive of their perceptions of performance. In terms of both performance and awareness, it appears that consumers' perceptions of and interactions with other LFS aspects are worth considering when evaluating craft breweries. Perhaps as local breweries mature in product development and engage in more competitions that bestow indications of quality, consumers will become more sensitized to brewery performance. Our findings are consistent with previous studies indicating that male and higher income individuals are more likely to visit craft breweries.

Although demographics, including years of residence in a community, were significant to understanding who might be aware of breweries, they had less impact on the perceptions among the subset of those who were aware of breweries. This finding indicates that breweries could improve awareness by marketing their products and non-beer-related activities (e.g., providing community gathering spaces, CSA dropoffs, craft markets) to audiences beyond younger males (who have a higher household income and are newer to the community). Cross-promotion of craft and local enterprises—especially if included in a broad local marketing campaign—will likely generate awareness of these activities. In short, there are opportunities to pair local food marketing with other connected products and experiences, such as those offered by craft breweries. Once this is accomplished, then the next logical step might be to engage in broader regional culinary or agritourism trails projects.

These results also illustrate that more rural communities view their local craft breweries as performing below their counterparts in more urban communities. This finding may indicate an opportunity for growth for these rural craft breweries. Each smaller community in this analysis has at least one craft brewery nearby. The lower scores could be explained by the limited number of breweries or the variety of what each brewery offers. Perhaps residents view these establishments as too expensive, elitist, or catering toward out-of-town visitors, or the local breweries in smaller communities are indeed of lower quality. This warrants further study, as it would be interesting to understand how the craft brewery experience can be tailored to locales with less dense populations.

Additionally, it would be interesting to determine whether tourists have different perceptions of craft breweries than residents. Potentially, a survey distributed to tourists or visitors might offer an interesting perspective on the differences in perceptions among those who live in a place and those who visit. Another potentially interesting area of study would be to evaluate consumer perceptions of these local food system elements in a post-COVID-19 world. Because this survey was completed before the onset of widespread COVID-19 restrictions in 2020, it would be interesting to know whether respondents' perceptions were changed by their pandemic experience. The survey developers are collecting post-COVID results in some of these communities, and future work will show how local food systems responded.

Since this is a case study of the American Southeast, we expect the results would differ in other parts of the United States because of cultural differences and because the brewery industry is more mature in some of those regions. The Local Food Vitality Survey shows great promise in evaluating consumer perceptions and would be useful in evaluating interest and perceptions of communities beyond U.S. borders. In conclusion, this study offers insights into how people in the American South perceive their local craft breweries. First, the results indicate that residents are engaged with the local food system and, thus, perceive many of its elements positively, and second, this analysis also suggests a relationship between local food systems and craft brewing. One crucial policy suggestion from this study is that closer collaboration among the various components of the food system could yield significant benefits. Knowing this creates a host of opportunities for facilitating collaboration across these domains.

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