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"There's No Place Like Home": Inquiry into Preferences for Local Foods

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Abstract

Using a nationally representative survey of U.S. consumers, we analyze demographics, food shopping behaviors, and stated preferences and use logistic regressions to further explore local food preferences and perceptions of farmers' markets. When asked the definition of "local," the largest percentage of respondents (28%) selected that local meant "in their county of residence." Respondents assigned various qualities to farmers' markets, including freshness, healthiness, tastiness, and locally produced. Having higher income, the presence of a child in the household,

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reading packaging information, shopping for local food at the supermarket, and closer definitions of local all increased the probability of shopping at the farmers' market.

Keywords: best–worst scaling, consumer perceptions, definition of local, farmers' market, food retail, local foods

Locavore (noun lo·ca·vore \ ˈlō-kə-ˌvȯr \) *– A person whose diet consists only or principally of locally grown or produced food.*

– Oxford American Dictionary

The local food movement has been known "formally" since the 1950s. However, policies promoting local foods and the popularity of the "buy local" movement have been increasing recently (Winfree and Watson, 2017). The *Oxford American Dictionary* chose the word "locavore" as the 2007 word of the year, citing two reasons why local food consumption was on the rise: (i) an increase in consumer concerns for human impact on the environment and (ii) the role consumers believed eating local foods could play in living an environmentally friendly lifestyle (Oxford University Press, 2007). Despite the rise in popularity, the definition of local is still ambiguous and may differ among consumers (Thilmany McFadden, 2015). Beyond the definition of local, the reasons behind its rise in popularity are important to consider. The attributes that people find important or preferable and influence decisions to purchase local foods can be used in marketing, while the decisions of grocery retailers and restaurants can be reflected in the use of local foods in business promotion and outreach.

Many have tried to define the ambiguous term "local" using distance measures such as miles or geopolitical boundaries such as U.S. states or regions. The 2008 Food, Conservation, and Energy Act defined local foods as those produced within a 400-mile radius or within the boundaries of the state where the food was being sold (Low et al., 2015). From a consumer perspective, Onozaka, Nurse, and Thilmany McFadden (2010) found that over 70% of survey respondents defined local as coming from within a 50-mile radius and considered a 300-mile radius more likely to be regional than local. Foods labeled as "produced within the state" in grocery stores take advantage of the idea that some consumers prefer knowing the location in which products are produced. Nganje, Hughner, and Lee (2011) referred to the Arizona Grown certification as locally grown in their survey instrument and found that respondents were willing to pay more for locally produced spinach (defined as produced within the state) compared to locally produced carrots. Based on these results, it is unclear whether defining local as produced within the state aligns with respondents' definition of local or if they were demonstrating a preference for products grown within their state of residence.

Regardless, willingness to pay for the locality of production may be product-specific. For example, Nganje, Hughner, and Lee (2011) hypothesized that consumers associated within-state production with food safety and were willing to pay more for that attribute in spinach (than in carrots) due to recent food safety concerns related to spinach. The attributes and values consumers associate with their definition of local foods are, therefore, variable and complex.

Local food is often associated with farmers' markets, community supported agriculture (CSA), and direct buying (Zepeda and Leviten-Reid, 2004; Dunne et al., 2011). The general assumption is that those selling food at a farmers' market also live and grow the items near the farmers' market (Zepeda and Leviten-Reid, 2004). However, the rise in popularity of local products has meant that brick and mortar retailers also advertise the sale of local foods (Dunne et al., 2011). Additionally, many restaurants boast of serving food sourced locally, and the practice appeared on lists of restaurant trends for multiple years (Sharma, Moon and Strohbehn, 2014). An abundance of attention has been placed on various aspects of local food markets, including locally grown, locally produced, and even discussions about sourcing (Martinez, 2010). While none of these labels or claims are necessarily synonymous, consumers' perceptions of these statements deserve further study. When the farmer who actually produced (not just procured) the food is not physically available to answer questions regarding its production, the perceived definition of local food is an increasingly important marketing signal to consumers. Additionally, restaurants and brick and mortar retailers can use knowledge about the reasons why people seek out local foods to promote local wares without having the producer available to answer questions. Furthermore, it is possible that the attributes consumers associate with local foods can be met by nonlocal foods, such as environmentally friendly production practices, and retailers may choose to advertise non–locally produced food differently.

This analysis seeks to help close the gap in the literature by contributing to the definition of local, as seen or perceived by a nationally representative group of consumers, and to further understand the perceptions surrounding food (including local food) procurement both in the supermarket and in farmers' market settings. By analyzing demographics, food shopping behaviors, stated preferences, and the use of logistic regression focused on local food procurement, this work further explores local food preferences and perceptions of shopping at farmers' markets.

Methods

Survey Instrument

An online survey was launched on July 10, 2017, and closed on July 19, 2017. A total of 1,200 surveys were completed by U.S. household members during this data collection period. The survey was conducted using Qualtrics, and respondents were obtained through Lightspeed GMI, which maintains an opt-in panel. By using Qualtrics quotas, the survey was targeted to be nationally representative in terms of gender, age, income, region of residence, and education (U.S. Census Bureau, 2016). Questions were designed to help understand the relationship between households' demographic characteristics and their perceptions of local food. Regions of residence were as defined by the U.S. Census Bureau.[1] For all variables of interest, including shopping behaviors and preferences and household demographics, frequencies were calculated for categorical variables while means were calculated for continuous variables.

[1] Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont), Midwest (Indiana, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin), South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia), and West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, New Mexico, Montana, Nevada, Oregon, Utah, Washington, Wyoming).

Shopping Behavior and Perceptions of Local Food

In addition to demographic information, the study included whether the respondent was the primary food shopper, shopping frequency, weekly spending, availability of food retailers near their home, and other shopping questions focused on local foods. Regarding local foods, respondents were shown a variety of statements and asked to indicate how limiting the statement was in purchasing local foods. Additionally, respondents were asked their level of agreement with statements regarding local foods, such as how often they purchased local foods, shopping behavior, and the level of importance assigned to various reasons for purchasing local foods.

No single definition of local foods is universally accepted; thus we did not provide a definition to respondents, in order to avoid introducing bias among respondents from given information (Martinez, 2010). Rather, we assumed that respondents approached questions related to local foods similarly to how they would approach the local label in a shopping setting—with their own interpretation of the word *local.* Studying focus groups in Wisconsin, Zepeda and Leviten-Reid (2004) found that most respondents indicated a definition of local as an amount of time traveled by vehicle. A smaller group of respondents indicated the definition of local using a political boundary such as states or counties. Following Byrd, Widmar, and Wilcox (2017), we asked respondents to indicate their interpretation of local in terms of distance from their home. Respondents were presented with options to select from, including: i) my county of residence, ii) my county and neighboring counties, iii) 100 miles or less from my home, iv) my state of residence, v) the United States, vi) other, and vii) I don't know.

Logit Models

To further analyze the relationship between demographic characteristics and two specific shopping behaviors—purchasing local foods at the store and shopping at farmers' markets—we used two independent logit models to estimate the probability that a respondent would purchase local foods at the store or shop at a farmers' market. For the local foods model, the dependent variable took a value of 1 if the respondent shopped for local foods, and 0 otherwise. For the farmers' market model, the dependent variable took a value of 1 if the respondent shopped at the farmers' market, and 0 otherwise. All respondents were included in both models. For comparison purposes, the same independent variables, which included demographics and shopping behaviors, were used in both models, with one exception. Shopping at a farmers' market was included as an independent variable in the model of shopping for local foods at the store, and shopping for local foods at the store was included as an independent variable in the model of shopping at farmers' markets. The models allowed for (i) a flexible relationship between shopping at the farmers' market and shopping for local foods at the store, and (ii) the coefficient to be either negative or positive depending on the relationship between the independent and dependent variables. We hypothesized that respondents who shopped at farmers' markets were also likely to shop for local foods when making purchases at the store. Conversely, we hypothesized that those who shop for local foods when making purchases at the store were also likely to shop at farmers' markets. The coefficients of logit models are not directly interpretable, so we calculated marginal effects. The utility (V_{nj}) of either purchasing local foods at the store or shopping at farmers' markets takes the form

(1) $$V_{nj} = \beta' x_{nj} + e_{nj},$$

where x_{nj} is the vector of observed variables that relate to choice j for respondent n and e_{nj} is the unobserved error term (Train and Weeks, 2005). Observed variables for the model of respondents who shopped for local foods at the store were all dummy variables that took the value 1 (0 otherwise) and included female, age 55 or older, having a child in the household, usually or always reads information on food packaging before making purchasing decisions, looks at a display in a store to determine whether the food is local, shops at the farmers' market, definition of local food is within the county of residence, definition of local food is within 500 miles, definition of local is within the United States, resident of the Northeast, resident of the South, and resident of the Midwest. The observed variables for the model of farmers' market shoppers were identical to those in the model of those who shopped for local foods at the grocery store, with the exception of the inclusion of the variable that the respondent shopped for local food at the store and the exclusion of the variable that the respondent shopped at the farmers' market. The error term was assumed to be an independently and identically distributed Type I extreme value. Following Train and Weeks (2005), the logit probability (P_{ni}) for respondent n and attribute i becomes

(2) $$P_{ni} = \frac{e^{\beta' x_{ni}}}{\sum_j e^{\beta' x_{nj}}}.$$

Results and Discussion

Table 1 presents survey respondents demographic information and a comparison to U.S. Census Bureau data. There were 1,200 completed responses to the survey, and most categories were comparable to the population represented in the U.S. Census Bureau data, with the exception of region of residence, where there were 17% fewer respondents from the South and 17% more respondents from the Midwest, compared to U.S. Census targets. Other demographic information was derived from asking respondents to summarize eating behaviors with respect to vegetarian or vegan diets: 5% of respondents considered themselves vegetarian, while 4% considered themselves vegan. These results were similar to the findings of a Gallup Poll in which 4% of respondents were vegetarians and 2% of respondents were vegan (Gallup, 2012). 4% of respondents reported having a vegetarian household member, while 3% reported that a household member followed a vegan diet. The frequency of food shopping ranged from daily (6%) to monthly (8%), with the most frequent responses being weekly (43%) and twice weekly (26%).[2] Only 2% of respondents said that they did not know how much they spent in total on food each week, while 12% indicated they spent less than $50 weekly, 29% selected $50–$99, 28% selected $100–$149, 15% selected $150–199, 8% selected $200–$249, 4% selected $250–$299, and 2% selected $300 or more. In a nationally representative survey of U.S citizens, Morgan et al. (2017) found that a high percentage of respondents (relative to other categories) spent $51–$100 (34%) and $101–$200 (30%) per week on food. Similarly, a higher percentage of respondents in this study selected $50–$99 or $100–$149 as the amount they spent weekly on food.

[2] "I don't know" was provided as an option but was not selected by any respondents; 6% of households indicated they shopped daily, 26% twice weekly, 43% weekly, 15% every other week, 8% monthly, and 2% never.

Table 1. Demographic Variables (*N* = 1,200)

Variable	Percentage of Respondents	Percentage of U.S. Census
Gender		
Male	49%	49%
Age		
18–24	10%	13%
25–34	18%	18%
35–44	17%	16%
45–54	18%	17%
55–65	17%	17%
65 +	20%	19%
Income		
$0–$24,999	23%	22%
$25,000–$49,999	25%	23%
$50,000–$74,999	18%	17%
$75,000–$99,999	12%	12%
> $100,000	21%	26%
Education		
Did not graduate from high school	3%	13%
Graduated from high school, did not attend college	26%	28%
Attended college, no degree earned	25%	21%
Associates or bachelor's degree earned	32%	27%
Graduate or professional degree earned	14%	12%
Region		
Northeast	18%	18%
South	38%	21%
Midwest	21%	38%
West	24%	24%

Perceptions of Local Food and Shopping Behavior Results

People form their perceptions of an issue based on their frame of reference, which is influenced by convictions, values, norms, knowledge, and interests (Te Velde, Aarts, and Van Woerkum, 2002). To better understand shopping practices within the sample, respondents were asked a series of questions about their food buying behavior. The majority of respondents (88%) indicated they were the primary food shopper in their households, and 63% indicated they purchased food from farmers' markets, roadside stands, and U-pick operations. Although the majority of respondents

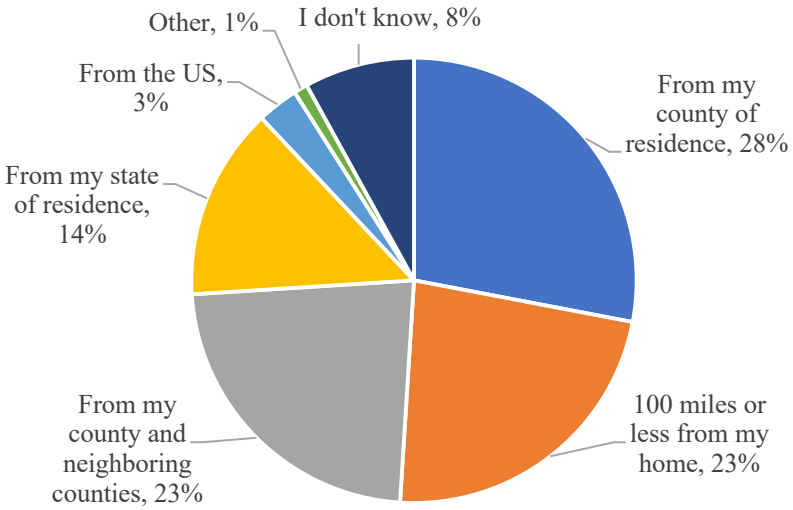
indicated they were the primary shopper, there is no way to verify this information. Even though the respondent may not truly be the primary shopper, they clearly believe that they either influence or execute food purchasing decisions for their household.

Respondents were asked about the food shopping location closest to their home to develop an understanding of the options present in the respondents' marketplaces. The shopping places least frequently selected as closest to the respondents' homes were community supported agriculture (CSAs) (1%), farm/farm stand (3%), community or home garden (3%), specialty/gift store (1%), natural food store (3%), and other (2%). The majority of respondents indicated that the closest food shopping location was a traditional supermarket (67%). Those making weekly shopping trips may be more likely to choose a farmers' market, considering an increased length of driving may be more easily accomplished when only shopping weekly compared to daily. This is further supported considering that 63% of respondents reported purchasing from a farmers' market, roadside stand, or U-pick operation, even though only 3% of respondents had those options closest to their home. In total, 68% of respondents indicated they purchased food labeled as "local" or "locally produced" in a grocery store, while 10% indicated they did not purchase such items, and 22% indicated that they did not know whether they did. Beyond the grocery store, 57% of respondents indicated they tended toward options not normally found at home when traveling. This desire for unique products when traveling and dining out may be useful information for those who plan and design restaurant menus and special advertising.

Respondents were asked additional shopping behavior questions related to the information they read on the food they purchased. A higher percentage of respondents indicated they always (21%), usually (31%), or sometimes (30%) read information on food packaging when making purchasing decisions compared to those who indicated rarely (13%) or never (6%). Respondents indicated checking for specific information about food origin less frequently than they reported looking at packaging. In total, 5% of respondents reported they always checked food origin, while 14% said they did so most of the time, 16% said about half the time, 16% said less than half the time, 24% said rarely, 19% said never, and 6% reported that they did not know. Many production attributes such as food origin and other production practices are credence attributes that cannot be directly discerned without reading label information. If consumers want to purchase locally produced items, the labels indicating that information need to be easy for the consumer to find, since few respondents indicated they actively look for information on food origin.

When asked to select their definition of local from a list of provided options, 28% of respondents indicated that local meant from their county of residence (Figure 1). In a nationally representative survey, Byrd, Widmar, and Wilcox (2017) asked respondents about their definition of local, offering options of 10, 20, 50, or 100 miles, and within the state. Given the options, respondents more frequently selected options that were closer to their homes: 75% of respondents selected less than 50 miles as local and 58% selected less than 20 miles. Onozaka, Nurse, and Thilmany McFadden (2010) found that most respondents labeled food from within the state as regional rather than local. In our study, 14% of respondents chose their state of residence as the definition of local. As a definition of local, only the United States had fewer respondents (not including "other" and "I don't know"). Given that counties vary in size, it is unclear which is closer, "100 miles or less from my home" or "my county of residence." However, in general, more people selected closer options as their definition of local as opposed to their state and the United States.

Figure 1. Respondents' Definitions of Local Food (*N* = 1,200)



Despite only 3% of respondents indicating a farm/farm stand was the closest shopping place to their home, and 7% indicating a farmers' market was closest to their home, 63% of respondents had previously purchased from a farmers' market, roadside stands, and U-pick operations. A large percentage of respondents (68%) indicated they purchased food in a grocery store that is labeled as "local" or "locally" produced; 50% of respondents had both purchased food from a farmers' market, roadside stand, or U-pick operation, and purchased food in a grocery store labeled as "local" or "locally" produced. Factors associated with purchasing local foods were presented to respondents and they were asked to indicate whether the factor was very limiting, moderately limiting, or not limiting to purchasing local food (Table 2). Unavailability and limited selection, seasonality, price, and inconvenient farmers' market days or times were selected as very limiting by 22%, 27%, 23%, and 19% of respondents, respectively.

Respondents were also asked to indicate which attributes were better at a farmers' market compared to the supermarket. They were given the options of "yes," "sometimes," and "no" (Table 2). A high percentage of respondents indicated farmers' markets ranked higher in terms of freshness (55%), healthiness (39%), tastiness (43%), and locally produced (50%). Respondents were asked to indicate, in terms of "strongly disagree" to "strongly agree," their level of agreement regarding local food statements including "local food is more expensive than other food," "local food should be organic," "local food tastes better," and other statements as listed in Table 3. Across all statements, a high percentage of respondents indicated they neither agreed nor disagreed; however, a higher percentage of respondents selected agreement over disagreement. Local vegetables and fruit were purchased "weekly or more often," more frequently than the other categories studied. Further research could evaluate whether this is a function of availability at farmers' market or consumer demand.

Respondents were asked to respond to various shopping statements with "yes," "sometimes," or "no" (Table 3). "No" and "sometimes" were selected by 32% and 30% of respondents for the statement "someone close to me consciously eats local foods." For the statements "someone close

Table 2. Respondents' Perceptions of Local Foods (N = 1,200)

Limiting Factors for Purchasing Local Foods	Very Limiting	Moderately Limiting	Not Limiting
Unavailability and limited selection	22%	38%	22%
Seasonality	27%	41%	17%
Uncertain of production location	12%	27%	37%
Price	23%	37%	27%
Farmers' market days or times are inconvenient	19%	34%	29%
Congestion/parking at farmers' market	13%	27%	41%
Time required for preparation of foods	9%	22%	51%
Lacking knowledge to prepare local foods	9%	21%	53%
Lacking transportation to market location	11%	17%	56%
Lacking storage capacity or refrigeration for large quantity purchases	13%	27%	45%
Variety	11%	33%	41%
Customer service	7%	22%	53%
Market location	16%	31%	38%
Market appearance	7%	25%	52%
Lack of regulation	9%	22%	49%
Food safety	13%	26%	45%
Preparation time	10%	21%	54%
Unattractive packaging	7%	19%	55%
Product quality	15%	27%	43%

Attributes Which Are Better at Farmers' Market than Supermarket	Yes	Sometimes	No
Freshness	55%	31%	4%
Healthiness	39%	36%	10%
Tastiness	43%	39%	6%
Locally produced	50%	32%	5%

Note: The option "I Don't Know" has been removed from the table for brevity. The percentage of respondents can be calculated by subtracting the percentages of the other options from 100%.

to me shops at farmers' markets" and "I find food at farmers' markets that cannot be founds at supermarkets," 33% and 43% of respondents (respectively) selected "sometimes." "No" was selected by 58%, 43%, and 58% of respondents (respectively) regarding the statements "I have my own personal garden," "I shop with family at the farmers' market," and "I shop with friends at the farmers' market."

Item attributes were also important to respondents. Respondents were asked to indicate on a Likert scale (from 1 = extremely important to 6 = not sure/don't know) the importance they attributed to each reason for purchasing local foods. The lowest mean response was for quality (1.75), indicating respondents found quality more important than the other reasons to purchase local foods

Table 3. Respondents' Beliefs regarding and Purchasing Behavior of Local Foods (N = 1,200)

Statement regarding Local Foods	Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Disagree	Strongly Disagree
Local food is more expensive than other food	10%	18%	24%	34%	9%	3%	2%
Local food should be organic	11%	17%	16%	39%	9%	5%	4%
Local food tastes better	13%	22%	23%	36%	3%	2%	1%
I like to know who produces the food I eat	13%	18%	23%	32%	8%	4%	2%
Purchasing local food is better for the environment	14%	25%	22%	33%	3%	2%	1%
Purchasing local food is more nutritious	11%	18%	22%	40%	4%	3%	1%
I try new foods when I shop at local food sources	10%	18%	23%	31%	10%	5%	3%
Shopping for local food is more enjoyable	12%	20%	20%	37%	5%	6%	2%

How Often Local Foods Are Purchased	More than Once a Week	Once a Week	Once a Month	Once Every 2 Months	3–5 Times a Year	Once a Year
Vegetables	10%	29%	21%	8%	15%	17%
Fruits	9%	27%	21%	8%	17%	18%
Honey	4%	4%	11%	8%	13%	60%
Meat	6%	19%	15%	6%	9%	45%
Seafood	4%	10%	13%	6%	4%	63%
Baked Goods	5%	19%	19%	8%	13%	36%
Water and other Beverages	9%	16%	11%	4%	5%	55%

Statement regarding Shopping Behaviors	Yes	Sometimes	No	I Don't Know
Someone close to me consciously eats local foods	20%	30%	32%	18%
Someone close to me shops at farmers' markets	27%	33%	26%	14%
I have my own personal garden	24%	14%	58%	4%
I shop with family at the farmers' market	20%	33%	43%	4%
I shop with friends at the farmers' market	13%	25%	58%	4%
I find food at farmers' market that cannot be found at supermarket	20%	43%	20%	17%

(Table 4). Zepeda and Leviten-Reid (2004) found that among reasons for shopping at farmers' markets, participants most frequently cited freshness and flavor. The second lowest mean response was for "more nutritious" (2.32), again indicating respondents found that nutrition was a more important reason for purchasing local foods than most other reasons. "Meeting/knowing the producer" had the largest mean response (3.69), which indicated this was the least important reason to purchase local foods. Other less important categories were "organically produced" (3.16) and "lessens environmental impact" (2.87). Similarly, using a Likert scale from 1 (strongly agree) to 5 (strongly disagree), respondents in the study conducted by Adams and Adams (2011) had a mean score of 4.17 in response to the statement "buying local produce can help support farm workers." This mean response was second (indicating disagreement) only to the statement "the production of local fruits and vegetables is great for the environment" (4.40) (Adams and Adams).

Logit Model Results

We used a logit model to better understand the relationship between respondents who shopped for local foods at the store, demographics, and shopping behavior (Table 5). Gender was not a statistically significant explanatory factor in shopping for local foods at the store. Respondents age 55 and older were 5% more likely (probabilistically) to shop for local foods at the store compared to younger respondents. If respondents usually or always read the information on food packaging when making a purchasing decision, they were 15% more likely to shop for local foods at the store. Beyond just reading information, if the respondent specifically looked at a display in the store to determine whether the food was local, they were 24% more likely to shop for local foods at the store. If the respondent shopped at the farmers' market, the probability that they shopped for local foods at the store increased by 26%. Respondents' definition of local foods was also a statistically significant predictor of shopping for local foods at the store. If the respondent defined local as within 500 miles of their home, the probability of shopping for local foods at the store increased by 11%. If they defined local as their state of residence, the probability of shopping for local at the store increased by 10%.

Similarly, we used a logit model to determine the relationship between demographics, shopping behavior, and shopping at the farmers' market (Table 5). Having an income over $50,000 increased the probability of shopping at the farmers' market by 6%. Having a child in the household increased the probability of shopping at the farmers' market by 8%. If the respondent usually or always read information on food packaging when making purchasing decisions, the probability of shopping at the farmers' market increased by 8%. Further, if a respondent looks at store displays to determine whether food is local, the probability that they shop at the farmers' market increased by 14%. If the respondent shopped for local food at the store, their probability of shopping at the farmers' market increased by 29%. However, having a definition of local that is within the county of residence increased the probability of shopping at the farmers' market by 10%. The probability of shopping at the farmers' market decreased by 9% if the respondent defined local as within their state of residence and by 22% if the respondent defined local as within the United States. Being a resident of the Northeast increased the probability of shopping at the farmers' market by 9%.

Interestingly, gender was also not a statistically significant explanatory variable for shopping at farmers' markets. Age was a statistically significant predictor of shopping for local foods at the store, but not for shopping at the farmers' market. In a national survey, Zepeda and Li (2006) found

Table 4. Importance of Purchasing Local Foods (N = 1,200)

	Extremely Important (1)	Very Important (2)	Moderately Important (3)	Slightly Important (4)	Not at All Important (5)	Not Sure/Don't Know (6)	Mean Response
Reasons to Purchase Local Foods	Percentage of Respondents						
Lessens environment impact	16%	27%	27%	18%	10%	3%	2.87[a]
Meeting/knowing the producer	9%	16%	16%	22%	31%	6%	3.69[b]
More nutritious	27%	35%	25%	9%	3%	2%	2.32[c]
Organically produced	16%	20%	23%	17%	21%	3%	3.16[d]
Quality	47%	39%	10%	3%	0%	1%	1.75[e]
Price compared to non-local	22%	33%	28%	10%	4%	2%	2.49[f,g]
Product variety	20%	35%	30%	10%	3%	1%	2.45[f]
Supports local agriculture	20%	33%	27%	14%	4%	2%	2.58[g,h]
Supports local economy	21%	32%	26%	15%	3%	3%	2.55[g,h]
Sustainability	19%	31%	29%	11%	7%	3%	2.65[h]

Note: Within the table, matching letters indicate the mean response for those reasons to purchase local foods are not statistically different. For example, both price compared to non-local and product variety have an f, indicating they are not statistically different. However, product variety and supports local agriculture do not have matching letters, which indicates they are statistically different.

Table 5. Logit Model of Respondents Shop for Local Foods at the Store and Respondents Shop at the Farmers' Market (N = 1,200)

	Respondents Shop for Local Foods at the Store				Respondents Shop at the Farmers' Market			
Variable	**Coeff.**	**Std. Err.**	***p*-value**	**Marginal Effect**	**Coeff.**	**Std. Err.**	***p*-value**	**Marginal Effect**
Female	0.22	0.14	0.115	0.04	-0.16	0.13	0.216	-0.04
Age 55 or older	0.27	0.16	0.085	0.05	0.22	0.15	0.142	0.05
Income above $50,000	0.18	0.14	0.189	0.04	0.28	0.13	0.035	0.06
Respondent has a child in the household	0.26	0.18	0.147	0.05	0.34	0.17	0.044	0.08
Respondent usually/always reads information of food packaging in making purchasing decisions	0.75	0.14	<0.001	0.15	0.37	0.14	0.008	0.08
Respondent looks at a display in a store to determine if the food is local	1.21	0.25	<0.001	0.24	0.62	0.20	0.002	0.14
Respondent shops at the farmers' market	1.28	0.14	<0.001	0.26	–	–	–	–
Respondent shops for local food at the store	–	–	–	–	1.29	0.14	0.000	0.29
Respondent defines local as within the county of residence	0.29	0.18	0.103	0.06	0.46	0.17	0.008	0.10
Respondent defines local as within 500 miles	0.56	0.19	0.004	0.11	0.12	0.18	0.502	0.03
Respondent defines local as within their state of residence	0.48	0.22	0.029	0.10	-0.38	0.20	0.06	-0.09
Respondent defines local as within the U.S.	0.48	0.43	0.264	0.10	-0.98	0.39	0.013	-0.22
Resident of the Northeast	-0.04	0.22	0.847	-0.01	0.39	0.21	0.063	0.09
Resident of the South	-0.22	0.18	0.239	-0.04	-0.02	0.17	0.922	-0.00
Resident of the Midwest	-0.28	0.21	0.175	-0.06	0.32	0.20	0.101	0.07
Constant	-1.00	0.23	<0.001		-0.99	0.22	<0.001	

that most demographics—including gender, age, education, race, and religion—were not statistically significant indicators of local purchases. Conversely, having an income above $50,000 was a statistically significant predictor of shopping at the farmers' market. The role of income in explaining local buying may not be surprising, considering a higher percentage of respondents indicated price was a very limiting factor when shopping for local foods. Concern for price significantly decreased the probability of purchasing local foods. Additionally, Thilmany McFadden (2015) indicated that local foods were often associated with higher prices, which some customers were willing to pay, depending on the channels they commonly used to purchase produce.

Having a child in the household increased the probability the respondent shops at the farmers' market but not that they shop for local foods at the grocery store. Winfree and Watson (2017) found that farmers' markets are associated with increased social capital and amenities within communities that have farmers' markets. This increase in social capital and amenities could be desirable for families with children, increasing the frequency of visits to farmers' markets by families with children. Sallis and Glanz (2006) found that people who have access to safe places such as walkable neighborhoods and local markets that offer healthy food are more likely to be active and eat healthful foods. Several studies show the impact of gardening on children, including indicators such as increasing the consumption of vegetables and improving other life skills (Bir et al., 2017; Davis and Brann, 2017; Miller, 2007; Nimmo and Hallett, 2008; Robinson and Zajicek, 2005). It is possible that similar effects could be found when children participate in farmers' markets, and further research could explore this idea.

Unsurprisingly, shopping at a farmers' market increased the probability of shopping for local foods at the store and shopping for local foods at the store increased the probability of shopping at a farmers' market, indicating that consumer concern for local food transcends shopping location. Respondents' definition of local affects the probability that they shop for local foods at the store and the probability that they shop at farmers' markets. Defining local food as that produced within 500 miles or within the state of residence increased the probability that the respondent shopped for local food at the store. For shopping at the farmers' market, defining local as within the county of residence led to a positive increase in the probability of shopping at the farmers' market. However, as the definition of local became broader, the probability of shopping at the farmers' market decreased. If the respondent had a very broad view of local food, they probably believe most of the food they consume is local and do not feel the need to frequent a farmers' market.

Conclusion

The term local is not easily defined, and the interpretation of local varies among consumers. More often, people believe the definition of local to be smaller than within the entire state, when compared to a broader interpretation of local that encompasses country of origin. This finding corresponds with those of Byrd, Widmar, and Wilcox (2017) and Onozaka, Nurse, and Thilmany McFadden (2010), who also found that respondents chose the closer option as their definition of local. The surge of campaigns promoting food items and products produced within the state is further supported by the finding that many consumers consider local as within the state for at least some products, such as the Arizona grown campaign discussed by Nganje, Hughner, and Lee (2011). Although most consumers did not have a farmers' market as the closest option for food

shopping, many consumers still shopped at farmers' markets. The enjoyment of shopping at farmers' markets, or the positive attributes many respondents associated with items purchased at farmers' markets, seems to be enough for consumers to overcome distance inconveniences. Additionally, consumers more frequently selected their shopping frequency as weekly, which may reduce the distance inconveniences associated with shopping locales.

Respondents also assigned many positive qualities to food from local sources, including freshness, healthiness, tastiness, and locally produced, similar to the positive attributes respondents ascribe to farmers' markets and local sources in other studies (Zepeda and Leviten-Reid, 2004; Adams and Adams, 2011). Factors that were considered very limiting with respect to local foods were selection, seasonality, and inconvenient market days or times. The attributes associated with local foods, such as quality and nutrition, may not be limited to local foods. If retailers selling nonlocal foods can demonstrate the quality and nutritional value of their food, they may be able to increase sales. Surprisingly, attributes often closely associated with local foods, such as "organically produced" and "lessens environmental impact," were not as important to respondents.

This research contributes to the definition of local (foods) and attempts to shed light on shopping behaviors related to local food beliefs and/or preferences. Fundamentally, respondents who had more tightly defined interpretations of local were more likely to shop at farmers' markets. Further research regarding the distance from farmers' markets that people believe the products to be produced may increase the understanding of the relationship between the definition of local and farmers' market shopping behavior. Additionally, respondents with preferences for local foods often purchased them from both brick and mortar stores and farmers' markets. Surprisingly, respondents were willing to drive to farmers' markets even though they were not the closest grocery option.

Although the desire to purchase local foods can be met by brick and mortar stores, farmers' markets appear to provide additional value to consumers, beyond the products themselves. Intuition would point to meeting/knowing a producer as a reason for the popularity of farmers' markets, but this was found to be the least important reason to purchase local foods. More research could be done to evaluate consumer shopping time and preferences for farmers' markets beyond frequency, and this information could be used to better tailor farmers' market hours of operation. Respondents with higher income, children, and those who read packaging information were more likely to shop at farmers' markets. Although reading package information is likely attributed to greater interest in credence attributes, the connection between farmers' markets and children is less clear. Further research into reasons for frequenting farmers' markets with children, including incorporating child-friendly activities or child-friendly shopping environments may aid in informing food marketplaces of the future.

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