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### **Increasing Farmers Market Patronage: A Michigan Survey**

## David S. Conner, Susan B. Smalley, Kathryn J. A. Colasanti, and R. Brent Ross

Farmers markets can play an important role in enhancing farm profitability, particularly those farms choosing to differentiate their products by appealing to consumer preferences for "locally grown" food or gain a larger share of the food dollar by marketing directly to consumers rather than through wholesale markets. This paper reports results of a random state-wide telephone survey in Michigan which measured attitudes and behaviors surrounding farmers markets in order to better understand drivers of participation and expenditure.

Questions were informed in part by a series of focus groups conducted throughout the state. Survey results find that about 60 percent of respondents report that they have attended a farmers market in the past year, spending on average \$81 in their most recent visit. Comparisons of these figures to prior studies suggest a high degree of social desirability bias among respondents. Those placing high importance on food quality and support of local farmers tended to have a higher probability of participation and predicted expenditure. Major constraints to farmers market attendance include perceived lack of convenience and the lack of perceived welcoming atmosphere, especially among Latino respondents. Discussion centers around strategies market managers may take in the face of tradeoffs between possible conflicting desires for local food and convenience. We conclude with limitations, including a discussion of social desirability bias and future directions of research.

Farm profitability is a continuing challenge for farms in Michigan and nationwide. For example, according to 2007 Census of Agriculture data, the majority of farms in Michigan (55 percent) and the U.S. (53 percent) earned negative net income (USDA National Agricultural Statistics Service 2007). Smaller farms make up the vast majority of Michigan farms: about 95 percent had gross sales less than \$250,000 (a common definition of small farm) in 2007, while 80 percent earned less than \$50,000, the cutoff point for non-commercial farms (USDA Economic Research Service 2009; USDA National Agricultural Statistics Service 2007).

An important competitive strategy for many smaller farms is product differentiation, exploiting consumer demand for specific attributes (Lancaster 1974; Porter 1985). One such attribute that has attracted significant interest recently is the "locally grown" attribute (Darby et al. 2008; Kingsolver 2007; Selfa and Qazi 2005; Zepeda and Li 2006). Although no universally accepted or legal definition of "local" exists, geographic boundaries such as state borders tend to be important factors in defining local for many consumers (Conner et al.

Conner is Assistant Professor, Smalley is Extension Specialist, and Colasanti is Outreach Specialist, C.S. Mott Group for Sustainable Food Systems, and Ross is Assistant Professor, Department of Agricultural, Food and Resource Economics, Michigan State University

2009; Darby et al. 2008; Selfa and Qazi 2005). Another important marketing decision is the choice of marketing channel. For the small farmer, direct sales to consumers are appropriate as they allow 100 percent of the consumer dollar to accrue to the farmer, compared to only 19 percent of aggregate food purchases (USDA Economic Research Service 2006). Direct-to-consumer food sales have increased dramatically in Michigan, experiencing more than 50 percent growth from 2002–2007, now totaling \$54 million (USDA National Agricultural Statistics Service 2007).

Farmers markets are important venues for those selling differentiated local products and/or selling direct to consumers. While some Michigan farmers markets allow vendors to sell items they did not grow, or even those grown out of state, the markets typically offer mostly items sold by local growers and many have labeling policies which help inform consumer choice (Conner et al. 2009). Previous research in Michigan suggests that farmers markets offer products which are unique or perceived as higher in quality than those available in grocery stores (Conner et al. 2009).

Farmers markets have been expanding in Michigan, with an estimated 90 markets in 2001, 150 in 2005, and 250 in 2009 (Michigan Farmers Market Association n.d.). Yet even if the number of markets is growing, the markets can only successfully sup-

port farmers to the extent that people shop there. A review of farmers market customer research reveals that most studies in this setting rely on intercept surveys (Cummings, Kora, and Murray 1999; Govindasamy and Nayga 1996). Though these studies provide useful insights about the people who shop at farmers markets, they offer little information about non-participants. Previous research has identified several demographic variables associated with farmers market patronage: farmers market shoppers tend to be older, female, married, employed, live in urban areas, and have higher levels of education and income (Govindasamy and Nayga 1996; Kezis et al. 1998; Onianwa, Wheelock, and Mojica 2005; Wolf 1997).

This research measures factors affecting farmers market patronage in Michigan for the purpose of identifying opportunities and obstacles which will inform marketing and policy strategies. The assumption is that if farmers markets can do more to encourage patronage, greater numbers of farmers will have the market opportunities these venues present. Following sections report on the methods and results of this study, implications of the findings on marketing strategies for market managers and vendors, and policy. The paper concludes with limitations and future research directions.

### **Methods and Data**

This research project took a two-phased approach: a qualitative study using focus groups designed to increase familiarity with germane issues, followed by a quantitative portion using telephone surveys. The intent of the telephone survey was to measure the frequencies of and relationships between important variables identified in the literature and the qualitative phase of research.

Both as a way to develop relevant and appropriate questions for the phone survey and to explore the complexities of food shoppers' behavior with respect to farmers markets, seven focus groups with a total of 63 people were conducted across Michigan's Lower Peninsula. These groups included individuals from both rural (four groups) and urban (three groups) locations. Focus group participants were selected to include a diversity of races and ethnicities and a wide range of ages and family stages rather than to be statistically representative of the state's population as a whole. Three groups were composed

solely of minority populations for whom English was not their native language (Arab-Americans; Latinas, the majority of whom were from Mexico; and international graduate student parents from a range of European, Middle-Eastern, and Asian countries). Five of the focus groups were composed solely of women and two were roughly split evenly between men and women. Income data were not collected but based on associations with programs like Women Infants Children, eligibility for the Supplemental Nutrition Program or status as students, we assume that the majority of participants were from low- to middle-income households. While most people were aware of the farmers market in their community, very few participants shopped at the market on a regular basis.

In each of these groups, participants revealed that they expected farmers markets to offer high-quality, fresh, naturally grown products and to emphasize produce over any other product type. Those who felt that their farmers market fell short of these expectations were often less inclined to shop there. General time constraints and inconvenient hours or locations were also barriers to participation that surfaced in every focus group. In six of the seven groups there was strong agreement that the market was inadequately advertised and that signage was poor. The seventh group commented that large vellow signs placed out on market days helped remind them of the market. Between two and five participants in each of three different focus groups expressed frustration that they were unable to use EBT at their local market. In one focus group this complaint surfaced even when the market in question did accept EBT, indicating that many people may be unaware of the ability to use this payment method.

Finally, while participants in all but one focus group indicated that they generally enjoyed the farmers market atmosphere, mothers with young children in three focus groups felt that it was a difficult place to bring children. Notably, all ten participants in the Latina group indicated they felt disrespected and distrusted at the market in their community. Participants in two focus groups—one with young, single law students and the one with Latina women—placed higher value on the convenience of the shopping experience, than did the other five groups, and this tended to serve as a disincentive to shop at the farmers market for

these individuals. In summary, the focus groups revealed several important themes relevant to our study of farmers market participation, including the importance of market product selection, the convenience of hours and location, the desire for greater promotion and signage, the ability to use one's preferred method of payment, and the perception of a welcoming atmosphere.

Based in part on the results of the focus groups, and selected literature on consumer attitudes and behavior surrounding farmers markets, we commissioned a series of questions for the Fall 2008 State of the State Poll conducted by Michigan State University's Institute for Public Policy and Survey Research. The survey instrument comprises three main parts: a demographic core, a non-demographic core, and the main substantive theme or themes (Hembroff 2009). The demographic core contains questions on standard demographic data (e.g., age, sex, income, race); the non-demographic core asks an array of questions including political identification and religious and partisan affiliation. These questions are included on every poll and are henceforth called "core" variables in discussions of results. The final set of substantive themes is commissioned by MSU researchers and other stakeholders. Variables, their definitions, and mean values are detailed in Table 1.

The referent population is the non-institutionalized English-speaking adult population of Michigan age 18 and over. Because the survey was conducted by telephone, only persons who lived in households with landline telephones had a chance of being interviewed. The sample is weighted to be representative of state residents. A total of 953 interviews were completed in October 2008 (Hembroff 2009).

The questions commissioned for this study asked about shopping behavior and attitudes. First, respondents were asked how frequently they shop for food for their household; those answering "never" (ten percent of respondents) were diverted to the next part of the survey and answered no further questions pertaining to this study. Those who affirmed they did shop for food for their household were then given the definition of farmers markets as "a farmers market is a place where a group of farmers come together, usually once a week, to sell their farm products" and asked if they had attended such a market in the past year. Next they were asked how many times they attended a farmers market in the previous calendar month (September 2008) and

how much they spent at their last visit.

The next set of questions measured the importance of 12 factors in determining whether to shop at a farmers market. Each importance question was asked using a four-point Likert-type scale (very, somewhat, not very, not at all). To aide in econometric analyses, a dummy attitudinal variable was created for each, equaling "1" if the response was "very important" and "0" for other responses (somewhat, not very, or not at all). See Table 1 for definitions of all variables in this analysis.

Because the objective of the project was to gain greater understanding of the drivers of participation and expenditure at farmers markets, a series of econometric analyses were conducted to identify factors associated with these behaviors. While some demographic variables (like political and union affiliation) are not always used in analyses of food shopping behaviors and preferences, they have been significant in previous Michigan studies (Conner, Campbell-Arvai, and Hamm 2008) and are therefore included to provide a broad array of potential market segmentation options to interested stakeholders. In all analyses, responses were weighted with a sampling-weight variable so that responses are representative of the state as a whole. Several other model specifications, including the number of visits per month and the product of visits times most recent expenditure, were tried but are not included in this paper.

### Model 1. Probit Analysis of Farmers Market Attendance

First, a Probit analysis was conducted, where farmers market attendance in the past year (the dummy variable FM shopper) was regressed on the core and attitudinal variables. Variables were restricted to those regressors which were significant at the 0.10 level or greater. A log likelihood ratio test suggested use of the full rather than restricted model. Given previous research, we hypothesize that female, married, income, urban, education, and full-time employment would have positive signs in this model. We also hypothesize that those who place importance on food quality and support for local farms would be more likely to shop at farmers markets, placing importance on convenience, one-stop shopping, and variety would make one less likely to do so.

Model 2. OLS Model of Dollars Spent at Most Recent Visit

Given that dollars spent at most recent visit ("dollar spent") is continuous and cardinal, most recent expenditure was regressed on the full set of core and attitudinal variables using Ordinary Least Squares. Those variables with t-values greater than one were selected for a restricted model; Ftest results suggested use of the restricted model for dollar spent.

#### Results

Descriptive Statistics

More than half (61 percent) of respondents stated they attended a farmers market in the past year (Table 1). These respondents on average visited a farmers market four times in the previous month and reported spending \$81 during their most recent visit. This expenditure is equal to approximately 37 percent of the average family's monthly food expenditure. If half of all households (reflecting 90 percent of respondents who shop for food multiplied by 60 percent who attended a farmers market) shopped at a farmers market and spent this sum, the total expenditure for one month at farmers markets for the whole state would be more than \$400 million. This figure is roughly eight times greater than the Census of Agriculture figure for annual farm-gate receipts of food sold directly to consumers, implying some combination of three likely explanations: our phone survey over-counts this figure (due in part, perhaps, to social desirability bias), the Census undercounts direct sales, and a large amount of expenditure at farmers markets is for non-food, prepared food, or items not produced by the vendor. Rapid market assessments from 2005 to 2008 at Michigan farmers markets typically show \$15-20 in average purchases (Smalley n.d.). In a study in Ontario in 1999, consumers reported spending about \$20 per visit (Cummings, Kora, and Murray 1999). While several factors may mitigate this discrepancy (ten years of inflation, different values of U.S. and Canadian currency, Michigan's greater diversity of agricultural products produced, increased popularity of farmers markets, and the fact that the timing of the survey meant that the most recent farmers

market was in the peak of harvest season), this comparison further suggests a large degree of over-counting in our survey. If social desirability bias is as high as these results suggest, it speaks to the high popularity of farmers markets among Michigan residents. While a social desirability bias of this magnitude may have significantly skewed results on farmers markets expenditure, and possibly even attendance, there is no evidence that it will significantly affect the way in which respondents ranked the importance of factors relative to shopping at farmers markets, which is at the core of this analysis.

The attribute with the highest percentage of respondents stating it is "very important" in their decision to shop at a FM is food quality (82 percent), followed by avoiding food-borne illness (81.9 percent) and ability to support local farmers (74 percent). The least important attributes were the ability to buy pesticide-free (36 percent) and hormone- and antibiotic-free (39 percent) products, to shop at one place (39 percent), and to get information on how and where the food was produced (42 percent). In both regression analyses, collinearity diagnostics revealed that no variable had a Variable Inflation Factor greater than four, suggesting no grave problem with collinearity.

Model 1. Probit Analysis of Farmers Market Attendance

Table 2 presents the full results of the Probit analysis for "FM-shopper." In this analysis (Pseudo Rsquared = 0.2304), which examined the factors affecting a respondent's attendance at a FM in the past year, five variables were statistically significant at the 0.10 level or higher, and all had positive sign: food quality, ability to support local farms, being white, being single, and living in a rural area all had a positive effect on the probability of FM attendance. Four variables were significant with negative sign: importance of one-stop shopping, convenient hours, Latino ethnicity, and working part-time. Many of these findings support our hypotheses of predicted direction of effect—e.g., the positive effect of importance of local farm support and quality and the negative effect of part-time employment, convenience, and one-stop shopping.

Table 1. Variable Names, Definitions, and Mean Values.

| Variable     | Definition  | Mean (standard error) |
|--------------|---|-----------------------|
| female       | Dummy variable, 1 = female, 0 = male  | 0.53 (0.04)           |
| age_years    | Respondent's age, 2008 minus year of birth  | 45.66 (1.18)          |
| educ_years   | Years of education, coded as highest grade completed for K-12, 14 for some college, 16 of Bachelor's Degree, 18 for Masters, 20 for Doctorate | 14.12 (0.16)          |
| protestant   | Dummy variable, self-identified religion,1 = Protestant, 0 otherwise  | 0.47 (0.04)           |
| catholic     | Dummy variable, self-identified religion,1 = Catholic, 0 otherwise  | 0.21 (0.03)           |
| republican   | Dummy variable, self-identified political party affiliation, 1 = Republican, 0 otherwise  | 0.24 (0.03)           |
| democrat     | Dummy variable, self-identified political party affiliation, 1 = Democrat, 0 otherwise  | 0.36 (0.04)           |
| conservative | Dummy variable, self-identified political ideology, 1 = conservative, 0 otherwise   | 0.37 (0.04)           |
| liberal      | Dummy variable, self-identified political ideology, 1 = liberal, 0 otherwise  | 0.16 (0.03)           |
| married      | Dummy variable, self-identified marital status, 1 = married, 0 otherwise  | 0.61 (0.04)           |
| single       | Dummy variable, self-identified marital status, 1 = single, 0 otherwise   | 0.22 (0.03)           |
| HH_adult     | Number of adults in household   | 2.39 (0.07)           |
| HH_child     | Number of children in household   | 0.91 (0.10)           |
| fulltime     | Dummy variable, self-identified, 1 = works full time, 0 otherwise   | 0.38 (0.04)           |
| parttime     | Dummy variable, self-identified, 1 = works part time, 0 otherwise   | 0.19 (0.04)           |
| retired      | Dummy variable, self-identified occupation, 1 = retired, 0 otherwise  | 0.17 (0.02)           |
| latino       | Dummy variable, self-identified, 1 = Latino, 0 otherwise  | 0.05 (0.02)           |
| white        | Dummy variable, self-identified, 1 = white, 0 otherwise   | 0.81 (0.03)           |
| afr_amer     | Dummy variable, self-identified, 1 = African-American, 0 otherwise  | 0.13 (0.02)           |
| inc_thous    | Midpoint of income category (\$1,000)   | 55.87 (1.94)          |
| rural        | Dummy variable, self-identified, 1 = lives in rural area, 0 otherwise   | 0.27 (0.03)           |
| suburb       | Dummy variable, self-identified, 1 = lives in suburban area, 0 otherwise  | 0.31 (0.04)           |
| smalltown    | Dummy variable, self-identified, 1 = lives in small town, 0 otherwise   | 0.27 (0.03)           |
| union_past   | Dummy variable, self-identified, 1 = has past affiliation with labor union, 0 otherwise   | 0.34 (0.04)           |
| ShopFM       | Dummy variable, self-identified, 1 = has shopped at farmers market in past year, 0 otherwise  | 0.61 (0.04)           |

Table 1. Variable Names, Definitions, and Mean Values (Continued).

| Variable             | Definition  | Mean (standard error) |
|----------------------|---|-----------------------|
| dollar_spent         | Dollars spent at most recent trip to farmers market   | 80.56 (29.47)         |
| times_month          | Number of trips to farmers market in most recent calendar month (September 2008)  | 3.93 (0.23)           |
| expend               | Monthly expenditure at farmers market (product of times_month times dollar_spent)   | 241.37 (58.38)        |
| value_very           | Dummy variable, 1 = stated "getting good value" is "very important" in decision whether or not to shop at a farme's market, 0 otherwise   | 0.62 (0.04)           |
| qual_very            | Dummy variable, 1 = stated "top quality products" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise   | 0.82 (0.03)           |
| variety_very         | Dummy variable, 1 = stated "large variety of products" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise  | 0.47 (0.04)           |
| location_very        | Dummy variable, 1 = stated "convenient location" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise  | 0.52 (0.04)           |
| convenient_<br>very  | Dummy variable, 1 = stated "convenient hours of operation" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise  | 0.51 (0.04)           |
| onestop_very         | Dummy variable, 1 = stated "ability to do all your shopping at one location" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise                              | 0.40 (0.04)           |
| supportfarm_<br>very | Dummy variable, 1 = stated "products being sold support local farms" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise                                      | 0.74 (0.03)           |
| foodinfo_very        | Dummy variable, 1 = stated getting "information from the vendor about where or how the food was grown" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise    | 0.42 (0.04)           |
| welcome_<br>very     | Dummy variable, 1 = stated "welcoming atmosphere" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise   | 0.43 (0.04)           |
| horm_anti_<br>very   | Dummy variable, 1 = stated "a large variety of antibiotic- or hormone-<br>free products" is "very important" in decision whether or not to shop<br>at a farmers market, 0 otherwise               | 0.39 (0.04)           |
| pestfree_very        | Dummy variable, 1 = stated "a large variety of organic or pesticide-free products" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise                        | 0.36 (0.04)           |
| illness_very         | Dummy variable, 1 = stated "food is handled in a manner that minimizes the chances of food borne disease" is "very important" in decision whether or not to shop at a farmers market, 0 otherwise | 0.82 (0.03)           |

Model 2. OLS Model of Dollars Spent at Most Recent Visit

Table 3 presents the results of the OLS regression analysis (R-squared = 0.4153) of the model examining factors affecting the amount in dollars spent at the most recent visit. Food value and welcoming atmosphere had a significant and positive effect. Several variables have a significantly (p < 0.10) negative effect, including the importance of convenience and hormone/antibiotic-free products, female, rural residency, and past union affiliation.

#### **Discussion**

The objective of this paper was to identify factors affecting farmers market patronage in Michigan for the purpose of identifying opportunities and obstacles which will inform marketing and policy strategies. Using a representative telephone survey we found that the majority of Michigan residents reported attending a farmers market in the past year. The most important factors determining whether to shop at a farmers market included food quality and support for local farmers; the latter finding is consistent with previous studies (Darby et al. 2008; Selfa and Qazi 2005). Other factors found to be significant in affecting market attendance and/or expenditure include good value and a welcoming atmosphere. Those placing a high value on convenience had lower participation and expenditures.

These data suggest several trends. First, safe, high quality, locally grown foods are the primary draws to the markets. More welcoming atmospheres and convenient times would likely increase patronage. Yet these goals can create difficult tradeoffs for market managers. Maximizing convenience may imply remaining open 24 hours a day seven days a week, but this schedule would not likely be supportive of farmers' time and resource availability. Permitting one-stop shopping may require selling items not able to be grown locally.

However, some implications are more straightforward. Market managers of locally grown food products should advertise the "local" aspect of their products. Clear labeling policies can alleviate confusion and ensure the authenticity of local food. Michigan consumers in a previous study (Conner et al. 2009) identified the state boundary as an important definition of local.

Vendors can increase sales by highlighting the availability of locally grown foods with labels, signs, and brochures: recent research finds that consumers are most interested in getting information in these forms (Howard 2006). Given food-safety concerns, evidence of food-safety training and/or certification (such as the USDA's Good Agricultural Practices audits) may help allay consumer concerns and increase sales. Recruiting vendors who resemble the population in diverse neighborhoods will help create a more welcoming atmosphere.

Finally, policy makers can help increase patronage at farmers markets as well. Previous research suggests lack of vendors is a serious constraint to about 20 percent of farmers markets (Smalley n.d.). Because farmers markets are excellent opportunities for business start-ups, encouraging these venues as market outlets for new farmers could benefit farmers as well as increase market patronage. Federal programs like the nascent USDA Beginning Farmer and Rancher Program can be expanded and added to state and local efforts like immigrant farmer training, farm incubators, and urban agriculture initiatives. These initiatives could assist farmers in selling at farmers markets.

On the state level, given the recent demise of the *Select Michigan* food promotion program due to budget cuts, generic advertising for food products may fall on the tourism industry's *Pure Michigan* campaign. While the value to tourism of working agricultural landscapes has been demonstrated elsewhere (Wood et al. 2000), cost/benefit analysis is needed to guide and justify investment decisions in this arena. Finally, low-cost, scale-appropriate safe food production and handling training and certification efforts would add value to products while serving public health goals.

### **Conclusions**

Michigan farmers markets are enjoying broad patronage, addressing consumer demand for high-quality, locally grown foods, and creating market options for Michigan farmers, while bringing potential ancillary benefits to their communities. Our analyses suggest a number of marketing and policy options to to build on the state's agricultural diversity and to enhance economic growth while cultivating a safe, healthy, and available food supply for all of Michigan's residents.

Table 2. Results of Probit Analysis of FM\_shopper.

| Variable         | Coefficient (standard error) | P Value |
|------------------|------------------------------|---------|
| value_very       | 0.26 (0.20)                  | 1.33    |
| qual_very        | 0.50* (0.28)                 | 1.77    |
| variety_very     | 0.30 (0.20)                  | 1.51    |
| location_ very   | -0.10 (0.22)                 | -0.47   |
| convenient_ very | -0.83*** (0.23)              | -3.57   |
| onestop_very     | -0.62*** (0.20)              | -3.07   |
| supportfarm_very | 0.43* (0.23)                 | 1.88    |
| foodinfo_very    | -0.09 (0.21)                 | -0.44   |
| welcome_very     | 0.11 (0.22)                  | 0.48    |
| horm_anti_ very  | 0.25 (0.23)                  | 1.08    |
| pestfree_v very  | -0.22 (0.24)                 | -0.92   |
| illness_very     | -0.05 (0.26)                 | -0.17   |
| female           | 0.08 (0.19)                  | 0.42    |
| age_years        | 0.01 (0.01)                  | 0.87    |
| educ_years       | 0.07 (0.04)                  | 1.61    |
| protestant       | -0.03 (0.21)                 | -0.15   |
| catholic         | -0.31 (0.28)                 | -1.12   |
| Republican       | -0.09 (0.26)                 | -0.33   |
| Democrat         | 0.04 (0.23)                  | 0.19    |
| conservative     | 0.26 (0.21)                  | 1.23    |
| liberal          | -0.23 (0.25)                 | -0.90   |
| married          | 0.36 (0.26)                  | 1.40    |
| single           | 0.65** (0.31)                | 2.06    |
| HH_adult         | -0.1 (0.10)                  | -0.94   |
| HH_child         | 0.01 (0.09)                  | 0.11    |
| fulltime         | -0.36 (0.26)                 | -1.42   |
| parttime         | -0.58* (0.31)                | -1.91   |
| retired          | 02 (0.28)                    | -0.08   |
| latino           | -0.97** (0.48)               | -2.03   |
| white            | 0.59** (0.29)                | 1.99    |
| afr_amer         | 0.43 (0.38)                  | 1.12    |
| inc_thous        | 0.00 (0.00)                  | 0.51    |
| rural            | 0.47** (0.20)                | 2.29    |
| suburb           | 0.25 (0.23)                  | 1.09    |
| union_past       | -0.14 (0.19)                 | -0.77   |
| constant         | -1.91** (0.90)               | -2.12   |

<sup>\*, \*\*,</sup> and \*\*\* denote significance at the 0.10, 0.05, and 0.01 levels, respectively.

| Variable        | Coefficient (standard error) | t-value |
|-----------------|------------------------------|---------|
| value_very      | 85.26** (40.41)              | 2.11    |
| variety_very    | -52.38 (44.87)               | -1.17   |
| location_very   | -48.03 (35.59)               | -1.35   |
| convenient_very | -82.02* (48.29)              | -1.70   |
| welcome_very    | 183.16* (70.64)              | 2.59    |
| horm_anti_ very | -102.71** (49.80)            | -2.06   |
| illness_very    | 28.15 (41.08)                | 0.69    |
| female          | -100.42* (38.22)             | -2.63   |
| educ_years      | -10.37 (11.68)               | -0.89   |
| protestant      | -73.86 (51.80)               | -1.43   |
| catholic        | -92.29 (56.90)               | -1.62   |
| married         | -68.11 (52.10)               | -1.31   |
| inc_midpt_thous | 0.92 (1.00)                  | 0.92    |
| rural           | -58.78* (30.36)              | -1.94   |
| union_past      | -65.30** (31.41)             | -2.08   |
| constant        | 355.48* (206.86)             | 1.72    |

Table 3. Results of OLS Regression of Dollar\_spent (Restricted Model).

This paper discusses the results of a representative state-wide poll, generalizable to the population of Michigan. However, as discussed above, the discrepancy between reported expenditure in this survey and prior research suggests a considerable degree of social desirability bias. While indirect questions have been used on some attitudinal and behavioral questions (Alpert 1971; Fisher 1993), their application to expenditure questions would be difficult. Direct observation of consumers farmers market purchases would also be logistically difficult.

These findings suggest many promising avenues of future research. In particular, better understanding of the tension between local, high-quality food versus convenience may help guide improved marketing and policy strategies. Much of the appeal of farmers markets is in the differentiated product attributes they offer, including locally grown, high-quality products direct from farmers. Can a farmers

market become more convenient without sacrificing these features? What is the proper mix of these tradeoffs and how can a market manager discover this at reasonable cost and effort? We hope this paper fosters greater interest in and understanding of farmers markets.

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