Who are the CSA Consumers and how to Promote CSA to more Consumers?

Michael Vassalos,
Assistant Professor
Department of Agricultural and Environmental Sciences
Clemson University
Email: mvassal@clemson.edu

Zhifeng Gao[1]
Associate Professor
Food and Resource Economics Department
University of Florida
Email: zfgao@ufl.edu

Lisha Zhang
Assistant Professor
Department of Agricultural and Environmental Sciences
Clemson University
Email: lishaz@clemson.edu

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[1] Corresponding author

Abstract

Data from a national online survey, in conjunction with a probit and an ordered probit formulations are utilized to investigate the impact of: i) demographic characteristics, ii) lifestyle preferences, and iii) different information outlets, on the probability that a consumer is a CSA member, or, considers joining a CSA arrangement. The results indicate that while demographic characteristics do not affect the probability that a consumer is currently a CSA member, they have a statistically significant impact on the probability that a responder will join a CSA arrangement in the future. Lifestyle preferences had a statistically significant impact on both the probability that: i) a consumer is currently a CSA member and/or ii) is considering to join a CSA in the future. From the information outlets examined only word of mouth and online sources influence the probability that a consumer will join a CSA in the future. These findings may have important implications regarding the marketing strategies employed by CSA farm managers.

Key Words: Community supported agriculture (CSA), direct marketing, local foods

Introduction

Consumer preferences for food have drastically changed over the last decades. Other than the nutrient provided by food, consumers increasingly care about the impact of food production on the environment, and society. To satisfy the demand of this increasingly sophisticated group of consumers, producers have start utilizing different forms of direct marketing including farmers markets, on-farm sale, roadside sale, U-pick, and Community Supported Agriculture (CSA) (Bond et al., 2006; Bruch and Ernst 2010). Other than farmers markets, CSA is one of the most widely used direct marketing strategies that was increasingly adopted by farmers over the last twenty years.

Specifically, under a CSA arrangement consumers purchase "shares" of a farm's expected yield before the planting period and obtain a portion of the produce later, during the harvesting season (Brown and Miller, 2008; Connolly and Klaiber, 2014). The most common CSA variations include: i) subscription based CSAs, which are farmer driven, and ii) shareholder CSAs that are primarily consumer driven (Bruch and Ernst, 2010). Since 1984, when Jan Vander Tuin founded the first CSA operation in USA, CSA has become an integral part of the local food movement (Peterson et al., 2015; Connolly and Klaiber, 2014; Sproul and Kropp, 2015). To illustrate, the number of farms that market their products through CSA has increased from, an estimated, 500 farms in 1996 to more than 12,000 in 2012 (Kolodinsky and Pelch, 1997; Harmon, 2014; USDA 2014). The popularity of the CSA scheme can be explained by the multitude of benefits enjoyed by CSA consumers and producers alike. For instance, receiving payments in advance can improve the financial security and the cash flow for producers (Connolly and Klaiber, 2014; Lea et al., 2006). Another benefit is the elimination of the middleman and the ability to obtain higher prices, which may translate to higher profits for producers (Zepeda and Li, 2006; Lea et al., 2006; Curtis et al., 2015). Consumers' reasons for selecting CSAs include: obtaining local produce, supporting the local producers, environmental reasons and networking with the community (Peterson et al., 2015; Harmon, 2014; Curtis et al., 2015, Connolly and Klaiber, 2014).

The aforementioned growth of the CSA marketing scheme has attracted the interest of applied economic researchers. Consequently, numerous empirical research studies related to CSAs have been conducted. A common theme of this literature includes efforts to identify the economic impact of CSA arrangements on consumers and producers. Brown and Miller (2008) provide a review of the research endeavors in this topic. A related strand of the literature focuses on the dietary/nutritional impacts of the CSAs (i.e. Curtis et al., 2015; Harmon 2014; Allen IV et al., 2016). Lastly, a number of scholars have examined the factors that motivate consumers' participation in CSA arrangements and/or factors that influence consumers' satisfaction from CSA memberships ((i.e. Lang, 2005; Cox et al., 2008; Sharp et al., 2002; Pole and Kumar, 2015; Pole and Gray 2013)

In contrast, identifying the impact of various factors on the probability that an individual will join a CSA arrangement remains a relatively unexplored topic in the literature; although, notable exceptions are the research of Kolodinsky and Pelch (1997) and Peterson et al. (2015). However, these studies were limited to CSA members in Vermont and Kansas respectively.

As the competition for local food expenditures intensifies, for future CSA development, it is important to identify: i) the type of consumers that are likely to participate in CSA arrangements; ii) the impact of different information outlets on the decision to participate, iii) aspects of CSA agreements that help retain existing CSA customers, and iv) understand who is shopping at CSA. The answers to these questions will provide valuable insights to farm managers and policy makers in order to better understand the market and promote the sustainability of CSA by keeping current CSA customers as well as attracting new customers. The present study aims to fill this void in research using a nationwide online survey of regular grocery shoppers administered in May, 2015.

The objective of the present study is to examine the impact of demographic characteristics consumers' lifestyle, and different sources of information on the probability that an individual is currently a CSA member, and will become a member of a CSA arrangement. The present study contribute to the current literature by analyzing ordered multi-level response and by including a national sample, instead of a binary approach and focusing on a particular state. This approach enables us to reveal more about the factors that influence consumers' decision to participate in CSAs and draw generalizations that may be applicable to a larger audience. Furthermore, this study not only examines the factors that influence a person being a CSA customer, but also it determines the factors that affect a person being a future CSA customer. At last although a plethora of studies have examined the reasons that motivate consumers to join CSA arrangements, to the best of our knowledge, there is limited research on the reasons why consumers do not participate in CSA agreements. The present study will try to shed light on this question.

Empirical Framework

Two model formulations are utilized to achieve the study objectives. Specifically, we use a probit and an ordered probit model to evaluate the impact of the selected explanatory variables on the probability that a consumer: i) is a CSA member (yes/no), and ii) is consider joining a CSA arrangement in the future (no/not sure/yes) respectively. Furthermore, marginal effects are estimated for both formulations to gain a more meaningful interpretation of the results. The present section briefly discuss the two formulations.

Probit model

An individual consumer, indexed by i, is either a member of a CSA arrangement during the time of the survey ($Y_i = 1$) or not ($Y_i = 0$). The probability of being a member dependents on a vector of explanatory variables (X) associated with consumer i, and variable j, and a vector of unknown parameters β to be estimated. Following Cameron and Trivedi (2005), for the probit model, this probability is determined by:

$$(1)\ P_i = \Phi(X'\beta) = \int_{-\infty}^{x'\beta} \varphi(z)dz$$

where Φ(.) is the standard normal cdf. The marginal effects are calculated as:

$$(2)\ {\partial P_i}\Big/{\partial X_{ij}} = \varphi(X'_i\beta)\beta_j = \varphi\left(\Phi^{-1}(p_i)\right)\beta_j$$

Ordered Probit formulation

In addition to the probit formulation, an ordered probit model is utilized to analyze the data set. Specifically, survey participants' intention to join a CSA arrangement is measured by their answer to the question "Are you planning to join a CSA in the future?" Responders were provided with the following three ordinal choices to select: i) no, ii) not sure and iii) yes.

Assume that a consumer, indexed by i, is considering to join a CSA arrangement in the future. The consumer's decision (Y_i) can be specified as a discrete variable with three alternative outcomes: i) the consumer will not join the CSA, ii) the consumer is not sure whether or not will join the CSA, and iii) the consumer will join the CSA arrangement.
Starting with a latent variable y* defined as:

$$(3)\ y^* = X'B + \varepsilon$$

the probability that consumer i, will belong in group j, is given by (Cameron and Trivedy, 2005):

$$(4)\ Prob\ (y_i = j) = F\left(\alpha_j - X'_i\beta\right) - F(\alpha_{j-1} - X'_i\beta)$$

the marginal effects are calculated as:

$$(5)\ \frac{\partial Pr\ (y_i = j)}{\partial x_{ri}} = \{F'\left(\alpha_{j-1} - X'_i\beta\right) - F'(\alpha_j - X'_i\beta)\}$$

where α is a threshold parameter to be estimated with the β, F is the cumulative normal and X is the vector of explanatory variables

Data Collection and Results

An online survey was distributed by Survey Sampling International (SSI) to its national representative consumer panels in May 2015. SSI used a quota sampling method by releasing the survey to its consumer panels in several rounds. After each round the demographics of respondents who finished the survey was compared with the census data. If some of the demographics deviated too much from the census (e.g. too much females) in a round, then the survey will be released to a sample with adjusted demographics (e.g. more male). This procedure continued until the quota was met and the demographics of the final sample was as close as possible to the national population. After removing respondents with missing values, we included data from 822 respondents in the final analysis**.**

Summary statistics for the sample are reported in Table 1. Among all participants 52% were female, 76% Caucasian and the median age was 37 years old. These numbers compare favorably

with the U.S. population of 50.8% female, 77.4% white and 35.3 years median age (US census, 2010). Our sample is slightly biased towards higher income families. Specifically, the median household income for the sample is $ 62,500, compared to the US median of $ 53,657. However, this is not unexpected considering that the survey was online.

A standard t-test for comparing means of unequal variances was utilized to gauge differences in characteristics between CSA members and non –members (Table 2). In line with previous studies (i.e. Kane and Lohr, 1997; Henderson et al., 1999; Perez et al., 2003) our findings indicate that, on average, CSA members are younger, more educated, with higher income. Furthermore, as it can been seen from Table 2, CSA members spend more on grocery shopping and have a more active lifestyle. There was no significant difference between CSA members and non-members in race and time spend cooking. Focusing on farmers' markets Zepeda (2009) found no statistically significant difference in education, income and age between consumers who shop and those who do not shop at farmers markets. Thus, it appears that CSA members represent a narrower portion of the consumers that prefer local food.

The importance of various reasons in the responders' decision to participate, or not, in CSA arrangements are reported in Figures 1 and 2 respectively. Consistent with previous research (i.e. Curtis et al., 2015; O' Hara and Stagl, 2001; Cox et al., 2008), the findings indicate that: i) supporting local farms, and ii) purchasing organic foods are among the strongest motivations for joining a CSA arrangement. Specifically, more than 80% of the responders indicated the aforementioned reasons as somewhat important or very important factors influencing their decision. Conversely, approximately 40% of the survey responders, indicated as one of the main reasons for not joining a CSA their preference for farmers' markets (Figure 2). This finding highlights the need to promote factors that differentiate CSA arrangements from other direct marketing schemes, to increase membership. The limited variety and the cost of the CSA membership were the 2nd and 3rd most important factors that discourage the survey responders from participating in CSA arrangements.

The findings of the probit formulation, in conjunction with the estimated marginal effects, are reported in Table 3. The McFadden's adjuster R^2 is 0.37 and the model correctly classifies 92.3% of the observations, indicating a good fit. Consistent with previous research (i.e. Zepeta and Li, 2006; Peterson et al., 2015) the demographic variables examined did not have a statistically significant effect on the probability that a responder is a member of a CSA arrangement. This finding further validates the hypothesis that demographic characteristics may not be helpful in predicting CSA participation (Peterson et al., 2015, Bond et al., 2006).

In contrast to Kolodinsky and Pelch (1997), our findings indicate that the households with more children under 18 are more likely to belong in a CSA arrangement (Table 3). A potential explanation for this finding is that parents place a value in the opportunity to introduce their children to agricultural activities (Cooley and Lass, 1998). Furthermore, larger families may utilize CSAs as social interaction venues (Gumurakiza et al., 2014).

A number of lifestyle variables had a statistically significant and positive impact on the probability that a survey responder was a CSA member. For example, responders who are members of fitness clubs are 6.5 percentage points more likely to participate in CSA

arrangements (Table 3). Similarly, vegetarians are 3.8 percentage points more likely to be CSA members. Lastly, responders that were CSA members on the past are 53 percentage points more likely to be CSA members during the time of the survey. This finding provides further support for the hypothesis that member satisfaction substantially influences the probability of CSA membership (Lang 2005; Harmon, 2014; Kolodinsky and Pelch, 1997).

Tables 4 and 5 report the coefficient estimates and the marginal effects for the ordered probit formulation. The McFadden adjusted R^2 for the model is 0.144. Moreover, the threshold parameters are statistically different from each other (Table 4). Thus, the three categories should not be collapsed into two, and the use of an ordered probit model is justified.

The most discernable differences between the probit and ordered probit formulations are related to the impact of the demographic and information variables. For example, the findings indicate that women are more likely to join a CSA arrangement in the future (Table 4). Specifically, women are 2.5 percentage points more likely to become CSA members. A couple of reasons justify this finding. First, women are predominately responsible for grocery shopping (Castellano, 2015; Zepeda, 2009). Second, women are more likely to be satisfied from CSA arrangements (Lang, 2005).

Following Kolodinsky and Pelch (1997) and Govindasamy and Nayga (1997), our initial hypothesis was that education would have a positive impact on the probability of participating in CSA arrangements. However, in line with Jekanowksi et al. (2000), our results indicate that the higher education levels translate to lower probability to join CSA (Table 4). In detail, more educated consumers are 3.6 percentage points more likely not to join a CSA arrangement (Table 5). A potential explanation for this finding is that more educated consumers are more likely to have busier schedules (Gumirakiza et al., 2014). Furthermore, it is possible that more educated consumers do not value the "local brand" as much (Jekanowski et al., 2000). This finding may be an indication of the changing characteristics of CSA members.

Moreover, consistent with previous research (i.e. Kolodinsky and Pelch, 1997; Peterson et al., 2015, Zepeda, 2009), age, income and race do not have a statistically significant impact on the probability that a consumer will join a CSA arrangement (Table 4). Furthermore, the findings indicate that consumers who spend more on grocery shopping are 2.1 percentage points more likely to participate in CSA arrangements in the future (Table 5).

Regarding the information sources, in line with Kolodinsky and Pelch (1997), the results highlight the importance of family/word of mouth on the probability of becoming a CSA member. Specifically, responder who place a higher value on this information source are, approximately, 5% more likely and 13% less likely to join a CSA arrangement. Under the same token, responders who place a higher importance on websites are more likely to join a CSA arrangement (Table 4). On the other hand, receiving information from news or advertising through road signs did not have a statistically significant impact. This result can provide useful information to CSA managers as they design their marketing campaigns in order to maintain current members and attract more members.

Consistent with the findings of the probit analysis, the marginal effects from the ordered probit indicate that responders who are already csa members are more likely to participate in CSA arrangements in the future (Table 5). This findings further highlight the importance of having satisfied members. Lastly, the results indicate that consumers who consider food produced from CSA better for the environment are approximately 5% more likely to join a CSA. On the other hand consumers who identified themselves as non-vegetarian are 12% more likely not to participate in CSA arrangements.

Conclusions

Although a plethora of empirical studies have examined the reasons that: i) motivate consumers to join CSA arrangements, and ii) influence their satisfaction from a CSA (i.e. Lang, 2005; Cox et al., 2008; Sharp et al., 2002; Pole and Kumar, 2015; Pole and Gray 2013), the literature regarding the impact of various factors on the likelihood that an individual will to join a CSA is rather limited. Furthermore, the few notable exceptions (i.e. Peterson et al., 2015; Kolodinsky and Pelch, 1997) have focused on limited geographical areas. However, as the competition for local food expenditures intensifies, a better understanding of who a CSA member is, and of the factors that can increase consumers' participation in CSA arrangements is crucial for the continuous success of this direct marketing outlet. The present study tries to fill this gap and gain a better understanding of the factors that influence consumers' decisions to join CSAs using a national sample.

We utilized a probit and an ordered probit formulation to investigate how consumers' demographic characteristics, lifestyle preferences, and information outlets influence the probability that a person is a CSA member, or is considering to join a CSA arrangement in the future. The results indicate that while demographic characteristics do not affect the probability that a consumer is currently a CSA member they have a statistically significant impact on the probability that a survey responder will join a CSA arrangement in the future. On the other hand, consumer lifestyle preferences had a statistically significant impact on both the probability that: i) a consumer is currently a CSA member and/or ii) is considering to join a CSA in the future. Moreover, from the information outlets examined only word of mouth and online sources influence the probability that a consumer will join a CSA in the future.

Overall, these findings indicate that although CSA consumers appear to be a homogeneous group there is a difference between the factors that determine current and future consumers' membership. Furthermore, the results indicate that producers' should question the effectiveness of traditional information outlets (i.e. news, road signs) on the probability of increased membership. To maintain CSA growth, novel ways of attracting consumers may be necessary. These strategies should be primarily focused on increasing member satisfaction which in turn will increase loyalty. Based on our findings, further analysis should be contacted on the factors that increase loyalty among CSA members. Moreover, additional research should be contacted regarding the factors that influence consumers' decision not to participate in a CSA arrangement, to tailor more targeted advertising strategies.

Figure 1: Most Important Reasons for CSA Program Participation, among CSA members

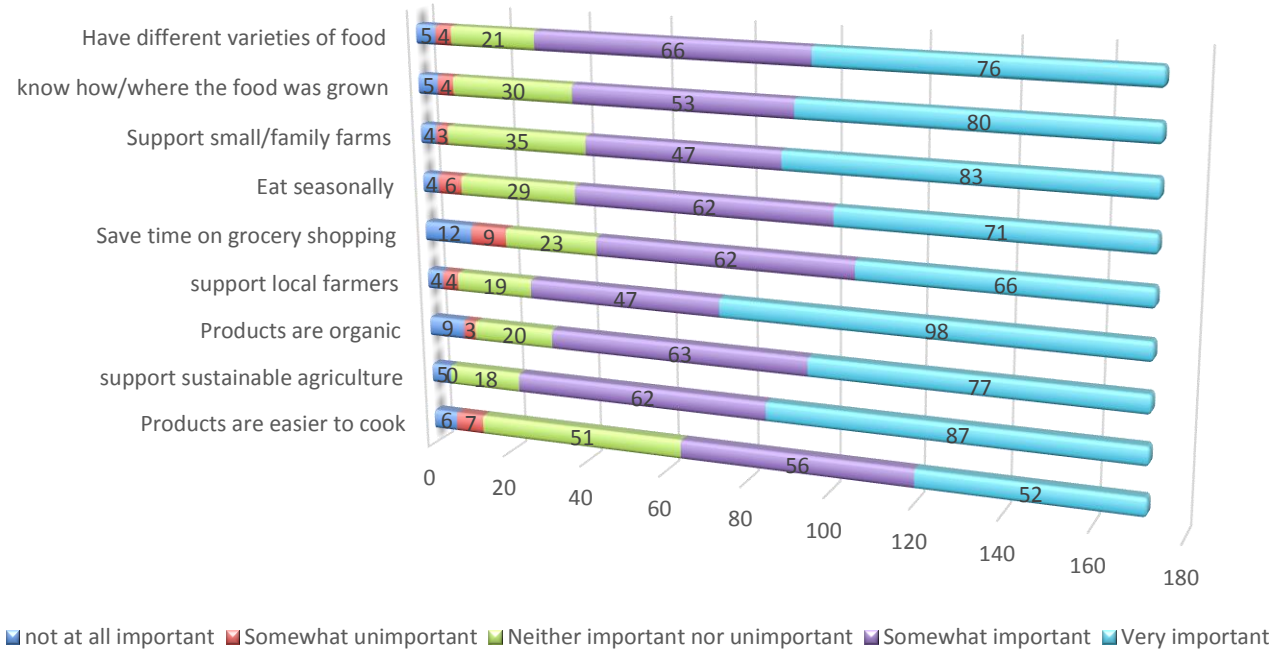

Figure 2: Responders Rational for Not Participating in CSA Programs

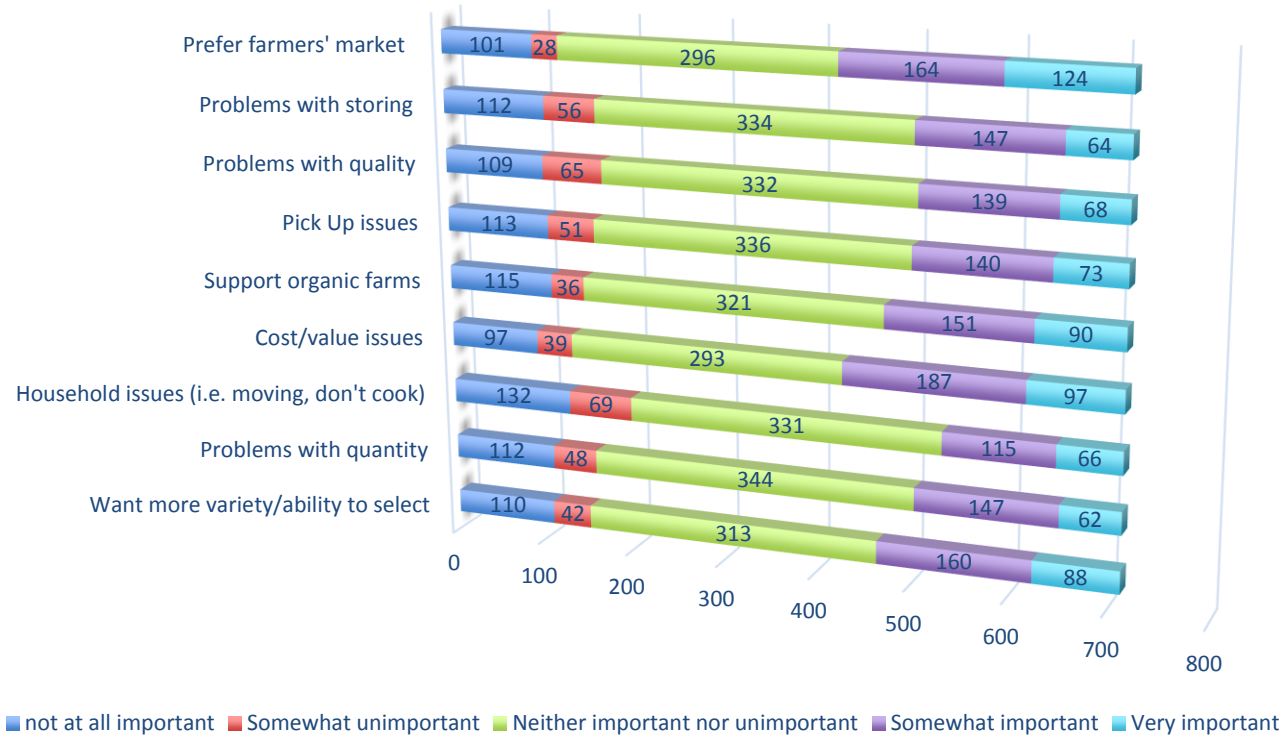

Table 1: Description of the variables and summary statistics

Variable	Description	Mean	Std. Dev.
	1. Demographic Variables		
Age	Age of the responder	42.78	18.08
Female		0.52	0.49
Caucasian		0.76	0.42
Income	Average annual household income ($ 1000)	62.07	42.92
Education	Education level: 0 if some high school; 4 if holds a graduate degree	2.27	0.99
Kids	Number of kids < 18 in the household	1.81	1.11
	2.Lifestyle Variables		
Vegeterian	1 if vegetarian or vegan; 0 otherwise	0.07	0.25
Gym	1 if member of a fitness club; 0 otherwise	0.29	0.45
Cook	Hours spend cooking in an average week	5.2	2.84
Expenditure	Grocery shopping expenditure ($100)	1.449	0.97
Health	Organic food has more health benefits: 0 = Strongly disagree/disagree; 1= neutral; 2 agree/strongly agree	1.23	0.62
Ingredients	How important is the list of ingredients when you purchase food: 0 = not at all/somewhat unimportant; 1 = neither important/nor unimportant; 2 = somewhat important/very important	1.62	0.67
environment.	Production of food from CSA has lower environmental impact: 0 = Strongly disagree/disagree; 1= neutral; 2 agree/strongly agree	1.46	0.62
Past member	Past member of CSA (1 if the responder was a CSA member)	0.09	0.29
chain	Money spend at a major chain for grocery shopping	144.26	143.14
recycle	How often do you recycle glass, newspaper, cans and plastic (0 =never, 4 =always)	3.14	1.23
	3. Information Sources		
web	Importance of website in join a CSA: 0 = not at all/somewhat unimportant; 1 = neither important/nor unimportant; 2 = somewhat important/very important	1.13	0.78
word of mouth	Importance of friends/ family members in join a CSA: 0 = not at all/somewhat unimportant; 1 = neither important/nor unimportant; 2 = somewhat important/very important	1.24	0.78
news	Importance of newspaper members in join a CSA: 0 = not at all/somewhat unimportant; 2 = somewhat important/very important	1.05	0.78
road	Importance of road signs in join a CSA: 0 = not at all/somewhat unimportant; 1 = neither important/nor unimportant; 2 = somewhat important/very important	1.11	0.77

Table 2: Test of means, csa members and non-members

	CSA member (n=100)		Non- member (n=722)		
Variable	Mean	Std. Error	Mean	Std. Error	t-test[a]
Age	35.94	13.13	43.73	18.47	5.26***
Female	0.35	0.47	0.54	0.49	3.81***
Income	73.54	52.16	60.48	41.27	- 2.40*
Education	2.49	1.01	2.24	0.99	- 2.27*
Vegetarian	0.19	0.39	0.05	0.22	- 3.37**
Caucasian	0.69	0.46	0.77	0.41	1.78
Expenditures	211.44	124.23	135.73	88.9	-5.89***
Environment	1.73	0.547	1.43	0.62	- 4.98***
Health	1.55	0.592	1.19	0.61	- 5.65***
Ingredients	1.59	0.726	1.63	0.66	0.56
Gym	0.62	0.487	0.25	0.43	- 7.13***
Cook	5.73	2.91	5.22	2.83	- 1.64
kids	2.29	1.13	1.74	1.09	- 4.52***

[a] Significance level in this column refers to the difference between CSA members and non-members
*, **, and *** represent significant at the 10%, 5% and 1% significance levels respectively

Table 3: Probit estimation results and Marginal Effects

Dependent variable = CSA member	Estimation Results		Marginal Effects	
	Coefficient	Std. Error	Coefficient	Std. Error
Variable				
female	-0.254	0.160	-0.028	0.018
income.	-0.003	0.002	-0.000	0.000
age	0.006	0.006	0.001	0.001
caucasian	-0.097	0.176	-0.011	0.021
education	-0.040	0.083	-0.004	0.009
kids	0.137**	0.070	0.015*	0.008
gym	0.502***	0.163	0.065***	0.025
vegetarian	0.287	0.260	0.038	0.041
cook	0.014	0.028	0.001	0.003
expenditures	0.221***	0.083	0.024***	0.009
ingredients	-0.102	0.118	-0.011	0.013
health	0.079	0.132	0.009	0.014
environment	0.236*	0.141	0.026*	0.015
past member	1.986***	0.194	0.537***	0.070
web	0.064	0.137	0.007	0.015
word of mouth	0.154	0.137	0.017	0.015
news	0.158	0.140	0.017	0.015
chain	0.001	0.001	0.000	0.000
road	-0.082	0.145	-0.009	0.016
recycle	0.098	0.073	0.011	0.008
vegexp	-0.001	0.003	-0.000	0.000
constant	-3.410***	0.531		
Adjusted McFadden R2	0.37			
% Correctly classified	92%			

*, **, and *** represent significant at the 10%, 5% and 1% significance levels respectively

Table 4: Ordered Probit estimation results, dependent variable = plan to join csa

	Coefficient	Std. Error
Variable		
csa member	0.633***	0.167
female	0.163*	0.090
income.	-0.002	0.001
age	-0.001	0.003
caucasian	-0.112	0.103
education	-0.092*	0.049
kids	-0.015	0.043
gym	0.067	0.101
vegetarian	0.323*	0.167
cook	0.023	0.015
expenditures	0.135***	0.051
ingredients	-0.016	0.069
health	0.036	0.076
environment	0.300***	0.075
past member	0.259	0.182
web	0.177**	0.078
word of mouth	0.345***	0.079
news	0.125	0.080
chain	-0.000	0.000
road	-0.011	0.084
recycle	0.044	0.035
vegexp	0.002	0.002
A1	1.370***	0.270
A2	2.879***	0.282

*, **, and *** represent significant at the 10%, 5% and 1% significance levels respectively

Table 5: Ordered Probit marginal effects for the probability of joining a CSA in the future

	NO		Not Sure		Yes	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Variable						
csa member	-0.233***	0.055	0.101***	0.015	0.132***	0.045
female	-0.065*	0.036	0.040*	0.022	0.025*	0.014
income.	0.001	0.000	-0.000	0.000	-0.000	0.000
age	0.000	0.001	-0.000	0.001	-0.000	0.000
caucasian	0.044	0.040	-0.026	0.023	-0.018	0.017
education	0.036*	0.019	-0.022*	0.012	-0.014*	0.008
kids	0.006	0.017	-0.004	0.010	-0.002	0.007
gym	-0.027	0.040	0.016	0.024	0.010	0.016
vegetarian	-0.124**	0.061	0.064**	0.026	0.060	0.036
cook	-0.009	0.006	0.006	0.004	0.004	0.002
expenditures	-0.053***	0.020	0.033***	0.013	0.021***	0.008
ingredients	0.006	0.027	-0.004	0.017	-0.002	0.011
health	-0.014	0.030	0.009	0.018	0.005	0.012
environment	-0.119***	0.030	0.073***	0.019	0.046***	0.012
past member	-0.100	0.068	0.055*	0.032	0.046	0.037
web	-0.070**	0.031	0.043**	0.019	0.027**	0.012
word of mouth	-0.136***	0.031	0.084***	0.020	0.053***	0.013
news	-0.049	0.032	0.030	0.020	0.019	0.012
chain	0.000	0.000	-0.000	0.000	-0.000	0.000
road	0.004	0.033	-0.003	0.020	-0.002	0.013
recycle	-0.017	0.014	0.011	0.009	0.007	0.005
vegexp					0.000	(0.000)

*, **, and *** represent significant at the 10%, 5% and 1% significance levels respectively

References

Allen IV, J.E, J. Rossi, T. Woods, and A.F. Davis. 2016. " Do Community Supported Agriculture Programmes Encourage Change to Food Lifestyle Behaviours and Outcomes? New Evidence from Shareholders." *International Journal of Agricultural Sustainability* DOI: 10.1080/14735903.2016.1177866

Bond, J.K., D. Thilmany, and C.A. Bond. 2006. "Direct Marketing of Fresh Produce: Understanding Consumer Purchasing Decisions." *Choices: The Magazine of Food, Farm and Resource Issues* 21(4): 4th quarter.

Brown, C., and S. Miller. 2008. "The Impacts of Local Markets: A Review of Research on Farmers Markets and Community Supported Agriculture (CSA). *American Journal of Agricultural Economcis* 90(5): 1296-1320.

Brunch. M.L., and M.D. Ernst. 2010. *A Farmer's Guide to Marketing through Community Supported Agriculture (CSAs)* Center for Profitable Agriculture, Tennessee Department of Agriculture.

Cameron, C.A.., and P.K. Trivedi. 2005. *Microeconometrics Methods and Applications.* Cambridge University Press, New York.

Castellano, R.L.S. 2015. "Alternative Food Networks and Food Provisioning as a Gendered Act." *Agriculture and Human Values* 32: 461-474.

Connolly, C., and H. A. Klaiber. 2014. "Does Organic Command a Premium When the Food is Already Local?" *American Journal of Agricultural Economics* 96(4): 1102-1116.

Cooley, J.P, and D.A. Lass. 1998. "Consumer Benefits from Community Supported Agriculture Membership." *Review of Agricultural Economics* 20(1): 227-237.

Cox, R., L. Holloway, L. Venn, L. Dowler, J.R. Hein. M. Kneafsey, and H. Tuomainen. 2008. "Common Ground? Motivations for Participation in a Community – Supported Agriculture Scheme." *Local Environment* 13(3): 203-218.

Curtis, K.R., K. Allen, and R.A. Ward. 2015. "Food Consumption, Attitude, and Behavioral Change Among CSA Members: A Northern Utah Case Study." *Food Distribution Research* 46(2): 3-16.

Govindasamy, R., and R.M. Nayga. 2997. "Determinants of Farmer-to Consumer Direct Market Visits by Type of Facility: A Logit Analysis." *Agricultural and Resource Economics Review* 26(1): 31-38.

Gumirakiza, J.D., K.R. Curtis, and R. Bosworth. 2014. "Who Attends Farmers' Markets and Why? Understanding Consumers and their Motivations." *International Food and Agribusiness Management Review* 17(2):65-81.

Harmon, H.A. 2014. "Community Supported Agriculture: A Conceptual Model of Health Implications." *Austin Journal of Nutrition and Food Sciences* 2(4): 1024.

Henderson, E., J.D. Gussow, and R. Van En. 1999. *Sharing the Harvest: A Guide to Community Supported Agriculture.* Chelsea Green, White River Junction, VT.

Jekanowski, M.D., D.R. Williams II, and W.A. Schiek. 2000. "Consumers' Willingness to Purchase Locally Produced Agricultural Products: An Analysis of an Indiana Survey." *Agricultural and Resource Economics Review* 29(8): 43-53.

Kane, D.J., and L. Lohr. 1997. *Maximizing Shareholder Retention in Southeastern CSAs: A Step Toward Long Term Stability.* Organic Farming Research Foundation,, Santa Cruz, CA.

Kolodinsky, J.M., and L.L. Pelch. 1997. "Factors Influencing the Decision to Join a Community Supported Agriculture (CSA) Farm." *Journal of Sustainable Agriculture* 10: 129-141.

Lang, K. B. 2005."Expanding Our Understanding of Community Supported Agriculture (CSA): An Examination of Member Satisfaction." *Journal of Sustainable Agriculture* 26(2): 61-79.

Lea, E., J. Phillips, M. Ward, and A. Worsley. 2006. "Farmers' and Consumers' Beliefs About Community – Supported Agriculture in Australia: A Qualitative Study." *Ecology of Food and Nutrition* 45(2): 61-86.

O'Hara, S.U., and S. Stagl. 2001. "Global Food Markets and Their Local Alternatives: A Socio-Ecological Economic Perspective." *Population and Environment* 22(6): 533-554.

Perez, J., P. Allen, and M. Brown. 2003. *Community Supported Agriculture on the Central Coast: The CSA Member Experience*. Research brief #1. Santa Cruz: Center for Agroecology and Sustainable Food Systems.

Peterson, H.H., M.R. Taylor, and Q. Baudouin. 2015. "Preferences of Locavores Favoring Community Supported Agriculture in the United States and France." *Ecological Economics* 119: 64-73.

Pole, A., and A. Kumar. 2015. "Segmenting CSA Members by Motivation: Anything but Two Peas in a Pod." *British Food Journal* 117(5): 1488-1505.

Pole, A., and M. Gray. 2013. "Farming Alone? What's Up with the "C" in Community Supported Agriculture." *Agriculture and Human Values* 30(1): 85-100.

Sharp, J., E. Imerman, and G. Peters. 2002. "Community Supported Agriculture (CSA): Building Community Among Farmers and Non-Farmers." *Journal of Extension* 40:1-9.

Sproul, T.W., and J.D. Kropp. 2015. "A General Equilibrium Theory of Contracts in Community Supported Agriculture." *American Journal of Agricultural Economics* 97: 1345-1359.

U.S. Department of Agriculture. 2014. *2012 Census of Agriculture – Summary and Stated Data*. Washington, DC: USDA National Agricultural Statistics Service,

Zepeda, L., and J. Li. 2006. "Who Buys Local Food?" *Journal of Food Distribution Research* 37(3): 1-11.

Zepeda, L. 2009. "Which Little Piggy Goes to Market? Characteristics of Farmers' Market Shoppers." *International Journal of Consumer Studies* 33: 250-257.