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Uncovering Success Attributes for Direct Farmers' Markets and Agri-Tourism in the Mid-Atlantic Region of the United States

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Abstract

Farmers' markets and agri-tourism operations play significant roles in many rural economies; however, they tend to be underused which threatens their viability. Results from factor, cluster and regression analyses show that bundling of farmers' markets activities will spur diverse and steady patronage beyond what the growers earn from their traditional fresh produce and value added products. Additionally, farmers' markets and agri-tourism operators can use customer profiling to improve their marketing efforts in a competitive environment. The regression results show that a number of socio-economic variables are associated with the patronage experience.

Keywords: farmers' markets, agri-tourism, factor analysis, product bundling, consumer profiling, market segmentation

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Introduction

As federal farm support programs become increasingly untenable, farmers are being encouraged to innovatively address farming risks and rely less on government support. Direct farmer to consumer markets are among alternatives used in many farming communities. Farmers' markets, defined by the USDA as a multi-stall market at which farmer-producers sell agricultural products directly to the general public at a central or fixed location, particularly fresh fruit and vegetables but also meat products, dairy products, and/or grains (USDA Food and Nutrition Service), are fast growing in popularity because they can be profitable for producers while offering consumers a wide array of farm products at affordable prices. The number of farmers' markets rose to 8,144 in 2014, up from 3,706 in 2004 and 1,755 in 1994 (USDA's Agricultural Marketing Service).

Also included in such markets are pick-your-own (PYO), on-farm markets, roadside stands and community supported agriculture (CSA). Advantages of these markets include buffering farm incomes, providing marketing avenues and addressing price volatilities beyond what futures markets or any government support programs can do. Major challenges confronting many of farmer-to-consumer market operations are capacity underutilization and a narrow consumer base. Farmer-to-consumer market operators may need additional activities to attract a more diverse customer base beyond fresh produce buyers. For example, Martinez et al. (2010) identifies capacity constraints among issues affecting performance of local food systems including farmers' markets. This may be more of an issue for seasonal markets than year-round operations. A study by Ragland and Tropp (2009) found that about 88% of the farmers' markets operate seasonally. Seasonal operations tend to have fewer vendors which results in less revenue for those markets. Ragland and Tropp's findings also show that year-round markets had more than three times the sales of markets operating for six months or less per year. To increase viability, Martinez et al. (2010) suggests that facilities explore bundling of farm entrepreneurial activities with direct farm sales strategies.

While these market alternatives provide opportunities to sell locally grown produce directly to consumers, some researchers view them as a practical rural development strategy. Various farmers' market economic impact studies demonstrate that the markets are good for local economies, farmers and consumers (Conner et al. 2010; Che, Veeck and Veeck 2005; Das and Rainey 2010). The markets provide growers with extra income, since many farmers must work full-time either off the farm or outside the local area to support their families. Farmers' markets, by selling directly to consumers, also provide more profit for growers by displacing brokers or other middlemen. The benefits extend to consumers as well, by providing a broader choice of fresh produce and value added products (Keeling-Bond, Thilmany, and Bond 2009). Communities in which these businesses operate gain from more money spent in the local economy, creating spending, re-spending, and higher multiplier effects (Darnton 2012). Retail spending by consumers promotes local business development and expansion. Additionally, the USDA and other government agencies are recognizing farmers-to-consumer markets are a better vehicle to promote affordable and healthier living by increasing consumption of fruits and vegetables.

While many benefits are associated with farmers' markets and agri-tourism activities, operators need to devise ways to attract a diverse and steady customer base to overcome the issues of

capacity underutilization. The main objective of this study is to uncover some of the success strategies farmers' markets/agri-tourism operators could initiate to sustain and expand capacity utilization. Specifically, (i) identify and estimate the relative importance of the factors underlying success of a farmers market/agri-tourism site; (ii) identify distinct consumer segments based on important drivers/forces for visiting direct market/agri-tourism sites; (iii) develop a profile of these distinct consumer groups; and (iv) explore the relationship between consumers' socio-economic characteristics and patronage of farmers markets/agri-tourism sites.

The information generated by this study is useful not only to farmers but also to policy makers to improve effectiveness of farmer-to-consumer market channels. It may also contribute toward developing efficient and effective business strategies. A unique contribution of this study is a better understanding of what contributes successful operation practices of farmers' market/agri-tourism sites.

Literature

Small to medium-scale farmers often find farmers' markets a predictable and cost-efficient outlet to sell a large proportion of their production. This market segment has been growing steadily over time. Findings from Hand et al. (2010) demonstrate that direct market sales account for a higher percentage of small farms' sales than for larger farms. According to USDA's Agricultural Marketing Service, the number of farmers' markets rose from 1,755 in 1994 to 8,144 in 2014—more than quadruple growth. Direct farmer-to-consumer marketing amounted to \$1.2 billion in current dollar sales in 2007, compared with \$551 million in 1997, according to the 2007 Census of Agriculture.

Farmers' markets have been hailed as a development strategy. Hughes et al. (2008) view farmers' markets as a means to enhance retention of local dollars. Along similar lines, Brown (2003) puts a psychological spin to the functionality of these markets, pointing out that consumers feel good by supporting small scale local agriculture, thereby helping to retain dollars in the local economy. Other studies have focused on the untapped potential of farmers' markets and agri-tourism (Jensen et al. 2006; Jolly and Reynolds 2005), because customers are willing to pay more for products purchased from farmers' markets and because it is an industry that can operate year-round. In Tennessee, visitors to farmers' market or agri-tourism sites spend an average of \$15, while in California about 67% of the those who purchased products from farm-related tourism sites were willing to pay a price equal to or greater than what they would pay for the same or similar products in conventional outlets (Jolly and Reynolds 2005).

Direct marketing and agri-tourism ventures are not only economically advantageous, but also provide social benefits to business owners and consumers (Tracy et al. 1982). A study by Das and Rainey (2010) strongly agrees that farmers' markets and agri-tourism ventures can be complimentary in opening up new, profitable markets for farm products and services, as well as in providing travel experiences for the public. Furthermore, Che, Veeck and Veeck (2005) find that agri-tourism gives people an opportunity to better understand the hard work and skill that go into producing the food and fiber that they need.

While profitability and market access are significant functions of farmers' markets and agri-tourism businesses, they need to develop strategies to attract a continuous flow of customers if their ventures are to be successful. Tracy et al. (1982) found that patronizing farmers' markets and agri-tourism sites is driven by attributes such as superior quality and freshness of produce coming directly from farms compared to produce offered by wholesale and retail markets. Other studies overwhelmingly see farmers' markets as a better mechanism for rural revitalization and development (Henderson and Linstrom 1982; Linstrom 1978; Govindasamy and Nayga 1996). The studies point out that direct interaction with consumers leads to relationships and community building, and the relationships are seen as a critical success factor in a business where customer satisfaction is highly valued. The interaction enhances overall quality of life, especially for urban consumers, by simultaneously offering recreational outlets, generating income and employment in the area, preserving agricultural lands and open spaces, and contributing to community development. Additionally, such interaction allows consumers to question farmers freely about pesticide use and production methods to ensure that the product is "chemical-free" (Gale 1997).

Some studies isolate success factors specific to agri-tourism. Brown and Reeder (2007) and Ryan, DeBord and McClellan (2006) have shown that agri-tourism is partly driven by such factors as location (region), flow of visitors, and proximity to urban areas (shorter travel distances). The businesses should target households with higher education, higher family income, relatively younger members, and more family members (Carpio, Wohlgenant and Boonsaeng, 2008). A Colorado study on agri-tourism finds that income level, urban influence, and promotions via tourism offices and magazines positively influenced travel and related expenditures (Gascoigne, Sullins and McFadden, 2008). Their study further finds that travelers from higher income and Caucasian households were more likely to visit agri-tourism sites than people with lower income and non-white households. Agri-tourism operators should understand that the socioeconomic factors are constantly evolving as the U.S. population ages and becomes more affluent and diverse, but this should provide opportunities for entrepreneurial farmers to respond to consumers' changing food preferences and eating patterns (Ballenger and Blaylock 2013).

In addressing capacity underuse, Brown and Reeder (2007) suggest joint ventures of farmers' markets and agri-tourism, since the recreational nature of agri-tourism, including corn mazes, hay rides and food festivals, can make up for the lack of business at farmers' markets during the off-season.

Data and Methods

An internet survey of consumers residing in Delaware, New Jersey and Pennsylvania was conducted from June 21-29, 2010 to capture consumer purchasing behavior and other characteristics related to visiting agri-tourism operations and shopping at direct (farmer-to-consumer) market outlets in the Northeast. The survey instrument was developed using SurveyMonkey.com (Palo Alto, CA), a survey tool that allows researchers to design and implement an online survey. The survey was pre-tested on a subset of the target consumer population (n=93) to refine and clarify misleading or misunderstood questions prior to full deployment of the survey. Survey participants were randomly drawn from a panel of participants managed by Survey Sampling International, LLC (Shelton, CT), a provider of sampling solutions

for survey research. The selected panelists received a consent statement along with a link to the survey developed by researchers from Rutgers University and Pennsylvania State University. All potential participants were screened and invited to participate if they were: 1) age 18 and older, to ensure that only adults participated; 2) the primary food shopper for the household; and 3) had attended agri-tourism and direct marketing events or activities in the past. Panelists were also informed in a consent statement of their compensation, an entry into Survey Sampling International's quarterly \$25,000 sweepstakes and an instant win game play, which is standard compensation for the panelists. To begin the survey, panelists clicked on a hyperlink at the bottom of the consent statement, which then directed them to the survey welcome screen.

Of the 2,594 members who registered with the panel and accessed the survey (309 from DE, 952 from NJ and 1384 from PA), 1,134 met the criteria and began the questionnaire. Of those, (133 from DE, 424 from NJ and 577 from PA), 993 completed the 15-minute survey (122 from DE, 364 from NJ and 507 from PA). Panelists were asked to quantify the amount of produce they purchased at direct marketing outlets, what type of produce they bought, the number of visits per month, and the amount of dollars spent during visits to each of the targeted farmer-to-consumer direct market outlets and agri-tourism operations. In addition, panelists responded to demographic questions (age, gender, 2009 annual gross household income and household size). When the surveys were completed, participants were directed to a thank you page.

The study analysis is based on responses to 17 questions relating to factors, motivations, and reasons for visiting an agri-tourism site or farmers' market. Respondents were asked to rate on a scale of 1 through 7 the factors/motivations/reasons for their visit, with a rating of 1 indicating that the factor was not at all important, a rating of 7 indicating that the factor was extremely important, and with an average score of 3.5 denoting an indifferent or neutral response. Two sets of questions using the same Likert scale focused on site attributes and motivating factors for visiting a farmers' market or agri-tourism site. Respondents were asked, *"How important are the following factors/attributes/reasons in your decision to visit an agri-tourism site for an activity or event/factors/attributes including hay rides, wine tasting, agricultural festival/fairs, produce purchases, availability of picnic tables, and other related farmers' markets and agri-tourism activities?"*

Principal components factor analysis (PCA) was used to reduce the 17 questions exploring consumer motivations for visiting a farmers' market or an agri-tourism site to a smaller set of factors. A standard latent root equal to one and a Scree test were used to establish how many factors to retain, followed by a confirmatory analysis to ensure internal reliability of the factors. Next, a two-stage cluster analysis was employed to identify clusters of respondents with similar motivations for visiting a direct market/agri-tourism site. ANOVA tests were applied to examine inter-cluster heterogeneity. Finally, a regression analysis was applied on the standardized factor scores obtained from the principal component analysis to explore the relationship between the identified dimensions and the socioeconomic attributes of the consumers. The selection of the analytical methods used is based on the variable measures; in this study all were ordinal. However, in the presence of continuous and ordinal variables, alternative methods are used. All 17 variables used in the analysis were ordinal making factor analysis the logical analytical method to identify factors explaining the pattern of correlations within a set of observed variables. Additionally, the factor analysis reduces constructs represented by broad variables to a manageable number of interpretable dimensions. This step was followed by clustering; a

technique which enabled us to discover hidden patterns. Although there are a wide variety of methods available for grouping individuals into market segments on the basis of multivariate survey information, clustering remains the most popular and most widely applied method.

Empirical Results: Motivation for Visiting Direct Farmer's Market or Agri-Tourism Sites

Table 1 presents the mean, standard deviation and factor loadings from the principal component factor analysis, obtained after a Varimax rotation of consumer responses to the 17 questions, exploring reasons/motivation for patronizing a farmers' market or other agri-tourism site.

Factors are ranked in order of the proportion of variance explained, and are labeled to reflect the latent stimuli underlying consumer motivation for the visit. With the exception of one, all the estimated means of >3.5 , on questions relating to the importance of motivations/reason for the visit, suggest relevance of the variables in defining the latent dimensions on the bundle of factors underlying the visit. The mean scores and factor loadings from factor analysis are used concurrently for meaningful interpretation. Factor loadings of $>.5$ as in this study is an excellent indication of a solid factor (Costello and Osborne 2005; Jensen et al. 2014). As reported in Table 1, the analysis identified five factors important in the decision to visit a farmer's market or agri-tourism site. Together, these factors accounted for 66% of the variance, and are summarized in the discussion below.

FACTOR 1: *Learners Experience* (scale of 1-7, where 1 = not at all important and 7 = extremely important). This dimension captures the importance of agricultural education in the Mid-Atlantic public places. Most American people reside in urban areas; therefore, many Americans may not possess basic agricultural knowledge. A visit to a farmers' market or agri-tourism site may provide a valuable opportunity to learn first-hand about agriculture. It may be more pertinent to visit farms, particularly to school-aged children who may not know how their food is produced. The survey revealed that the learning experience is the most important of the five factors in choosing whether to visit a farmers' market or agri-tourism site, accounting for approximately 16% of the variance.

FACTOR 2: *Naturalist Experience* (scale of 1-7, where 1 = not at all important and 7 = extremely important). A naturalist experience occurs when a consumer sets aside some time to connect or reconnect with nature. These consumers can be seen driving around rural farms for the joy of the rural scenery. Naturalists are often seen in groups of friends or families. One compelling reason for naturalists to visit rural locations is an attempt to leave the clutter of cities and enjoy the refreshing countryside. The naturalist experience dimension accounts for approximately 14% of the variance.

FACTOR 3: *Leisurely Experience* (scale of 1-7, where 1 = not at all important and 7 = extremely important). About 13% of the variation is due to the leisure aspects motivating a visit to farmers' markets and other agri-tourism sites. This segment of consumers seeks agri-tourism destinations offering such attractions as concerts, hay rides, farm tours or petting zoos. One important consideration for these consumers is the value they attach to the eating experience; therefore, a good restaurant or café is a major factor for visiting.

Table 1. Varimax Rotated Factor Loadings Public Motivations/Factors for Visiting Farmers' Market and Agri-tourism Sites

Description	Mean (Std. Dev.)	Factors				
		1	2	3	4	5
FACTOR 1: Learners Experience						
Learn how food is grown	4.03 (1.66)	865				
See where food is produced	4.29 (1.66)	.846				
Experience farm visit	4.51 (1.61)	.633				
Educational class	3.88 (1.57)	.576				
FACTOR 2: Naturalist Experience						
Enjoy rural scenery	5.33 (1.34)		.778			
Spend time with family and friends	5.44 (1.42)		.764			
Appreciate scenery and natural settings	5.00 (1.42)		.577			
FACTOR 3: Leisurely Experience						
Events (e.g., concerts)	4.24 (1.59)			.768		
Activities (hayrides, farm tours)	4.90 (1.56)			.745		
Has restaurants and cafes	4.08 (1.53)			.593		
Has animal pet zoo	3.75 (1.69)			.547		
FACTOR 4:Purchasing/Marketing Experience						
Buy fruits and vegetables	5.48 (1.45)				.767	
Support local farmers	5.51 (1.34)				.664	
Buy value added products	4.44 (1.55)				.646	
Located near my home	4.93 (1.49)				.606	
FACTOR 5: Entertainment/Partying Experience						
The site has facilities: picnic tables and restrooms	4.94 (1.68)					.725
The site has shops	5.09 (1.40)					.711
Percent of total variance explained		15.8%	13.9%	13.3%	12.5%	10.8%
Total variance explained by Factors 1-5=66.39						

FACTOR 4: Purchasing/Marketing Experience (scale of 1-7, where 1 = not at all important and 7 = extremely important). This motivating factor reflects the well-established reason that farmers' markets exist, to provide consumers a better shopping alternative for fresh and value

added products. This dimension explains another 13% of the variation. The main attractions for a successful purchase/market experience are the knowledge that the products will be fresh, they are produced locally and support the local economy, and that the consumers can meet farmers personally. Interestingly, support for local farmers correlates highly with the purchasing experience. Additionally, the proximity of locations has an economic rationale due to rising gas prices that make driving long distances to supermarkets less attractive. Our results seem to agree with the findings by Ragland, Velma, and Coleman (2011) whose findings show that the top three reasons for shopping at the market are freshness and taste, supporting local agriculture, and convenience, mirroring closely our fresh food purchasing, and entertainment.

FACTOR 5: *Partying/ Entertainment Experience* (scale of 1-7, where 1 = not at all important and 7 = extremely important). This dimension captures the importance to the Mid-Atlantic public of away-from-home activities such as potlucks (a gathering where people contribute a dish of food to be shared among one another) and shopping. These experiences comprised about 11% of the variation and reflect the importance to the businesses of facilities and shops. Entertainment facilities (picnic tables and restrooms) and shops should be bundled or developed simultaneously to make a visit, a fulfilling experience for customers. Similar to our conclusions in this study, Gumirakiza, Curtis and Bosworth (2014) show that social interaction is one of two major motivations for attending farmers markets.

Cluster Analysis

The means and standard deviations of the standardized factor scores and the number of respondents in each cluster are reported in table 2. The analysis identified four clusters based on the importance respondents placed on reasons for visiting a farmer's market or agritourism event. The results were obtained by subjecting individual cases to non-hierarchical clustering. The number of clusters was determined based on interpretability and external validity using the criteria of increases in cluster coefficients as clusters merge. The ANOVA tests suggest significant heterogeneity on the importance the Mid-Atlantic public placed on each of the five factors. Respondents chose one of four consumer segments to describe their primary reasons for leisurely pursuits (Table 2). For example, respondents in cluster three, "*Buyers*," are significantly different from the other clusters in that they were more likely to be impacted by the purchasing experience ($F [3, 1,130] = 296.10, p < 0.05$), as shown by a relatively higher mean score on purchasing experience compared to the other clusters. Elepu and Mazzoco's (2010) findings on clusters/segments include market enthusiasts and recreational seekers, just as with the cluster buyers and partiers in our study.

Naturalists: This group is comprised of respondents who appreciate and enjoy rural scenery. Most likely the segment is comprised of urban residents who visit agri-tourism sites on weekends to spend time with family and friends (note the high mean score for factor 2). About 40% of the respondents belong to this group, making it the largest of all clusters. To capture this consumer segment, business operators may need to bundle entertainment attractions such as concerts along with rural scenery visits. Interestingly, the group is not driven by a purchasing/buying experience, but by an attraction to rural scenery. Arguably, farmland preservation becomes a very important component of agricultural sustainability in the Mid-Atlantic region to continue attracting naturalists.

Partiers/Entertainment lovers: This is the second largest consumer segment, comprising about 30% of the respondents. The group may be described as people interested in having a good time away from home. To attract this consumer group, business operators may need to invest more on facilities such as picnic tables and restrooms, and on making their sites attractive. Availability and immediate access to shops will likely enhance the entertainment experience since customers wouldn't have to leave their chosen spots to buy any items that are missing for a potluck or picnic event.

Table 2. Characteristics of the Consumer groupings identified through Cluster Analysis (Means and Standard Deviations)

Dimensions/Factors: farmer-consumer/agri-tourism	Naturalists N=453 40%	Learners N=189 17%	Buyers N=164 14%	Partiers N=328 29%	F-Statistic
FACTOR 1: Learners Experience	-.389 .778	.425 .665	-.884 .901	.734 .598	253.38*
FACTOR 2: Naturalist Experience	.539 .689	-.712 .860	-.964 .884	.148 .666	232.82*
FACTOR 3: Leisurely Experience	.201 .764	.085 .812	-.484 1.026	-.085 1.097	23.93*
FACTOR 4: Purchasing/marketing Experience	-.062 .669	-1.243 .932	.751 .710	.427 .604	296.10*
FACTOR 5: Partying/entertainment Experience	-.226 .791	-.154 .981	-.222 1.240	.511 .736	51.31*

Notes. Values in the table are means and standardized factor scores, with standard deviations in parenthesis-statistics are from the ANOVA inter-cluster differences, where the asterisk (*) denotes significance at the 5% level or better.

Learners: The third consumer segment is learners, comprising about 17% of the respondents. This group may be described as those seeking to have an intimate knowledge of agriculture and farmland. Although this group may be largely school children, it may also represent people seeking to know more about agriculture. For example, people in this group are seeking to know what it takes to produce food and what a farm and those who work on the farm look like. They may question whether farm lifestyles differ from those in other sectors of the economy. Organizing activities that attract this group will require events that promote both the market and touristic aspects of such sites.

Buyers: This is the smallest consumer segment consisting of 14% of the respondents. The segment is the traditional farmers' market customers who patronize the sites to take advantage of reasonably-priced fresh produce, meat, herbs, live plants and value added products. However, for these markets to survive, they will need to expand their range of activities and attractions to draw crowds in the off-season, while still providing the goods that the customers seek during the growing season. The buyers in this group place a priority on the proximity and support of local farmers, but the operators need to provide variety and quality at a reasonable price so the customers don't shop elsewhere.

Explaining Factors Underlying Visits to Farmers' Markets and Agri-Tourism Sites

Multiple regressions were carried out on the five factors identified in the principal factor analysis. The regression analysis identified and estimated the relationships between socioeconomic variables and patronage of direct farmers' markets and agri-tourism sites. The regression results provide operators of farmers' markets and agri-tourism sites segmentation information to develop promotional strategies to sustain their businesses. Table 3 presents the socioeconomic variables used in the regression analysis and their relevant statistics. The dependent variables in the regression analysis are the standardized factor scores that were obtained from the principal component analysis. As observed from the regression results reported in Table 4, the adjusted R^2 ranged between 0.011 and 0.050 and the F-statistic was significant across all the models, signifying better model performance. Results on significant factors impacting the five dimensions on visiting direct farmers' markets and agri-tourism sites are summarized below.

Learners Experience: General interest in agriculture and farming in particular was the most important motivation for the Mid-Atlantic population to visit farmers' markets and agri-tourism sites. Variables that positively impacted the learning experience related to urban residences compared to rural, number of children 17 years of age and below in a family, and adult youths between the ages of 25 to 35 years compared to those who are 35 years and older. Ethnicity had a negative impact on the learning experience. The ethnicity finding may be explained by the predominance of Caucasians in agriculture in general.

Naturalist Experience: The major attraction defining a naturalist experience was interest in rural scenery and farming. Variables on the number of children 17 years of age and below in a family and Caucasian compared to other races were positively related to the naturalist experience. On the other hand, youths 20 years and younger and males tended to perceive the naturalist experience negatively.

Leisurely Experience: The public motivation for patronizing farmers' markets and agri-tourism sites was the activities offered, including events such as concerts, hay rides and farm tours. As expected, variables that positively impacted the leisure experience related to the number of children 17 years of age and below in a family, the age of adult youths and being employed compared to retired.

Purchasing/Marketing Experience: The purchasing experience may be affected by a consumer's cost-to-benefit comparison on prices, and product attributes such as quality, freshness and variety offered by farmers' markets compared to supermarkets and other retail outlets. As expected, students and males viewed the buying experience negatively. Females will be more likely to buy groceries at farmers' markets. Just as in this study, Elepu and Mazzocco (2010) found that more females than men shop at farmers' markets.

Entertainment/Eat away from home/Partying/Experience: The major consideration to attract these customers is the presence of facilities to make entertainment, partying and eating out successful. People who were non-Caucasians, adult youths between the ages of 25 to 35 years and those who were employed perceived the partying experience negatively. Young adults may

be less keen to attend potlucks away from home because they would rather eat out in a fast food outlet, while consumers 35 years and older view potlucks as a way to connect with family and friends.

Table 3. Definitions and Descriptive Statistics of Socioeconomic Variables

Variable	Definition	Mean	Std. Deviation
MALE	=1 if respondent is male; 0 otherwise	.250	.433
UND_20YEAR	=1 if respondent is under 20 years; 0 otherwise	.024	.153
A21_35YEAR	=1 if respondent is 21-35 years of age; 0 otherwise	.293	.455
A36_OLDER*	=1 if respondent is 36 years of age and older; 0 otherwise	.683	.394
LTHISCH	=1 if respondent level of education is below high school; 0 otherwise	.007	.059
HSC_GRAD	=1 if respondent is a high school graduate; 0 otherwise	.280	.449
COL_GRAD*	=1 if respondent is a college graduate and above; 0 otherwise	.713	.420
U_17SIZE	=average number of children under 17 in a family	1.7	1.087
URBAN	=1 if respondent resides in an urban area; 0 otherwise	.11	.313
S_URBAN	=1 if respondent resides in a sub-urban area; 0 otherwise	.69	.464
RURAL*	=1 if respondent resides in a rural setting; 0 otherwise	.20	.403
ETHNICITY	=1 if respondent is Caucasian; 0 otherwise	.88	.322
INCBLW_80K*	=1 if respondent is in the income bracket below \$80,000; 0 otherwise	.68	.369
INC80_99K	=1 if respondent is in the income bracket \$80,000-\$99,000; 0 otherwise	.13	.340
INCAB_100K	=1 if respondent is in the income bracket \$100,000 and above; 0 otherwise	.19	.389
RETIRED*	=1 if respondent is either retired or homemaker; 0 otherwise	.32	.365
EMPLOY	=1 if respondent is employed; 0 otherwise	.54	.499
SELF-EMPLOY	=1 if respondent is self-employed; 0 otherwise	.08	.270
STUDENT	=1 if respondent is a student; 0 otherwise	.07	.251

Note. *These variables were dropped during estimation to avoid the dummy variable trap

Table 4. Regression Results: Socioeconomic variables impacting farmer-consumer markets/agri-tourism

	1. Learners Experience	2. Naturalist Experience	3. Leisurely Experience	4. Buying Experience	5. Partying Experience
Constant	.107 (.649)	-.615 (-3.751)	-.443 (-2.700)	.144 (.867)	.626 (3.828)
Urban residence (vs. Rural)	.320 (2.352)**	-.050 (-.371)	.116 (.861)	-.139 (-1.022)	.077 (.575)
Suburban residence (vs. Rural residence)	-.068 (-.755)	.085 (.955)	.085 (.948)	-.076 (-.839)	-.003 (-.036)
Number of children under 17 years of age in a family	.112 (3.286)**	.134 (3.989)**	.094 (2.782)**	-.044 (-1.300)	-.086 (-2.555)**
Male (vs. Female)	.105 (1.270)	-.322 (-3.934)**	-.040 (-.486)	-.175 (-2.115)*	-.102 (-1.247)
Age, under 20 years (vs. 36 years and older)	-.205 (-.791)	-.519 (-2.025)*	.081 (.315)	-.202 (-.779)	-.691 (-2.699)**
Age 21-35 (vs. 36 years and older)	.175 (2.082)*	-.014 (-.163)	.209 (2.510)**	-.073 (-.873)	-.291 (-3.506)**
Below high school education (vs. college and above)	.085 (.115)	-.111 (-.151)	-.037 (-.050)	-1.046 (-1.407)	.009 (.012)
High school education (vs. college and above)	.001 (.009)	.062 (.753)	-.008 (-.100)	.010 (.119)	-.004 (-.053)
Employed (vs. retired)	-.068 (-.837)	.099 (1.226)	.163 (2.012)*	-.023 (-.285)	-.162 (-2.005)*
Self-employed (vs. retired)	-.147 (-1.009)	-.011 (-.074)	.063 (.439)	.066 (.456)	-.042 (-.293)
Student (vs. retired)	-.025 (-.143)	.081 (.464)	.202 (1.160)	-.338 (-1.925)*	-.175 (-1.007)
Caucasian (vs. other races)	-.369 (-3.196)**	.387 (3.382)**	.094 (.818)	.077 (.667)	-.261 (-2.287)**
Income, 80_99K (vs. Income below 80K)	.044 (.412)	-.085 (-.811)	-.001 (-.007)	.084 (.791)	-.032 (-.304)
Income over, 100K (vs. Income below 80K)	-.110 (-1.176)	.089 (.963)	-.127 (-1.365)	.118 (1.265)	-.073 (-.794)
Adjusted R Square	.046	.050	.017	.011	.035
Model F-Statistic	4.024**	4.316**	2.084*	1.693*	3.260**

Notes. Single and double asterisks (*) denote significance at 5% level or better, the values in the parentheses are t-ratios. The variable categories in the brackets are excluded to avoid the dummy variable trap.

Conclusion

Farmers' market and agri-tourism business operations have proven that they can provide a stable income for the majority of small- to medium-scale farmers who participate, capacity use year-round remains a challenge that business operators need to address. This study shows that bundling of farmers' markets activities is a workable business strategy. The study suggests that if

bundling is implemented, it will spur diverse and steady patronage beyond the sale of traditional fresh produce and value-added products. Patronage to agri-tourism sites and farmers' markets may be broken down into five distinct experiences: learning, naturalist, purchasing, leisurely and entertainment experiences. Operators can use this information to capitalize on in their business strategy. Information from a cluster analysis yielded four market segments: those with a strong affection for rural scenery, those interested in knowing more about agriculture, consumers who visit just to buy farmers' produce and value-added products, and a group of consumers who visit just to connect with others and have fun.

Customer profiling provides valuable information that farmers' markets and agri-tourism business operators could use to be more successful, because it reveals who their customers are and what it takes to attract them. The regression results show that a number of socioeconomic variables are related with the patronage experience. This study finds that there is potential to generate activity year-round by bundling activities to tap a wider market beyond traditional fresh produce buyers.

Future research should focus on barriers to creating year-round operations and what are the necessary investments to sustain them. Investment requirements may be beyond the reach of individual operators, so perhaps partnerships with local authorities would be a strategy to stimulate rural economies.

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