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# Consumer Segments in Urban and Suburban Farmers Markets

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## Abstract

Using cluster analysis, this study used a consumer intercept survey to measure consumers' attitudes and behaviors at a sample of urban and suburban farmers markets. Five consumer segments were identified using cluster analysis, namely: Market Enthusiasts, Recreational Shoppers, Serious Shoppers, Low-involved Shoppers, and Basic Shoppers. Each of these segments represents a group of consumers with different attendance and purchasing behavior. Furthermore, different segments look upon the farmers market shopping experience differently, ranging from an opportunity to quickly purchase fresh vegetables to a regular outing of on-site consumption and entertainment. Managerial and marketing implications of identified consumer segments were hence drawn.

**Keywords:** cluster analysis, consumer segments, farmers markets

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## Introduction

In retail outlets such as shopping malls, consumer segments have been identified for the benefit of mall managers and vendors (Ruiz et al., 2004; Reynolds et al., 2002; Bloch et al., 1994; and Roy, 1994). In an effort to assist market managers and vendors target their customers, some studies have been conducted to segment shoppers at farmers markets ([Reserved], 2004; Wolf and Berrenson, 2003; and Eastwood, 1996). Based on their shopping behaviors, shoppers at farmers markets have been grouped into frequent and infrequent shoppers ([Reserved], 2004 and Eastwood, 1996), or into planned purchasers, impulse (unplanned) purchasers, planned non-purchasers, and unplanned non-purchasers (Wolf and Berrenson, 2003). However, there is still need to investigate the potential existence of consumer segments stemming from consumer preferences as it has been found to be the case in shopping malls (Reynolds et al., 2002).

Identifying consumer segments based on behavior and preferences rather than merely demographics is not new. A study published by the Coca-Cola Retailing Research Foundation (2004) provides evidence that individuals' "membership" in a behavioral or preference-based consumer segment is dynamic. That is, an individual can be classified into different consumer shopping segments based on their grocery shopping "mission." The study identified nine separate and distinct missions, each of which characterized a market segment, namely: *Care for Family, Smart Budget-Shopping, Discovery, Efficient Stock-Up, Specific Item, Bargain-Hunting Among Stores, Reluctance, Small Basket Grab and Go, and Immediate Consumption.* Thus, grocery store managers could use this information to attract and serve people on different missions, rather than treat all missions alike, which may result in unfulfilled customers.

Reynolds et al. (2002) segmented shoppers at both a traditional and an outlet mall based on their preference for mall attributes such as: mall essentials, entertainment, convenience, and brand-name merchandise. They identified five customer segments as being common to both the traditional and an outlet mall. These segments included: Basic, Apathetic, Destination, Enthusiasts, and Serious. The sixth consumer segment, Brand Seekers, was unique to the factory outlet mall. The knowledge of these consumer segments also led to the identification of key mall attributes for the benefit of mall managers and vendors.

For similar reasons, this study extends consumer segmentation analysis to farmers markets. Although their organization and shopping environment are different from that of either shopping malls or grocery stores, knowledge of customer segments and preferences can be useful. Therefore, the main objective of this study is to provide insights into consumer segments found in farmers markets, to assist market managers and farmer vendors in designing successful farmers markets. Three specific objectives are identified: first, to identify consumer segments existing in farmers markets based on their preferences for market attributes; second, to distinguish among consumer segments in terms of their demographics and shopping behaviors; and third, to interpret the characteristics of consumer segments and suggest managerial and marketing implications for each segment.

The remainder of this paper is organized in major sections of methodology, results, and implications to market managers and vendors.

 

## Methodology

Markets were selected to include a stratified sample of urban and suburban markets, but no other sampling restrictions were imposed. At the time of data collection there were 34 urban and 48 non-urban farmers markets operating in Illinois. Data were collected from six farmers markets randomly selected from the Chicago and Metro East (St. Louis) metropolitan areas using a standardized questionnaire in 2004. Two were within the city of Chicago, three were suburban, and one was in suburban East St. Louis. The questionnaire was developed based on previous studies ([Reserved], 2004; and Reynolds et al., 2002). Shoppers were intercepted randomly at the selected farmers markets and were asked to complete the questionnaire. In total, 508 questionnaires were completed, of which only 379 were completely filled by respondents and hence, useful.

The markets selected included a variety of market characteristics. Some were only open on a weekday afternoon and evening while others were open on a weekend day. Days of operation varied from Thursday through Sunday.

The survey was comprised of three principle sections. One section asked about the respondents demographic characteristics. Another section asked the respondent to indicate relative importance (seven point Likert scale) of twenty-four characteristics of farmers markets. These characteristics are identified below in Table 3. A third section asked about the respondent's behavior on that day and in general at this and other farmers markets (time, money spent; other missions, patronage frequency and products purchsed).

Consumer segments existing in farmers markets were derived through the use of the multi-step cluster analysis method. The multi-step cluster analysis method has been used to segment consumers shopping in malls (Reynolds et al., 2002; and Bloch et al. 1994). The multi-step cluster analysis method involved the successive application of factor analysis, Ward's and k-means clustering methods. The Statistical Package for Social Scientists (SPSS) software was used in the data analysis as it was capable of performing factor analysis and both the Ward's and k-means clustering procedures.

## Results

The results of the data collection and analysis are presented in the sequence of sample demographics, consumer segment identification and analysis of segment behavior.

*Demographic Characteristics of Sample*

Table 1 compares the demographics of the sample collected with similar data from the 2000 Census. A large proportion of the shoppers in the selected farmers markets were highly educated, middle aged or older, professional, white, and female. These results are quite consistent with those obtained from other consumer surveys ([Reserved], 2004; Govindasamy et al., 2002; Sovell, 2001; and Kezis et al., 1998). Women often are the dominant gender shopping at farmers markets in Illinois and elsewhere, which might be related to their primary shopping role for groceries in the household.

 

**Table 1.** Demographic Characteristics of Farmers Market Consumers Compared to U.S. Population.[1]

| Characteristic | | Sample | U. S. Population | Chi-square |
|---|---|---|---|---|
| Gender | Male | 23.3% | 49.1% | |
| | Female | 76.7% | 50.9% | 26.6***[2] |
| Age | Under 25 | 6.7% | 35.3% | |
| | 25-34 | 15.9% | 14.2% | |
| | 35-44 | 23.0% | 16.0% | 43.5*** |
| | 45-54 | 18.4% | 13.4% | |
| | 55-64 | 19.5% | 8.6% | |
| | 65 and over | 16.6% | 12.4% | |
| Household size | 1 | 18.2% | | |
| | 2-3 | 54.0% | | |
| | 4-5 | 25.1% | | |
| | Over 5 | 2.7% | | |
| Education | Some high school | 1.1% | 19.6% | |
| | High school graduate | 5.2% | 28.6% | |
| | Some college | 16.2% | 21.0% | 210.3*** |
| | College graduate | 33.7% | 21.8% | |
| | Post-graduate | 43.7% | 8.9% | |
| Ethnicity | Black | 10.7% | 12.3% | |
| | Asian | 2.6% | 3.6% | |
| | American Indian | 0.2% | 0.9% | 2.7 |
| | White | 82.9% | 75.1% | |
| | Native Hawaiian | 0.0% | 0.1% | |
| | Other | 3.5% | 5.5% | |
| Occupation | Student | 9.6% | | |
| | Professional and related | 41.8% | | |
| | Other | 19.9% | | |
| | Unemployed/Homemaker | 11.2% | | |
| | Retired | 17.5% | | |
| Income | Less than $20,000 | 10.7% | | |
| | $20,000-49,000 | 23.9% | 57.9% | ( < $50,000) |
| | $50,000-74,999 | 22.1% | 19.5% | |
| | $75,000-99,999 | 16.0% | 10.2% | |
| | $100,000 and over | 27.2% | 12.3% | |

[1]Source of U.S. Population Data: U.S. Dept. of Commerce, U.S. Census Bureau, Census 2000.
[2]*** indicates significant at p= 0.01.

## Consumer Segment Identification

*Component Factors*

Because there were many (24) market attributes, some of them correlated, it was first necessary to reduce them to a few uncorrelated component factors through factor analysis. However, the use of factor analysis in data reduction has been criticized for the occurrence of multiple factor loadings or correlated factors (Aldenderfer and Blashfield, 1984). To get uncorrelated factors, this study employed both principal component analysis and varimax as extraction and rotation methods respectively (Kim and Mueller, 1978a).

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.829. Normally, the KMO measure should be at least 0.5 for the sample size to be adequate for factor analysis, indicating

 

the sample size was adequate in this case. The Bartlett's test of sphericity was also significant (*chi-square* = 3642.60, *df* = 276, $p < 0.001$), implying that the correlation matrix was not an identity matrix. The Bartlett's test further showed that the factor model was appropriate.

Two unrelated, popular criteria were used to determine the number of component factors: Kaiser criterion and scree plot (Santos, 1999, and Kim and Mueller, 1978a & b). Using both criteria, seven component factors were extracted. These component factors accounted for approximately 65% of the total variance. Table 2 (see Appendix) shows the factor loadings of market attributes, the extracted component factors, and their respective names: *nearby stores*, *shopping experience*, *adjunct products*, *convenience*, *superior produce*, *assorted produce*, and *organic produce*. It is also important to note at this point that not all market attributes were regarded by respondents as being important as shown by the mean scores. Moreover, mean scores of most attributes were statistically different across study markets as shown by the F-test.

*Consumer Segments*

The Ward's Method was used to derive initial cluster seeds as in previous studies (Reynolds et al., 2002; and Bloch et al., 1994). Consumers were clustered based on standardized factor scores. Standardized factor scores were computed using the Anderson-Rubin criterion to ensure orthogonality of component factors (Kim and Mueller, 1978a). From the dendrogram, the number of appropriate-sized clusters lay between 2 and 6. The search for economically viable consumer segments also required the generation of fairly sizeable clusters and hence, made this method more appropriate.

The initial cluster seeds derived from the Ward's method were used in the k-means method to obtain final clusters of consumers. For two, three, and four clusters, some base variables were insignificant implying these clusters were not distinct. In contrast, five and six clusters were distinct. However, by conducting split half analysis, the optimum number of clusters was found to be five. The largest cluster has 119 consumers whereas the smallest one has 43 consumers (Table 3). The other three remaining clusters have 107, 62 and 48 consumers. The identified consumer segments were then designated the following names: Market Enthusiasts, Recreational Shoppers, Serious Shoppers, Low-involved Shoppers, and Basic Shoppers. The reasons for these interpretive names are discussed in the description section below.

**Table 3.** Final Cluster Centers Based on Standardized Factor Scores

| **Factors** | ***Enthusiasts*** | ***Recreational*** | ***Serious*** | ***Low-involved*** | ***Basic*** |
|---|---|---|---|---|---|
| Nearby stores | -0.41 | 1.94 | -0.22 | -0.069 | -0.19 |
| Shopping experience | 0.69 | 0.48 | -1.15 | -0.32 | -0.07 |
| Adjunct products | -0.28 | 0.76 | -0.01 | -0.14 | 0.04 |
| Convenience - | 0.16 | 0.29 | 0.39 | -0.06 | -0.14 |
| Superior produce | 0.17 | 0.10 | 0.40 | -2.18 | 0.48 |
| Assorted produce | 0.67 | 0.31 | 0.76 | -0.31 | -0.98 |
| Organic produce | 0.29 | 0.28 | -0.45 | 0.03 | -0.14 |
| *Total* | 107 43 | | 62 | 48 | 119 |

**Note:** Factor scores have mean 0 and standard deviation 1

 

*Validation of Consumer Segments*

Consumer segments were validated by performing both reliability and external validity tests. The reliability test was carried out to ascertain the degree of consistency of consumer segments. In contrast, the external validity test was done to determine whether the formed consumer segments were representative of shoppers in the urban and suburban farmers markets of Illinois. Both reliability and validity tests which were performed to validate consumer segments are discussed below. Successful reliability and validity tests enable commingling of data among markets as well as inferences about consumers at other markets.

The use of multiple clustering algorithms served as a test for the reliability or consistency of clusters. This reliability test has been commonly used in segmentation studies (Ketchen, Jr. and Shook, 1996). Both the Ward's and k-means methods indicated the optimal number of clusters were five. Under the Ward's method, the largest cluster had 111 consumers whereas the smallest one had 41 consumers. The other three remaining clusters had 88, 75 and 64 consumers. Therefore, the sizes of segments under the Ward's method were more or less similar to those obtained by the k-means method (Table 3).

Two approaches were taken to test for the validity of consumer segments: multivariate analysis of variance (MANOVA) of base variables and non parametric tests (chi-square and F-test) on non-clustering variables (Ketchen, Jr. and Shook, 1996; Aldenderfer and Blashfield, 1984). The MANOVA test indicated that consumer segments were distinct since all base variables were significant (Table 4).

**Table 4.** MANOVA of Component Factors

| | **Cluster** | | **Error** | | | |
|---|---|---|---|---|---|---|
| *Component* | *Mean Square* | *df* | *Mean Square* | *df* | *F* | *Sig.* |
| Nearby stores | 46.951 | 4 | 0.509 | 374 | 92.326 | .000 |
| Shopping experience | 36.928 | 4 | 0.616 | 374 | 59.974 | .000 |
| Adjunct products | 8.571 | 4 | 0.919 | 374 | 9.327 | .000 |
| Convenience 4 | .505 | 4 | 0.963 | 374 | 4.680 | .001 |
| Superior produce | 66.950 | 4 | 0.295 | 374 | 227.218 | .000 |
| Assorted produce | 51.622 | 4 | 0.459 | 374 | 112.565 | .000 |
| Organic produce | 6.900 | 4 | 0.937 | 374 | 7.365 | .000 |

*Description of Consumer Segments*

Non parametric tests showed that consumer segments differed significantly in some of their demographic and behavioral characteristics (Tables 5 and 6).

Moreover, consumer segments identified from farmers markets were somehow related to those found in shopping malls even though the two retail outlets differ so much in organization and product involvement. And, to a certain extent, consumer segments in farmers markets were comparable to known typologies of grocery shoppers. A description of each segment follows. It should be noted that due to the demographic make up and size of the sample, the cells in three rows in Table 5 (those labeled Some High School (Education), Asian and Other (Ethnicity)) had expected frequencies less than five.

 

**Table 5.** Demographic Characteristics of Consumer Segments

| *Characteristic* | | *Enthusiasts* | *Recreational* | *Serious* | *Low-involved* | *Basic* | *Chi-square* |
|---|---|---|---|---|---|---|---|
| Gender | Male | 13.5% | 18.6% | 21.3% | 51.1% | 29.1% | 26.822*** |
| | Female | 86.5% | 81.4% | 78.7% | 48.9% | 70.9% | |
| Age | Under 25 | 3.8% | 12.2% | 6.6% | 12.8% | 7.7% | 36.177** |
| | 25-34 | 6.7% | 17.1% | 21.3% | 19.1% | 20.5% | |
| | 35-44 | 15.4% | 26.8% | 27.9% | 19.1% | 28.2% | |
| | 45-54 | 23.1% | 24.4% | 16.4% | 14.9% | 15.4% | |
| | 55-64 | 30.8% | 17.1% | 16.4% | 21.3% | 15.4% | |
| | 65 and over | 20.2% | 2.4% | 11.5% | 12.8% | 12.8% | |
| Education | Some high school | .0% | .0% | 1.6% | 4.3% | .8% | 45.013*** |
| | High school graduate | 7.6% | 11.6% | 1.6% | .0% | 3.4% | |
| | Some college | 13.3% | 34.9% | 19.4% | 8.5% | 10.1% | |
| | College graduate | 36.2% | 39.5% | 35.5% | 29.8% | 33.6% | |
| | Post-graduate | 42.9% | 14.0% | 41.9% | 57.4% | 52.1% | |
| Ethnicity | Black | 6.0% | 39.0% | 3.3% | 10.6% | 6.0% | 59.035*** |
| | Asian | 3.0% | 7.3% | .0% | .0% | 3.4% | |
| | American Indian | .0% | .0% | 1.6% | .0% | .0% | |
| | White | 86.0% | 51.2% | 91.8% | 85.1% | 86.2% | |
| | Other | 5.0% | 2.4% | 3.3% | 4.3% | 4.3% | |
| Occupation | Student | 1.9% | 19.5% | 11.7% | 15.2% | 12.1% | 27.258** |
| | Professional and related | 59.2% | 43.9% | 41.7% | 47.8% | 51.7% | |
| | Service and other | 8.7% | 22.0% | 16.7% | 13.0% | 8.6% | |
| | Unemployed/Homemaker | 11.7% | 9.8% | 15.0% | 13.0% | 9.5% | |
| | Retired | 18.4% | 4.9% | 15.0% | 10.9% | 18.1% | |
| Income | Less than $20,000 | 4.4% | 20.0% | 12.7% | 9.1% | 8.3% | 27.782** |
| | $20,000-49,000 | 16.7% | 37.5% | 23.6% | 20.5% | 22.0% | |
| | $50,000-74,999 | 23.3% | 22.5% | 25.5% | 20.5% | 22.0% | |
| | $75,000-99,999 | 24.4% | 10.0% | 9.1% | 25.0% | 14.7% | |
| | $100,000 and over | 31.1% | 10.0% | 29.1% | 25.0% | 33.0% | |
| | Total | 107 | 43 | 62 | 48 | 119 | 27.2% |

Note: *** and ** significant at 1% and 5% respectively

 

**Table 6.** Behavioral Characteristics of Consumer Segments

| *Characteristic* | | *Enthusiasts* | *Recreational* | *Serious* | *Low-involved* | *Basic* | *Sample* | *Chi-square* |
|---|---|---|---|---|---|---|---|---|
| Frequency of Visits | 0-10 | 52.3% | 75.0% | 49.2% | 70.8% | 67.5% | 61.0% | 21.698*** |
| | 11-20 | 30.8% | 10.0% | 37.7% | 25.0% | 26.5% | 28.3% | |
| | > 20 | 16.8% | 15.0% | 13.1% | 4.2% | 6.0% | 10.7% | |
| | Mean | 11.25 | 6.88 | 10.97 | 8.15 | 8.59 | 9.6 | |
| Average Money Spent | $0-9 | 10.5% | 11.9% | 16.4% | 18.8% | 15.7% | 14.6% | 12.295 |
| | $10-19 | 40.0% | 40.5% | 34.4% | 37.5% | 29.6% | 34.7% | |
| | $20-25 | 18.1% | 21.4% | 19.7% | 31.3% | 23.5% | 21.8% | |
| | $25 & Over | 31.4% | 26.2% | 29.5% | 12.5% | 31.3% | 28.9% | |
| | Mean($) | 21.22 | 22.19 | 19.45 | 19.39 | 19.74 | 20.44 | |
| Average Time Spent | < 1 hr. | 64.2% | 39.0% | 69.4% | 66.0% | 56.9% | 59.4% | 11.713** |
| | 1 hr. & above | 35.8% | 61.0% | 30.6% | 34.0% | 43.1% | 40.6% | |
| | Mean(hr) | 0.77 | 1.05 | 0.70 | 0.77 | 0.83 | 0.84 | |
| Market Patronage | New Customer | 8.4% | 27.9% | 9.7% | 14.6% | 14.3% | 12.8% | 10.932** |
| | Old Customer | 91.6% | 72.1% | 90.3% | 85.4% | 85.7% | 87.2% | |
| Total | | 107 | 43 | 62 | 48 | 119 | 379 | |

Note: *** and ** significant at 1% and 5% respectively

 

*Market Enthusiasts*

*Market Enthusiasts* were the second largest segment in the market constituting 28% of the total sample (Table 3). These consumers considered the cleanliness and the general appearance of the market as important factors in deciding to come to shop there compared to other consumer segments. They also cared about how markets were organized, amenities at the market, and the general service they were accorded at the market. The presence of exceptionally high quality produce, such as organic produce influenced their patronage decisions more than any other group. Because they were enthusiastic about the market, they attached a lower value to the existence of other retail outlets nearby the market or other non-produce in the market. They were not inconvenienced much compared to other groups in visiting the market. Perhaps, they lived nearby the market or if they did not, their greater admiration for the market offset any inconveniences that they faced while patronizing the market.

Typically, *Market Enthusiasts* came to the market eleven times in a season. Approximately 48% of them came to the market more than ten times during the market season. On average, they reported spending about $21 per trip. Approximately one-half of them spent $20 or more per trip. They usually spent 0.77 hr (about 46 minutes) at the market per trip. Approximately 36% of them spent at least one-hour at the market (Table 6).

The demographic characteristics of *Market Enthusiasts* were typical of general sample of shoppers at the market (Table 5). They comprised 28 percent of the sample. A large proportion of *Market Enthusiasts* comprised of individuals who were older, highly educated, high income, professional, white, and female. More specifically, slightly over one-half of them were 55 years or older, 78% of them were at least college graduates, and 31% of them had household incomes of $100,000 and above. Eighty-six percent of them were whites. Similarly, 87% of them were female. In terms of occupation, a large proportion (59%) of them was professionals.

*Market enthusiasts* were somewhat similar to "Full Experience Shoppers," "Enthusiasts," and "Mall Enthusiasts" identified in the mall (Ruiz et. al, 2004; Reynolds et al., 2002; and Bloch et al., 1994). Ruiz et al. found "Full Experience Shoppers" to like shopping at the mall and thus were more frequent and second highest money spenders there. Bloch et al. described "Mall Enthusiasts" as shoppers whose purchases, usage of the mall, and experiential consumption were relatively high. Similarly, Reynolds et al. found "Enthusiasts" to prefer both products and auxiliary services provided by the malls.

*Recreational Shoppers*

*Recreational Shoppers* were the smallest segment in the market and made up of only 11% of the sample (Table 3). In deciding to come to shop at the market, *Recreational Shoppers* placed higher value on the existence of other retail outlets nearby the market or non-produce and events at the market compared to other consumer segments. Other than shopping for produce, these shoppers also attended the market in order to buy other products. They liked to treat their shopping as an entertainment event and were looking forward to a more festive atmosphere at the market than other groups. Perhaps, they were not time-pressed, took time off their busy schedules to relax, were on family outing, or were on vacation.

 

Typically, *Recreational Shoppers* exhibited the following behaviors. They were less frequent than other segments and came to the market about seven times in a season. Only one-quarter of them came to the market more than ten times during the market season. However, once in the market they tended to spend more money than other segments. They spent about $22 per trip. Nearly one-half of them spent $20 or more per trip. *Recreational Shoppers* also spent more time at the market than other segments and stayed for a little over one-hour per trip. Over 60% of them spent at least one-hour at the market (Table 6).

*Recreational Shoppers* tended to separate out from the rest of the groups in terms of demographics except in gender and occupation. Their distribution was skewed with more younger, less educated, diverse individuals with slightly lower household incomes than other segments (Table 5). Twenty percent of them were 55 years or older, 14% of them were post-graduates and only 10% of them reported household incomes of $100,000 and above. More than one-half (51%) of *Recreational Shoppers* were white while 39% of them were black. However, like the general sample of shoppers, they were predominantly professional and female (Table 5).

Shopping motivations of *Recreational Shoppers* in farmers markets matched those of "Grazers" and "Recreational Shoppers" in malls. "Grazers" were found to spend their time at the mall browsing and eating (Bloch et al., 1994). "Recreational Shoppers" at the malls regarded their shopping at the mall as an "escape" (Ruiz et al., 2004). *Recreational Shoppers* in farmers markets can also be likened to "Discovery Shoppers" identified in supermarkets (Coca-Cola, 2004). "Discovery Shoppers," as the name suggests, went to supermarkets to browse for new products. Behaviorally, they were relatively high money spenders at supermarkets just like *Recreational Shoppers* in farmers markets.

*Recreational Shoppers* also had most of the characteristics of "Impulse Purchasers," a segment identified by Wolf and Berrenson (2003), in a night farmers market. "Impulse Purchasers" were less frequent and tended to be new visitors at the market. Nonetheless, they spent more money at the market. Demographically, "Impulse Purchasers" were relatively young shoppers just like *Recreational Shoppers*.

*Serious Shoppers*

*Serious Shoppers* made up 16% of the farmers market consumers (Table 3). They considered the presence of a variety of high quality produce at the market as more influential in their patronage decision making process than other segments. One could envision that these shoppers would have liked to come to shop at the market more frequently but were often busy, time-pressed, or lived far-away from the market. However, the existence of variety of high quality produce at the farmers market made them overcome any inconveniences involved in shopping in the market. Since they did not stay long at the market, they did not appreciate much the general atmosphere of the market compared to *Recreational Shoppers.*

The following behavioral characteristics were typical of *Serious Shoppers*. They shopped at the market an average of eleven times in a season. Slightly over one-half of them visited the market more than ten times per market season. They spent about $19 per visit. Nearly one-half of them spent $20 or more per trip. They spent less time per trip at the market than other segments.

 

They spent about 0.7 hr (42 minutes) at the market per trip. Approximately 70% of them spent less than one-hour at the market. In sum, *Serious Shoppers* were regular, high money spenders who spent less time per trip and were not likely to attend the market for recreation (Table 6).

The demographic characteristics of *Serious Shoppers* were typical of the general sample of shoppers at the farmers market (Table 5). They tended to be medium-aged or older, educated, and have medium-high household incomes. Approximately 28% of them were under 35 years, 77% of them were at least college graduates, and nearly one-half of them had household incomes of $20,000-74,999. Also, 29% of them had household incomes of $100,000 and above. With respect to gender and ethnicity, *Serious Shoppers* reflected the sample's high concentration of whites and females.

In terms of preferences, *Serious Shoppers* resembled "Serious Shoppers" in malls, who were found to be more concerned about products than auxiliary services, such as the presence of entertainment or events (Reynolds et al., 2002). Because *Serious Shoppers* were convenience-seekers, they also tended to relate to a group of grocery shoppers known as "Time-challenged shoppers" (FMI, 2002). According to the FMI study, "Time-challenged shoppers" valued convenience of the grocery outlet because of their busy schedules. For instance, they had large households and young children to take care of. In their effort to cut on their grocery costs, "Time-challenged shoppers" responded to frequent shopper programs. *Serious Shoppers* at farmers markets seemed to be busy people, too. They included a slightly larger proportion of young adults (ages 26 to 44) who were more likely to have children at home.

*Low-involved Shoppers*

*Low-involved Shoppers* were the second smallest group in farmers markets (Table 3). They were less enthusiastic about their farmers markets than other segments. A typical *Low-involved Shopper* had behavioral characteristics outlined as follows. They were less frequent patrons than other segments. They came to the market eight times per season. Over 70% of them shopped at the market ten or less times in a season. They spent about $19 per trip. Forty-four percent of them spent $20 or more per trip. They spent 0.77 hr (46 minutes) per trip. Only 34% of them spent at least one-hour at the market (Table 6).

Two demographic characteristics distinguished *Low-involved Shoppers* from other segments, namely: age and gender compositions (Table 5). This segment comprised of shoppers of all age groups more equally than the other segments. In terms of gender, more *Low-involved Shoppers* were males. More than one-half (51%) of them were male compared to the entire sample being 23% male. The rest of the demographic characteristics were typical of the general sample of shoppers at the market (Table 5). That is, most of the *Low-involved Shoppers* were highly educated whites with high household incomes. In particular, 87% of them were at least college graduates, and one-quarter of them had household incomes of $100,000 and above.

*Low-involved Shoppers* seemed to be analogous to "Minimalists" or "Apathetic Shoppers" identified in shopping malls. It was found that "Minimalists" engaged least in the activities of the mall (Bloch et al., 1994). Similarly, "Apathetic Shoppers" did not enjoy much shopping at the malls (Reynolds et al., 2002). This kind of shoppers, whether in the farmers market or mall,

 

might not be playing a primary shopping role for food or non food products in their respective households.

*Basic Shoppers*

*Basic Shoppers* formed the largest segment with 31% of the sample (Table 3). They considered the presence of high quality produce at the market more importantly in their patronage decisions than other segments. These shoppers valued more the freshness of market produce and cared little about its variety and where it came from. Although these shoppers cared less about the general atmosphere of the market, whether there were events or any stores nearby, they spent relatively more time at the market. Probably they did this in order to make the best selection of produce. Moreover, they also liked some non-produce items to be present at the market. Hence, they might have spent some time browsing and/or buying them.

Typically, they had the following behavioral features. They came to the market nine times in a season. Approximately 32% of them came to the market more than ten times during the market season. Their average money expenditure was about $20 per trip. More than one-half (55%) of them spent $20 or more per trip. They spent nearly one-hour (about 50 minutes) at the market whenever they shopped there. Forty-three percent of them spent at least one-hour at the market (Table 6).

The demographic characteristics of *Basic Shoppers* reflected those of most shoppers at the market (Table 5). They tended to be medium-aged and older, educated, and had medium-high incomes. More than 70% of them were 35 years or older, over 80% of them were at least college graduates, and nearly one-third (33%) of them had household incomes of $100,000 and above. *Basic Shoppers* were predominantly white females. Slightly over 70% of them were female and 86% were white.

*Basic shoppers* were somewhat akin to "Mission Shoppers" and "Traditionalists" in malls. Although "Mission Shoppers" did not like shopping at the mall, they had to go there to buy something (Ruiz et al., 2004). Likewise, "Traditionalists" visited malls with the primary purpose of buying merchandise or services (Bloch et al., 1993). *Basic Shoppers* were also related to "Basic Buyers," a segment identified from African American grocery shoppers (FMI, 2000). According to FMI, "Basic buyers" were primarily concerned with the "basics" in a grocery store such as high quality produce, meat, and fast checkout. "Basic Buyers" did not enjoy grocery shopping, tended to shop at large chain stores and were brand loyal. They also did not value much their cultural cues such as the presence of black salespersons.

## Managerial and Marketing Implications of Consumer Segments

Currently, farmers markets are organized differently from one another. Farmers markets can be open or closed/ventilated, seasonal or year-round. Some farmers markets offer only farm produce while others have meat, seafood, poultry, flowers, shrubs, herbs, crafts, prepared food, and baked goods. Some markets feature educational displays, cooking demonstrations, and festivals while others do not. Some farmers markets operate on weekends whereas others open

 

during weekdays. The time of operation of markets varies with more markets operating in the mornings (USDA).

Moreover, farmers markets receive inconsistent support from sponsors such as government agencies, business groups, nonprofit organizations, and individuals. These sponsors also have different motives for supporting farmers markets. Some of these motives include: revitalizing downtown areas; raising awareness of healthy nutrition, stewardship of the land and ecology, and so forth (Payne, 2002; Bachmann, 2002).

In light of the above market differences, market managers likely should strive to organize effective farmers markets, that is, farmers markets containing profitable vendors, satisfied shoppers, and those that meet the market sponsors' objectives. This study identifies consumer segments patronizing farmers markets. Knowledge of consumer segments, their preferences, behaviors, and demographics, can provide useful insights for market managers in their quest to establish effective farmers markets. On the other hand, farmer vendors can directly use this knowledge to target consumer segments thereby increasing their total sales and profits. Hence, the managerial and marketing implications of consumer segments are discussed below with respect to attracting and retaining the identified segments.

*Market Enthusiasts*

Market cleanliness and appearance appealed to *Market Enthusiasts* more than other segments. *Market Enthusiasts* might thus be attracted by keeping farmers markets clean and pleasing to the eye. The market décor and arrangement are likely to be important. Ample parking is also important, particularly in suburban markets where most shoppers drive to the market.
With respect to organic produce, even though *Market Enthusiasts* showed more interest in it, prior work has shown that consumers make their purchasing decisions based on other factors such as price and appearance ([Reserved], 2004). Thus, while it is good to have some organic produce at the market, the maintenance of high quality and fair pricing might boost market attendance of *Market Enthusiasts* more than the mere availability of organic produce.

*Recreational Shoppers*

*Recreational Shoppers* placed more value on the market atmosphere and entertainment than other segments. However, they tended to be occasional visitors, who mostly patronized markets that operated over the weekend. Thus, care must be taken when attracting this segment to shop at the market, as *Recreational Shoppers* are less likely to be repeat visitors and may be looking for an event. Introducing snacks and entertaining activities to markets operating over weekends might attract more *Recreational Shoppers* to shop there. However, this strategy may not attract the desired blend of other segments and be a high-cost strategy for acquiring non-repeat visitors to the market.

*Serious Shoppers*

*Serious Shoppers* valued a variety of high quality, locally-grown produce more than other segments. These produce attributes are likely to attract this segment to shop at the market.

 

However, the word "locally-grown" produce seems to be viewed differently across markets. For example, shoppers at Chicago markets take locally-grown produce to mean produce coming from the Midwest region (four state area). Thus, recruiting Midwest farmers from a larger radius to participate in Chicago and suburban markets might pull more *Serious Shoppers* to shop there. However, the definition of "local" may tighten outside major metropolitan areas.

In addition, *Serious Shoppers* sought convenience when deciding to shop at the market more than other segments. Location choice and accessibility are important to attract this segment.

*Low-involved Shoppers*

These shoppers were less appreciative of most of the market features compared to other segments. Anecdotally, they appeared to wander the farmers market, consuming coffee and donuts on site. One strategy for approaching this segment is to convert them to another segment, thereby getting them more involved at the market. Specific activities could be organized that target them, perhaps organizing family or community activities at the market, or food awareness development activities.

*Basic Shoppers*

*Basic Shoppers* placed more weight on the presence of high quality produce when deciding to shop at the market than other segments. Therefore, translating "quality" from the consumers' perspective to farmers may help vendors attract this segment. *Basic Shoppers* also liked some non-produce items to be present at the market implying that their interests in the market might be aroused by expanding the product category offered by markets to include such items.
Conclusion

It can be concluded that five preference-based consumer segments exist in urban and suburban farmers markets: *Market Enthusiasts*, *Recreational Shoppers*, *Serious Shoppers*, *Low-involved Shoppers*, and *Basic Shoppers*. These consumer segments significantly differ in demographic and behavioral characteristics. Thus, steps to attract one or more segments simultaneously can be undertaken consciously or unconsciously. For example, *Market Enthusiasts* and *Basic Shoppers* are focused on produce quality and variety. Although they differed in other aspects, none of the above groups expressed a strong desire for entertainment, recreational travel, or lengthy stays at the market. Another key managerial implication from these findings is for market organizers to pay attention to their nearby community demographics for indicators of their potential and actual customers. This will enable a more targeted offering which can be adjusted with experience and feedback.

## Further Research

Further research should investigate consumer segments existing in farmers markets located in rural areas. Also, research should be conducted on the motivations and behaviors of other stakeholders in farmers markets, specifically sponsors, organizers and farmer vendors. Doing so would facilitate a deeper understanding of future directions to be undertaken in the successful development and evolution of farmers markets. Given the expected demographics of

 

respondents, similar future research can avoid small issues experienced in this research with cross tabulation tables having a few instances of expected frequencies less than five.

Lastly, this study has contributed to the development and validation of constructs (*nearby stores*, *shopping experience*, *adjunct products*, *convenience*, *superior produce*, *assorted produce*, and *organic produce*) which can be used to measure why consumers patronize farmers markets, these constructs can be the basis for further research, thereby reducing the need for factor analysis in further research.

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# Appendix

Table 2: Component Factors (Factor Loadings of Market Attribute Variables)

| | | Factors | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Market Attribute | Mean score | Nearby stores | Shopping experience | Adjunct products | Convenience | Superior produce | Assorted produce | Organic produce | $H^2$ |
| Presence of nearby grocery stores | 2.04*** | .841 | .196 | .125 | .078 | -.106 | .084 | .039 | *.754* |
| Presence of nearby non-grocery stores | 2.06*** | .824 | .216 | .172 | .046 | -.085 | .058 | .075 | *.769* |
| Presence of meat | 2.28*** | .586 | -.087 | .386 | .151 | .064 | .046 | .297 | *.475* |
| Price of produce | 5.18** | .484 | -.121 | .154 | .334 | .220 | .150 | -.401 | *.635* |
| Appearance of market | 5.16** | .140 | .777 | .157 | .220 | .156 | .120 | -.010 | *.643* |
| Cleanliness of market | 5.82** | .051 | .726 | .101 | .280 | .212 | -.048 | .051 | *.615* |
| Time of operation of market | 5.38 | .011 | .620 | .181 | .264 | .117 | .031 | .097 | *.641* |
| Payment method at market | 4.01*** | .492 | .563 | .118 | .087 | .116 | .045 | -.155 | *.615* |
| Availability of parking space | 4.63*** | .169 | .455 | .159 | -.077 | .107 | .225 | -.426 | *.587* |
| Customer service | 5.62** | .119 | .441 | .097 | .394 | .169 | .212 | .143 | *.618* |
| Presence of snacks | 3.12*** | .205 | .075 | .791 | .019 | .026 | -.231 | -.035 | *.729* |
| Presence of events/activities | 3.11*** | .140 | .196 | .767 | .006 | .003 | -.080 | .044 | *655* |
| Presence of flowers | 4.11*** | -.068 | .189 | .657 | .115 | .022 | .359 | .023 | *.612* |
| Presence of crafts | 2.41*** | .325 | .184 | .628 | .081 | -.001 | .315 | -.035 | *.467* |
| Presence of processed food | 2.42*** | .479 | .021 | .543 | .169 | .108 | .063 | .136 | *.797* |
| Location of market | 5.84 | .031 | .219 | .135 | .858 | .046 | .099 | -.002 | *.816* |
| Accessibility of market | 5.80 | .046 | .225 | .104 | .837 | .104 | .148 | .000 | *.511* |
| Distance of market | 4.90** | .248 | .233 | -.060 | .578 | -.044 | -.099 | .030 | *.466* |
| Produce freshness | 6.79 | -.072 | .139 | .001 | .025 | .840 | .152 | -.003 | *.668* |
| Produce quality | 6.76 | -.088 | .178 | .043 | -.004 | .839 | .152 | .010 | *.511* |
| Food safety | 6.09** | .188 | .267 | .031 | .208 | .529 | -.172 | .123 | *.736* |
| Produce variety | 5.84 | .135 | .121 | .080 | .167 | .172 | .733 | -.096 | *.620* |
| Presence of locally-grown produce | 5.84* | .085 | .022 | -.078 | -.009 | .039 | .635 | .465 | *.787* |
| Presence of organic produce | 4.86*** | .209 | .082 | .167 | .050 | .134 | .126 | .706 | *.773* |
| *Cronbach's* $\alpha$ | | *.792* | *.771* | *.787* | *.769* | *.548* | *.474* | *.401* | |

**Note:** *** significant at the 1% level, ** significant at the 5% level, and * significant at the 1% level

 

 