Factors Influencing Customer Preference Towards Uzhavar Santhais (Farmers' Market) in Namakkal District Tamil Nadu

Shakeel-Ul-Rehman and M. Selvaraj
Department of Management Studies, Sona College of Technology,
Anna University Chennai, 636005 Salem, Tamil Nadu, India

Abstract: Direct marketing of agricultural products is economic way to satisfy the producers as well as buyers. Direct marketing of selling agricultural produce is seen progressing in India throughout. On one hand, it would enable a farmer to gain maximum possible share a consumer spends on purchasing the agricultural products and on the other hand, it would deliver the produce at cheap and affordable prices to customers. Uzhavar Santhai locally or commonly called as farmers' market is one example which has achieved success in most parts of India through an efficient marketing system of direct sale of fresh vegetables and fruits. This social institution has provided a good impact on the upliftment of farmer class in the country. The present study presents a survey based approach to find the relationship between the factors which influence the purchasing behavior and preference of customers with respect to these markets in Namakkal district of Tamil Nadu, India.

INTRODUCTION

India is among the largest producers of fruits and vegetables in the world. But, India is also among the largest vegetable and fruit consuming nations of the world. The major problem is not production but marketing the product. Marketing determines the value of the agricultural produce in terms of value of money and delivers it to the final consumer. Most of the farmers in India sell their produce through village level local markets, personal vending, unorganized retail markets, fairs, mandies, melas and co-operative societies, etc. Mostly, the middlemen exploit farmers as well as customers. Marketing of fruits and vegetables is more complicated in nature in contrast with the other field crops because of special character like extremely perishable nature, seasonality and bulkiness which needs special care and immediate disposal. The maximum share of present marketing of agricultural produce in India is carried out by the middleman. These exploit the farmers and consumers through various malpractices in weighing, handling, storage and payments, etc. The middlemen between farmers and consumers are eliminated under the marketing system of Uzhavar Santhai.

Generally, the middlemen and wholesale businessmen purchase the agricultural products from the farmers at a lower price. They also get the commission from the farmers for the transactions made. In turn, fresh vegetables and fruits purchased at the lower price from the farmers are sold out to retail businessmen at higher price and the retail businessmen in turn, sell these agricultural products further at higher price to the ultimate consumers. As a result, the farmers get only the lower price for their produce whereas the consumers have to pay higher price for the same produce as the chain of middle man increases the share of consumer price to the farmer reduces. It was therefore, felt necessary to develop an alternate marketing approach where both farmers and consumers would be benefited. In these circumstances the first farmers' market namely; Apni Mandi or Kisan Mandi was started in Chandigarh, Punjab in 1987, at Karnal, Haryana in 1988 and at Madurai, Tamil Nadu in 1999. Hence, the Government of Tamil Nadu has introduced an alternate scheme of marketing which is known as Uzhavar Santhai in order to derive more benefits to the farmers as well as consumers.

The first Uzhavar Santhai of the state Tamil Nadu was inducted on 14/11/1999 at Madurai. Uzhavar Santhais are maintained by the District Agricultural Produce Marketing Committee of the Department of Agricultural Marketing and Agribusiness. Presently, there are >140 Uzhavar Santhais working in different parts of the state Tamil Nadu. Some of the basic objectives of Uzhavar Santhais are:

Corresponding Author: Shakeel-Ul-Rehman, Department of Management Studies, Sona College of Technology,
Anna University Chennai, 636005 Salem, Tamil Nadu, India

- To facilitate direct contact between the farmers and community
- To provide fresh vegetables and fruits to consumers at evenhanded price daily devoid of any interference of middlemen
- To provide right quantity and measurements of the produce to the consumers

Review of literature: A considerable amount of research has been done in the respective field by the academicians and researchers. The literature obtained by the investigator, in the form of reports and research studies is briefly reviewed in this part. Parmar *et al.* (1994) conducted an attitude survey with reference to the marketing problems faced by vegetable growers of South Gujarat and revealed that spoilage and malpractices in weighing were the major problems. The study suggested the need for improvement in the marketing system by regulating the marketing operations, establishment of efficient transportation system and co-operative marketing structure. Sharan and Singh (2002) observed the pattern of sales, marketing costs and margins for kinnow in Rajasthan. They found that the producer's share in consumer's rupee is more in direct sale as compared to contract sale, due to elimination of pre-harvest contractor. They further suggested that marketing cost and margin indicate that producer's share in consumer's rupee may be increased by decreasing the number of intermediaries in the existing marketing system.

Mohan (2004) suggested that the changed scenario, strong and viable agricultural financial institutions are needed to cater to the requirements of finance for building the necessary institutional and marketing infrastructure. Agwu *et al.* (2008) recommended that extension should be more inclusive in documentation and transfer of innovations, expand technology transfer mandate, facilitate farmer innovations and build capability to analyze the same for social and economic development. The administrators and planners should adopt flexible management style that could encourage private sector interaction with the public sector; backed up with institutional guidelines for the linkage interactions. Several other factors such as micro economic, social institutional mechanism for flow of information, relevant actors and dynamics of knowledge economy must be considered as important in determining the better outcome of processes.

Yue (2009) stated that agro-businessmen corresponded with market economy. Modern agriculture is a revolutionary reformation on traditional agriculture and is a new type of diversified and comprehensive industry being developed. Farmers are principal part of modern agricultural construction and diversification. Halder and Pati (2011) suggested farmers that they should be their own price setters rather than price followers. There is also an immediate need to integrate the production, marketing and processing processes of the produce to get maximum benefits from fruits and vegetables cultivation.

Detre *et al.* (2011) investigated the adoption of direct marketing strategy and its impact on gross sales. The researchers found that production of organic crops and the regional location of the farm were important factors in adoption of direct marketing strategies. Farmers who adopted direct marketing strategies were likely to have higher income. Joshi (2011) found that the share of producer in consumer rupee is high in channel were there are fewer number of intermediaries. The marketing cost incurred by wholesaler in different channels were estimated 5.01, 6.39 and 7.88% of the consumer price, respectively and their consequent net margins were 9.68, 9.61 and 10.23% of the price paid by the consumer.

Martey *et al.* (2012) stated that the farm size provides the opportunity to produce surplus production which is critical in improving market participation. Output price is an incentive for farm households to supply more output in the market. It is recommended that extension officials should strengthen the business orientation of farm households coupled with government support in terms of market infrastructure. Irengbam (2012) found that the state government has taken several steps to improve the conditions of agricultural marketing. To organize agri-business effectively is to conduct product specific surveys successfully for ensuring marketability and the type of venture to be set up.

Shakeel-Ul-Rehman *et al.* (2012) in their study suggested that the need to strength the regulated agricultural market system arises from changing nature of linkages between agriculture and markets. It has also been observed that better and easy market access and efficient information flow can bring much desired market orientation of the production system. Reddy and Sateesh (2012) observed that the rythu bazaars (farmers' market) are acting as essential link between customers and producers as far as the marketing of vegetables is concerned. The concept of rythu bazaar is built on mutual benefit, i.e., producers and users/consumers of the commodity.

Need for the study: Producers use different types of market outlets and various ways for selling their produce at the different times of the years, an approach to maximize their returns on produce. So many platforms are available

to a seller/producer in India to sell their produce but a producer tries to sell the produce in those markets which brings maximum profit to him. Farmers' market is one such successful example where a producer can sell fresh fruits and vegetables directly to the customer without market intermediaries. Unlike conventional marketers, the farmers are too inexperienced and are unaware to conduct market research on the behavior of vegetable and fruit purchasers. So, it was felt a study could be undertaken to analyze the preference and perception of the vegetable buyers towards these markets and makes it available to the policy makers so that they can take accurate decisions regarding the new marketing strategies to be implemented in Uzhavar Santhais. Moreover, one can know the overall efficiency of these markets in terms of customer satisfaction and can suggest some better ways to improve their performance.

Objectives: The main objectives of the present study are:

- To study the concept of Uzhavar Santhais (farmers' market) of Namakkal district in particularly
- The study aims to evaluate and associate the diverse variables which influence the customer preference stowards Uzhavar Santhais (farmers' market) in Namakkal district of Tamil Nadu, India

MATERIALS AND METHODS

This study based on survey and analysis method. Data has been collected from both primary and secondary sources. For collecting primary data, a sample of 100 customers of vegetables from four Uzhavar Santhai, located in Namakkal district of Tamil Nadu, India. All the four Uzhavar Santhai's markets were selected on the basis of stratified sampling and a sample of 100 (25 customers from each of the four strata) was selected through convenience sampling which is a non probability method of sampling for the ease of researcher. A structured questionnaire was administered among the consumers to collect primary data. The secondary sources of data collection were journals, magazines and through informal discussion with officials of the department concerned.

RESULTS AND DISCUSSION

The tools used in the study are descriptive statistics, simple percentage analysis, correlation analysis and factor analysis. Table 1 represents the sample profile of respondents. The descriptive output given in the Table 2 shows that the highest mean is achieved by fresh of products in the market (mean = 4.41, SD = 0.494) followed by availability of product variety in the

market (M = 4.37, SD = 0.544), quality of products in the market (M = 4.35, SD = 0.626) and right measurements in the market (M = 4.24, SD = 0.553). The lowest mean is achieved by like to recommend the market (M = 1, SD = 0.00) followed by marital status (M= 1.19,

Table 1: Sample profile

Profile	Values (%)
Demographic profile	
Age (years)	
<25	5
25-35	40
35-45	32
45-55	19
>55	4
Gender	
Male	60
Female	40
Educational	
Illiterate	6
Below Ssc.	12
Intermediate	38
Degree and above	45
Marital status	
Married	78
Unmarried	22
Occupation	
Farmer	8
Employee	30
Professional	23
Business	21
Student	5
Homemaker	13
Annual income (Rs.)	
<50,000	8
50,000-1,00,000	25
1,00,000-1,50,000	35
>1,50,000	35
Factors	
Distance travelled (km)	
<2	36
2-5	35
>5	29
Frequency of purchase	
Daily	15
Alternate days	35
Weekly twice	35
Weekly once	15
Time of purchase	
6-7 a.m.	25
7-8 a.m.	48
8-9 a.m.	16
9-10 a.m.	6
Variable	5
Amount spend on purchase (Rs.)	
<50	10
50-100	37
100-150	37
>150	16
Like to recommend the market	
Yes	100
No	0
Other sources of purchase	
Private veg. malls	15
Local retail shops	32
Street vendors	20
Local bazaars	18
No	15

Table 1: Continue

Factors	Opinion/response (%)				
	SA	A	NAD	DA	SDA
Right measurements in the market	30	64	6	0	0
Freshness of products in the market	41	59	0	0	0
Availability of the product variety in the market	40	57	3	0	0
Quality of products in the market	42	52	5	1	0
Affordable price level of products in the market	14	50	31	5	0
Market in terms of convenience	11	34	38	17	0
Courteous behavior of sellers in the market	13	28	45	14	0

Primary data compiled from questionnaire: SA = Strongly Agree; A = Agree; NAD = Neither Agree nor Disagree; DA = Disagree; SDA = Strongly Disagree

Table 2: Descriptive statistics

Variables	N	Mean	SD
Age (years)	100	2.77	0.952
Gender	100	1.42	0.496
Educational qualification	100	3.21	0.891
Marital status	100	1.19	0.394
Main occupation	100	3.24	1.498
Annual income	100	2.88	0.946
Distance travelled	100	1.93	0.807
Frequency of purchase	100	2.54	0.926
Time of purchase	100	2.21	1.057
Amount spend on purchase	100	2.62	0.885
Right measurements in the market	100	4.24	0.553
Freshness of products in the market	100	4.41	0.494
Availability of the product variety in the market	100	4.37	0.544
Quality of products in the market	100	4.35	0.626
Affordable price level of products in the market	100	3.73	0.763
Market in terms of convenience	100	3.39	0.898
Courteous behavior of sellers in the market	100	3.40	0.888
Like to recommend	100	1.00	0.000
Other sources of purchase	100	2.87	1.276
Valid N (list wise)	100		

Results computed by using SPSS 15.0

SD = 0.394), gender (M = 1.42, SD = 0.496) and distance travelled (M = 1.93, SD = 0.807). Where M = Mean, SD = Standard Deviation.

Factor analysis: For this study, Factor Analysis (FA) function was used. Factor analysis can help to reduce many variables to a more meaningful number of variables and also to aid with examining inter-relationships among variables (Nwabueze, 2009).

Examination of the values for each variable in the Table 3 identifies that all the variables have the values above 0.600. Therefore, all the variables obtain and exceed the minimum acceptable level (MSA) and are statistically significant and collectively meet the necessary threshold of sampling adequacy with an MSA value. Each of the variables meets the fundamental requirement for factor analysis, i.e., the measures tested above indicate that the reduced set of variables is appropriate for factor analysis and can be preceded to next stage.

Scree plot: The earlier mentioned scree plot shown in Fig. 1 determines the optimal number of components. It plots the Eigen values of each component. According to Kaiser criterion of extracting all the components with Eigen values >1, above the horizontal line which passes from left to right, i.e., the numbers of components which fall on the steep slope of the graph are extracted as the Eigen value for these components is >1. The components where the curve changes its direction and becomes horizontal (eigen values ≤1), contribute very little to the variation and therefore can be eliminated. Three components lie on the steeper side of the curve and all others lie on the flat portion of the curve. Therefore, the scree plot suggested that optimal number of components is three.

Table 4 displays the output for inferring the adequacy of data for factor analysis. Kaiser Meyer Olkin (KMO) is a measure of sampling adequacy and its value
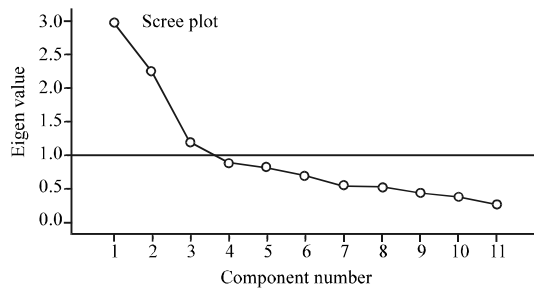
Table 3: Anti image correlation matrix

1	2	3	4	5	6	7	8	9	10	11
0.605[a]										
-0.355	0.663[a]									
0.051	-0.570	0.664[a]								
0.085	0.041	-0.076	0.770[a]							
-0.053	-0.029	0.025	-0.307	0.778[a]						
-0.174	-0.049	0.004	-0.143	-0.289	0.810[a]					
-0.152	-0.070	0.012	0.030	-0.107	-0.170	0.798[a]				
-0.046	0.025	-0.134	-0.153	-0.073	-0.016	-0.128	0.813[a]			
0.335	0.005	0.238	0.064	-0.227	-0.131	-0.090	-0.169	0.676[a]		
0.242	-0.147	-0.140	-0.019	-0.133	-0.109	-0.079	-0.160	-0.030	0.783[a]	
0.033	0.122	0.047	0.028	-0.087	-0.059	-0.217	0.090	0.050	-0.027	0.634[a]

Results computed by using SPSS 15.0; [a]Measures of Sampling Adequacy (MSA); 1: Distance travelled; 2: Frequency of purchase; 3: Amount spend on purchase; 4: Right measurements in the market; 5: Freshness of products in the market; 6: Availability of the product variety in the market; 7: Quality of products in the market; 8: Affordable price level of products in the market; 9: Market in terms of convenience; 10: Courteous behavior of sellers in the market; 11: Other sources of purchase

Fig. 1: Extracted three factor components; Results computed by using SPSS 15.0

Table 4: Factor analysis results

Q. No.	Factor 1	Factor 2	Factor 3
17. Courteous behavior of sellers in the market	0.675	-	-
15. Affordable price level of products in the market	0.675	-	-
12. Freshness of products in the market	0.670	-	-
11. Right measurements in the market	0.620	-	-
13. Availability of the product variety in the market	0.538	-	-
16. Market in terms of convenience	0.458	-	-
10. Amount spend on purchase	-	0.769	-
7. Distance travelled	-	0.744	-
8. Frequency of purchase	-	0.830	-
19. Other sources of purchase	-	-	0.713
14. Quality of products in the market	-	-	0.653
Eigen values	2.541	2.323	1.536
Percentage of total variance	23.100	21.115	13.960
Cumulative percentage of Variance	23.100	44.215	58.176
Number of items per factor	6.000	3.000	2.000
Kaiser-Meyer Olkin (KMO) MSA	-	0.725	-
Bartlett's test (Approx. Chi-square)	272.319	-	
df	55.000	-	
Sig.	0.000	-	

Results computed by using SPSS 15.0; Extraction Method: Principal Component Analysis; a) 3 components extracted; Rotation Method: Varimax with Kaiser Normalization; a) Rotation converged in 5 iterations

should be >0.600 for the sample to be adequate for undertaking factor analysis. The p-value of Bartlett's test of sphericity should be <0.05. In this study, both the values apply and factor analysis can be undertaken using the data set.

Factor analysis was performed on 11 variables to discover the underlying dimensions of customer perception towards farmers' market. The study used R-mode principal component analysis with a varimax rotation and eigen value equal to or >1 (Kinnear and Taylor, 1987), in proving a suitable factorial framework within 5 iterations. In the final round items of factor loadings <0.45 were dropped and loadings ≥0.45 were retained in order to get a clear factorial design. The dropped question bearing number 9 was, at what time do you prefer to purchase from the market? Table 4 also shows that in the rotated factor solution variables 17, 15, 12, 11, 13 and 16 loads significantly on factor 1;

Table 5: Component transformation matrix

Component	1	2	3
1	0.847	0.360	0.392
2	0.272	-0.926	0.262
3	-0.457	0.115	0.882

Results computed by using SPSS 15.0; Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization

Table 6: Factors labeled

Determinants of customer perception

Label	Factor No.	Variables
Market performance factor	1	Courteous behavior of sellers in the market
		Affordable price level of products in the market
		Freshness of products in the market
		Right measurements in the market
		Availability of the product variety in the market
		Market in terms of convenience
Cost and convenience factor	2	Frequency of purchase
		Amount spend on purchase
		Distance travelled
Perceptive factor	3	Other sources of purchase
		Quality of products in the market

variables 8, 10 and 7 loads significantly on factor 2 and variables 19 and 14 loads significantly on factor 3.

As mentioned before, this explains 58.176% of the variance. Based on the loadings of the 11 variables on each factor (for factor loading >0.45) and the loadings of the three summarized categories, the model we would like to mention that according to Hair *et al.* (1998), the factors can be named based primarily on the subjective opinion of researcher. Different researchers in many instances will no doubt assign different names to the same result because of different perception and background. For this reason the process of labeling factors is subject to considerable criticism. Table 5 displays the specific rotation applied to the component, rotated factor loadings are obtained by multiplying the unrotated factor loadings with the component transformation matrix. Thus, the mentioned factor analysis suggests that the factors are vital in formation of a favorable perception of customers towards the farmers' market.

Table 6 shows three factors labeled by the researcher based on his personal experience, observation and perception, although the labeling of these factors may vary from researcher to researcher. The main findings of the study are:

- Majority of the respondents (100%) liked to recommend the market to others which means that the markets have an overall positive impact on the customers
- Almost 100% of the customers either strongly agree or agree on the statement freshness of products on the market which means that majority of the customers get fresh fruits and vegetables in the market

- Almost 99% of the customers either strongly agree or agree on the statement quality of products in the market which means that customers get good quality of fruits and vegetables in the market
- Almost 50% of the customers either disagree or were neutral on the statement; market in terms of convenience which means that majority of the customers fell that the market is far
- Almost 59% of the customers disagree or were neutral on the statement; courteous behavior of sellers in the market which means that customers feel a problem while approaching the majority of sellers in the market
- Moreover, customers were mostly satisfied with the statements like; availability of product variety in the market and right measurements in the market which means the market is functionally good
- The correlational analysis showed that there is a positive association between the variables
- Factor analysis showed that the diverse variable categorized into factors are the major determinants of preferring the market in customer point of view, these factors are also the major determinants of customer satisfaction

CONCLUSION

The increasing demand of agricultural produce (fruits and vegetables) being obvious in the country, requires intensification of resource utilization in the form of production at the farm and availability in the market. Vegetables and fruits being the primary consuming food items in the country as Indian society is having a majority of vegetarian population. In India, much of the urban demand for fruits and vegetables is satisfied by rural production. It needs intensive care and handling as these commodities have very less shelf life are perishable in nature and are prone to immediate spoilage. So, more provisions must be made available to dispose the produce immediately and more markets like; farmers' market must be made available in the country. The need of the hour is to provide farmer easy access to approach the market and on the other hand, attract the customer by making fresh fruits and vegetables available at reasonable cost in these markets. The study has observed that there is a huge demand for these markets, people prefer to purchase vegetables and fruits from these markets and are highly satisfied. The variables discussed in the present study showed that these play a vital role among customers in deciding upon the farmers' market. The government must pay more attention towards this social institution and these markets must be made more functional; the focus should be on providing basic infrastructure like'

road, parking, loading and unloading, grading, cleaning, anti-spoilage storage, drinking water and sanitary and immediate wastage disposal facility, etc., in these markets.

SUGGESTIONS

Some of the suggestions proposed by the investigator on the basis of findings and observation of the study are briefly viewed as under:

- Consumer interest and safety must be attended greater priority and protection through efficient and transparent information systems
- The capacity to conduct investigations into market structure and customer satisfaction must be enhanced; the research programme pays greater attention to study consumer attitude and perception towards these markets
- More such markets must be established at different places so that a customer finds it easy to reach
- Communication strategy must be developed so that the Department of Agriculture will become more evident and relevant to the farmers and customers it serves
- Greater collective efforts must be made to promote agricultural markets. Develop promotional strategies for local and national level markets
- Costs and food price monitoring remains an ongoing programme. A consumer desk is established in government to tend to consumer queries
- Have access to infrastructure, logistics and related intelligence which should become the key source of domestic competitiveness
- Show greater commitment in promoting and establishing the vital physical infrastructure required to make markets function more efficiently and equitably
- Industry must develop a trade relation with these markets as fresh fruits and vegetables are easily available in these markets for processing
- Sellers should make a positive impact on the customers mind by their courteous behavior
- Moreover, policy makers should identify weak or missing components and linkages within the agricultural marketing systems and must take measures accordingly to bridge the gaps

LIMITATIONS

The study is a type of micro level study confined to only 100 customers from four Uzhavar Santhais, located in Namakkal district of Tamil Nadu, India. It is assumed that the respondents are honest in expressing their

opinions. Though, the sample size is small and has less scope for generalizations but every care has been taken to include all types of consumers in the sample to make it a representative one.

Moreover, the study does not imitate a real situation of all the farmers' markets present in Tamil Nadu or whole India.

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