Demographic Comparative Study of Consumer Behavior of Rural and Urban Population towards Food Brands

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Abstract

For developing and investigating consumer behavior it is important to quantify, influence and forecast consumer's behavior. In today's environment attentions were shifted from product and transfer to consumer. Now consumer will take care of any type of changes in product. While during marketing conferences or in board rooms, importance will be given to consumers w.r.t. product. Formation of quality brand will be the key. The present study leads to consumers behavior w.r.t. brand preference in rural or in urban areas and to highlight the differences in the perception of the consumers in these areas in respect to their demographic features like age, education, occupation, income. The study aims to explore the behaviour of consumers towards branded food products i.e. factors affecting behaviour, brand awareness, brands availability, brand loyalty etc. Efforts have been made to extract important factors which have a strong effect on the behavior of consumers.

Keywords
Consumer, Product, Decision making

I. Introduction

Consumer behavior involves "what-where-why-when and how" of purchase, experience process. Target consumer's plays a vital role in market success or in its failure. For understanding consumer's behavior it is important to express buying patterns. Knowing and Understanding of consumer behavior is a tedious task. In some cases Consumer 'say' something and 'do 'some other things. Consumer's behavior is the study of the process involved when individual or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires. Consumers are in any form. Marketing research deals with consumer's behavior. Thus, a study of behavior becomes very relevant to marketing researchers. As different types of consumers in the market react differently to different products, brands and their prices, the study has tried to analyse such differences in behaviour of rural and urban consumers.

II. Survey of Literature

A number of studies have been made to study the behaviour of consumers.

Arul kumar and Madhavi (2006) in their article entitled "A Study on Rural Marketing for FMCG" revealed that maximum number of respondents was affected by quality in rural area when the study was held on rural marking for FMCG. So FMCG companies must adopt the quality standard. Second one main elements of influence were cost of product so that product must be reasonable in price. They concluded that FMCG companies by creating rural area's attention could expand its market. Advertisement was a medium through which non-users could attract and become the users of FMCG.

Beverland (2001) a story on ZESPRI kiwi fruit was conducted in New Zealand market. In this level of brand awareness and technique used in branding were studied. For resulting, the necessary data was collected through survey and it was found that there was less level of brand awareness among consumers.

Kaushik Mukerjee (2007) in his article entitled "Analysis of the Strategies of Hindustan Lever Limited and Coca-Cola in the Indian Rural Market", focuses on to analyze the rural marketing initiatives. It is found that the potential of rural marketer is willing to use suitable strategies for reaching the rural consumers, to ensure proper need satisfaction, appropriate imagery and performance, the right feelings and judgments, and generating suitable resonance among the consumers.

Murlidher Lokhande (2009) in his article entitled "Rural Marketing: A Study of Consumer Behaviour", focused on how rural customers purchase two wheelers, which are the factors that affect purchasing decisions, etc. It is found that the majority of the respondents from the village were farmers and they had been using various models of motor.

Nirmala (2002) in his article entitled "A Study on Brand Loyalty and Brand Preference towards Health Leverages in Coimbatore City" studied the brand loyalty towards a particular brand and usage period of that particular brand.

Sarangapani and Mamtha (2008) in their article entitled "Rural Consumer: Post Purchase Behaviour and Consumerism", focus on to analyze their consumption patterns with select FMCGs, to investigate the motives of rural consumers, their brand preferences and shop patronage with regard to select FMCGs, for analyzing the post purchase behaviour of sample rural consumers in terms of their levels of satisfaction and consumerism in rural areas and according to rural consumers effecting marketing strategies must be adopted.

Vincent (2006) conducted that quality of the products was the main factor that influence the consumers to buy branded products. Because of its quality consumers gave less importance to price so they were ready to pay extra money for buying these products. Sometimes unbranded products also gave same satisfaction to the consumers, but consumers would still like to buy a branded product.

A number of studies have also been made on brand preference but little effort has been made to study the buyer behavior for branded food products in rural and urban areas. The present study is an attempt in this context.

III. Objectives

The present study has following objective which is as under: -

- To understand the demographic feature i.e. age of the consumers in relation to rural and urban population

IV. Research Methodology

The current study deals with questionnaire administered on consumer's belonging to rural and urban areas of "Ambala" District of "Haryana". On random basis population drawn were 150 respondents each from rural and urban. Local consumer's and marketers were under consideration for Preliminary discussions. Discussion includes branded food product consumption as well as about the available preferred brands in the study area to gather data on the products to be selected for study. As per discussion, used and commonly available products selected.

V. Collection of data

Review of literature explains the nature of studies undertaken in the past and provides a base to study. At the same time, for extracting useful and valuable information, it is essential to understand present situations as well. So the data collected for the study was divided into two parts: primary data and secondary data.

I. Primary data:

Personal interview with questionnaire method was used to collect the necessary data for the study. The opinions of the respondents were procured through interview or questionnaire at their door steps. It helped the researcher to generate necessary data for the study. Questionnaire contained many types of questions like open ended questions, closed ended questions, questions relating to rank etc. and was constructed in simple manner so that respondents could easily understand it and give their views freely. Quantitative techniques were used so that results could be analyzed to extract meaningful conclusions.

II.Secondary data:

The results of the study were corroborated with the literature to validate or contradict them.

VI. Statistical Analysis

Analytical Tools Used

Different statistical tools were applied for the analysis of data. The main tools or techniques were tabular analysis, chi-square test, t-test, rank correlation etc. They were explained as below:

(a) Tabular Analysis

Several tables were prepared based on the data collection regarding the demographic features like age, education, occupation etc. The tabular analysis was useful in presenting data in a meaningful manner and extracting results of the study.

(b) Percentage method

In order to draw conclusions from the tables and to make the data comparable and understandable percentage method was used. Maximum percentage showed maximum liking, preferences and positive behaviour of consumer towards that particular brand.

(c) **Correlation Analysis**

Correlation analysis is used to measure the closeness of the relationship between the variables. It is the statistical device which helps us in analyzing the degree of relationship between two or more variables.

• **Karl Pearson coefficient of correlation**

Present study explains correlation among the rural respondents and urban respondents regarding the place of purchase, influence of purchase decision, situation in which consumers change their brand, feeling after getting branded food products. Karl person's coefficient of correlation is used in all above cases.

Our X variable is rural respondents and Y variable is urban respondents.

X = Number of rural respondents

Y = Number of urban Respondents

$$r = \frac{N\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{[N\Sigma x^2 - (\Sigma x)^2][N\Sigma y^2 - (\Sigma y)^2]}}$$

Where:

N	=	number of pairs of scores
Σxy	=	sum of the products of paired scores
Σx	=	sum of x scores
Σy	=	sum of y scores
Σx^2	=	sum of squared x scores
Σy^2	=	sum of squared y scores

- **Spearman rank correlation**

Spearman rank correlation is used to test the association between two ranked variables, or one ranked variable and one measurement variable. It is important to understand that Pearson's correlation is a statistical measure of the strength of a linear relationship between paired data.

$$\rho = 1 - \frac{6\sum d_i^2}{n(n^2 - 1)}$$

Where,

R= Rank coefficient of correlation

D=Difference between two ranks (R_1-R_2)

N= Number of pair of observations

After calculating correlation, the degree of correlation between urban respondents and rural respondents regarding each of case was tested.

(d) Chi-square test:

This is a non-parametric test. Chi-Square symbolically written as "χ^2". It is used as a test of goodness of fit and as a test of attributes. Among different tests of significance, chi-square test is an important test. To know about the brand awareness and preference of brand different statistical techniques are used, one of them is chi-square test.

For applying this test, the researcher conducted a survey to collect the information of respondents regarding brand awareness and brand preference. There were 300 respondents and the researchers expect from each respondent to prefer one brand out of given 5 brands. So the expected frequency (E) is calculated by 300/5 = 60 but in some cases where 6 brand options were given, then E is 300/6 = 50. And observed frequency (0) was calculated after analyzing the responses given by the respondents then $\chi 2$ test is applied by using following formula.

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where:

O= Observed Frequency

E= Expected Frequency

v (degree of freedom) = n-1

Then the calculated value of$\chi 2$ is tested at 95% level of significance to know whether our hypothesis is accepted or rejected. If calculated value is less than the table value, then our hypothesis is accepted otherwise rejected.

VII. Analysis and Interpretation

Analysis is a process by which data becomes meaningful and interpretation relates to drawing results from such analysis. Thus analysis and interpretation of data forms an important part of the study. It involves full knowledge and skill on the part of the researcher and supervisor. Different statistical tools were used to analyze and interpret the data. Efforts have been made to ascertain association between urban and rural population with regards to demographic features of consumers.

1.1 Demographic Data of Respondents

Demographic data means age, education, occupation, income of respondents. The demographic explains a lot about the buying behaviour of the respondents. Therefore, data on some of the important demographic information was collected through questionnaire.

The table 1.1 presents the demographic data of respondents of rural area and urban area of Ambala district. From the table it could be observed that the large number of respondents was almost evenly spread in age groups ranging between 15- 60 years including 31.33 per cent in age group AG2 (15-30 years). 29.67 per cent of the respondents in AG3 (30-45years) and19.33 percent in the age group of 45 to 60 years (AG 4). Besides this, some respondents 11.67 per cent of them belonged to age group AG-1 i.e. below 15 Years. Very few respondents i.e. (8.00%) were above 60 years and belonged to the age group (AG 5).

Further, highly positive correlation (r= +0.911) was observed between the rural and urban respondents on distribution of age groups which was found to be statistically significant. It shows similarity in the different age groups of rural and urban respondents. It can be inferred that both groups were homogeneous.

Demographic Data of Respondents

General Information	Categories	No. of Respondents			% Respondents			
		Rural	Urban	Total	Rural	Urban	Total	
Age	Below 15yrs. (AG1)	11	24	35	0.073	0.160	11.67	r = +0.911
	15-30yrs. (AG2)	48	46	94	0.320	0.307	31.33	
	30-45yrs. (AG3)	47	42	89	0.313	0.280	29.67	
	45-60 (AG4)	30	28	58	0.200	0.187	19.33	
	60 and Above (AG5)	14	10	24	0.093	0.067	8.00	
Education	Below Matric	25	13	38	16.67	08.67	12.67	r= -0.078
	Matric	34	18	52	22.67	12.00	17.33	
	Graduation	35	35	70	23.33	23.33	23.33	
	Post Graduation	46	40	86	30.67	26.67	28.67	
	Post GraduationPlus	10	44	54	06.67	29.33	18.00	
Occupation	Industrialist	03	06	09	02.00	04.00	03.00	r = +0.447
	Business	33	50	83	22.00	33.33	55.33	
	Farming	48	12	60	32.00	08.00	20.00	
	Services	42	54	96	28.00	36.00	32.00	
	Any Other (Student)	24	28	52	16.00	18.67	17.33	
Income	0-10,000	34	12	46	22.67	08.00	15.33	r = -0.427
	10,000-20,000	49	27	76	32.67	18.00	25.33	
	20,000-30,000	40	35	75	26.67	23.33	25.00	

	30,000-40,000	17	42	59	11.33	28.00	19.67
	40,000 and Above	10	34	44	6.67	22.67	14.67

*t-value is significant at the 0.05 level (2-tailed).

A study of percentage of respondents in rural and urban area shows that the education level of the respondents in each category was similar to a large extent. Large number of the selected respondents (28.67 per cent) was post graduates and 23.33 per cent were graduates. Some of the respondents were below matriculation level (12.67%). Further 17.33 percent of respondents were matriculates and18 percent of the respondents were belonged to post graduation plus level. Comparison of urban and rural respondents as apparent from the table shows that respondents in the category of 'Post graduate plus' in rural areas were only 6.67% as compared to their counter parts in urban areas which were 29.33%. It is understandable that the respondents below matric in urban area were less as compared to rural area.

Negative correlation (r= -0.078) between the two groups of respondents viz. rural and urban with respect to their level of education was observed which shows some sort of dissimilarity in the educational level of rural and urban respondents. Value of t was not found to be significant. It is quite understandable that this disparity in the education level of the respondents is to some extent due to their place of living in rural and urban areas.

As regards occupational pattern maximum percentage of respondents belonged to business families (55.33per cent) and 32per cent of them were related to service families. 20 percent of respondents were involved in farming. 17.33 per cent were students and only 3 percent of the respondents were industrialists. A close look of the table shows that in rural areas 32.00 per cent of the respondents belonged to farming against 8.00 per cent in urban areas. On the other hand, in urban areas 33.33 per cent fall in business category against 22 per cent of respondents in rural areas. In services too urban areas had more respondents than the rural area.

Moreover, positive correlation (r= 0.447) explaining between the occupations of rural and urban respondents shows that there are no differences in occupation at some extent. This is also explained by applying t test, which is significant. It can be inferred that both groups were homogeneous to some extent.

The data pertaining to income depicts that a good percentage i.e. (25.33 per cent) related to income group of (10,000-20,000), 25.00 per cent of them fall under income group (20,000 –30,000) whereas 19.67 per cent belonged to income group (30,000-40,000) and 15.33 per cent of respondents were in income group (0-10,000). Only a small percent i.e. 14.67 per cent of respondents belong to (40, 000 and above) income level. There appeared to be a big gap in the rural and urban population in income pattern. While a good number (50 per cent and above) of rural respondents belong to income of less than 20,000 whereas more than 50 per cent respondents in urban areas had income of more than 30,000. It can affect the consumption pattern of branded food products.

Further, negative correlation (r= -0.0427) was observed which was found to be statistically significant. It shows that there is dissimilarity in the income levels of rural and urban respondents.

On the whole, the demographic features of the population under study have similarity to a great extent with apparent variations in education and income level which are quite understandable in view of awareness, living styles, occupational preferences etc.

1.2 Association of Urban and Rural Population on Demographic Features

The relationship of rural and urban respondents on demographic features including education level, occupation and income level with place of living was ascertained by applying chi- square test as under:

1.2.1 Association of Place of Living (rural/ Urban) with Education Level

In order to observe whether place of living of the respondents in rural and urban areas has an association with education level, crosstab analysis was made as under:

The crosstab analysis of place of living with educational level of respondents by applying chi-square test is displayed in **table 1.2**. The significant chi-square value (chi-square = 30.411; df =4) rejects the generally adopted null hypothesis that no association existed between place of living and educational level and suggests that the two variables are associated.

Table 1.2: Crosstab analysis of place of living with education level

Educational Level	Place of Living		Total
	Rural	Urban	
Below Matric	25	13	38
Matric	34	18	52
Graduate	35	35	70
Post-Graduate	46	40	86
Highly Educated	10	44	54
Test Statistic	Chi-Square Statistic = 30.411;df = 4; p = 0.000		

1.2.2 Association of Place of Living with Occupation

To examine the linkage of place of living of the respondents with their occupation chi-square analysis was conducted on the basis of collected general information as shown below:

Association of the Place of living with occupation of respondents was tested by chi-square test as presented in **table 1.3.** The chi-square value (chi-square = 27.89; df =4) was found to be significant which rejects the generally adopted null hypothesis of no association between two variables and suggests that they are associated with each other.

Table 1.3: Crosstab analysis of place of living with occupation

Occupation	Place of Living		Total
	Rural	Urban	
Industrialist	03	06	09
Business	33	50	83
Farming	48	12	60
Services	42	54	96
Other (Student)	24	28	52
Test Statistic	Chi-Square Statistic = 27.89;df = 4; p = 0.000		

1.2.3. Association of Place of Living with Income Level

In order to ascertain whether place of living of the respondents in rural and urban areas has an association with income level crosstab analysis was made as given below:

A crosstab analysis of place of living with income level of respondents along with chi-square test is displayed in **table 1.4**.It appears that place of living is associated with income level as was found to be significant chi-square value (chi-square = 40.908; d f =4). It further rejects the generally adopted null hypothesis that no association existed between place of living and income level.

Table 1.4: Crosstab analysis of place of living with income level

Income Level (Rs.)	Place of Living		Total
	Rural	**Urban**	
0-10000	34	12	46
10000-20000	49	27	76
20000-30000	40	35	75
30000-40000	17	42	59
40000 and above	10	34	44
Test Statistic	**Chi-Square Statistic = 40.908;df = 4; p = 0.000**		

From the above it can be concluded that there existed significant association between the place of living and demographic features.

In nutshell, the demographic features of the rural and urban population have similarity to a great extent so far as the age groups and occupation are concerned. However, there was some disparity in education and income level of the respondents. Further, association of place living with demographic features was observed and no significant difference was found.

IX. Conclusion

The results of the study are summarized as under:

An analysis of the demographic features exhibits that the respondents under study belonged to the age group ranging between 15- 60 years. Further, highly positive correlation (r= +0.911) was observed between the rural and urban respondents on distribution of age groups which was found to be statistically significant.

Large number of the respondents (28.67 per cent) was post graduates and 23.33 per cent were graduates. 18 percent of the respondents were belonged to post graduation plus level. Education level of rural and urban area respondents was similar to a large extent as positive correlation (r= 0.078) was found, which shows similarity in the educational level of rural and urban respondents. The significant chi-square value (chi-square = 30.411; df =4) rejects the generally adopted null hypothesis so there is no association existed between place of living and educational level and suggests that the two variables are associated.

As regards occupational pattern maximum percentage of respondents belonged to business families (55.33per cent). Positive correlation (r= 0.447) was observed between the occupation of rural and urban respondents and the pattern of relationship shows that there is differences in occupation of both area respondents at some extent.

The chi-square value (chi-square = 27.89; df =4) was found to be significant which rejects the generally adopted null hypothesis of no association between two variables and suggests that they are associated with each other. A good percentage i.e. (25.33 per cent) of respondents is related to income group of (10,000-20,000) and 25.00 per cent of them fall under income group (20,000 –30,000). A big gap of the rural and urban population in income pattern was appeared showing that a good number (50 per cent and above) of rural respondents belong to income of less than 20,000 whereas more than 50 per cent respondents in urban areas had income of more than 30,000. It can affect the consumption pattern of branded food products. Similarity positive correlation (r= +0.0427) was observed in the different income group of rural and urban respondents which was found to be statistically significant. Place of living is also associated with income level as significant chi-square value (chi-square = 40.908; df =4) was found. It rejects the generally adopted null hypothesis that no association existed between place of living and income level.The study is of great significance to the academicians and researchers as it not only strengthens the theoretical base of Consumer behaviour and brands but also helped the marketer to make strategy to meet future changes.

The significant research contributions were as under:

- A comprehensive review of literature on consumer behaviour and brand has been made and various research approaches were discussed which provide sound basis for studying consumer behaviour towards brand should be studied.
- The study examines the differences between consumers of rural area as well as urban area with regard to brand awareness, brand preference and other factors affecting consumer behaviour.
- This study was relevant for marketers in assessing the trends of change and to prepare marketing plans suits to future changes.
- The demographic features of the population under study have similarity to a great extent with some variations which are quite understandable in view of awareness, living styles, occupational preferences etc.
- The significant chi-square value rejects the generally adopted null hypothesis that no association existed between place of living and educational level and suggests that the two variables are associated.
- Place of living with occupation of respondents was found to be significant which rejects the generally adopted null hypothesis of no association between two variables and suggests that they are associated with each other.
- Efforts were also made to examine the linkage of place of living of the respondents with their Income level. It appears that place of living is associated with income level as it rejects the generally adopted null hypothesis that no association existed between place of living and income level.

X. Future Development and Scope

Considering the dimensions covered in the study and its scope, scope for future development has been analyzed.

- The study should undertake more dimensions and the area of the study should also be wider to provide more reliable and consistent results. The phenomena consumer behaviour is very vast so enough time and efforts must be made to cover all other aspects of consumer behaviour.
- Sample size should be representative enough to represent the universe. A large sample size is therefore, recommended.
- Respondents should be familiar with the topic or they must be aware so that researcher could elicit the actual information.
- Respondents' biasness was a bigger factor; they did not want to fill data related to their families. Moreover, they restrict themselves to fill their true data. Most of respondents among them did not show much

interest and gave the response in haste. They should show much interest and gave the response. So that data become reliable.

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