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Influence of Demographic Indicators on Customer Perception and Customer Satisfaction: A case of basmati rice brand in Jammu

*Naveed Hamid and **Kushum Saini

*Division of Agricultural Economic and Agri Business Management SKUAST-Jammu

**Scholar Division of Agricultural Economic and Agri Business Management SKUAST-Jammu

*Corresponding Author: Naveed Hamid

Abstract

India is the leading exporter of the Basmati Rice to the global market as the country has exported 37, 02,260.12 MT of Basmati Rice to the world for the worth of ₹. 27,597.87 crores during the year 2014-15. The Jammu and Kashmir is considered to be favorable state of production of Basmati rice with its pleasant climatic conditions. In Jammu and Kashmir the Basmati is confined at the areas of R.S.Pura, Samba and Kathua. The present study was carried out in district Jammu of Jammu and Kashmir State with the aim of understanding the influence of demographic indicators on Consumer Satisfaction and Perception. The present study uses primary data (150 Sarveshwar Basmati Consumers) and secondary data for fulfilling the objectives of the study. The study adopts descriptive, regression and Cross Tab (Chi Square Test) for analysis purposes. The results of the study revealed that the customers are satisfied with the Sarveshwar products in terms of quality and packaging respectively and customer's perception towards the Sarveshwar rice is fair in terms of the factors related to perception level. The study also depicted that there existed no relation or influence of demographic indicators , age, education and income on the customer satisfaction and perception as result showed that the tabular value of these factors showed greater value than the expected value , hence rejection of the Null hypotheses. so hence has no impact or influence on the decision regarding the customer perception and satisfaction towards the rice brand in the same area.

Key Words: Perception, Satisfaction, Cross tab, Influence, Null hypotheses

Introduction

Customer satisfaction is a term frequently used in marketing. It is a measure of how products and services supplied by a company meet or surpass customer expectation. Customer satisfaction is defined as "the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals. (Jamalet al.2002)

It acts as a key performance indicator within business and is often part of a balanced Scorecard. Customer satisfaction is seen as a key differentiator and increasingly has become a

key element of business strategy."Within organizations, customer satisfaction ratings can have powerful effects. They focus employees on the importance of fulfilling customers' expectations. To determine the consumer' perception and satisfaction level towards Sarveshwar basmati rice, so as to develop appropriate policies, the present endeavor plays a vital role. The purpose of this study was to recognize those factors which effect consumer perception and satisfaction about Sarveshwar rice and influence of various demographic indicators.

Perception is the virtue by which a customer perceives or sees a product, brand or a service. Perception is something which gives meaning to product in customer's mind. It is somewhat similar to brand image but is different because brand image is made through brand messages and identity but perception is sometimes more at a psychological level.(Eggert et al. 2002), (Woodruff et al. 1997)

Objectives of the study

1. To study the influence of demographic indicators on customer perception and customer satisfaction.

Research methodology

The study was based on primary and secondary sources of information. The research was conducted with the help of schedule and after collection of the required data from the company, it has been analysed by using various statistical tools (chi-square (X²) test).

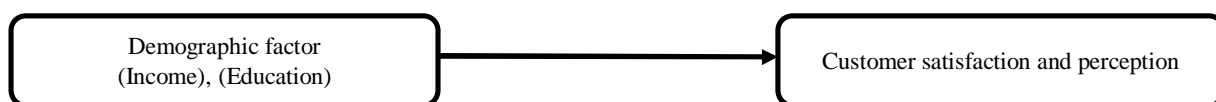
For studying the influencing of demographic indicate on customer perception and customer satisfaction, following statement were measured or analysed and to result were calculated by using cross-tab analysis (Chi-square test).

Chi-square (X²) test (crosstab Analysis)

A chi-square (X²) test is used to test whether distributions of categorical variables differ from each another.

Hypothesis

- There is a significant difference between customer income and customer satisfaction.
- There is a significant difference between customer education and customer satisfaction.
- There is a significant difference between customer income and customer Perception.
- There is a significant difference between customer education and customer perception.



The formula for the chi-square statistic used in the chi square test is:

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

Results and discussion

The Table 1 represents the gender profile of the respondents of the study area. It is clear from the Fig 5.1 that out of 150 respondents, 116 (77 per cent) were male and 34 (23 per cent) were female.

Table 2 represents the age of the respondents of the sample area. It is clear from the Fig 2 that 33 respondents (22 per cent) were in the age group of 18 to 29 years, 69 respondents (46 per cent) age lies in 30 to 49 years and 48 respondents (32 per cent) age lies in 50 to 69 years.

Table 3 represents the education of the respondents. It is clear from the Fig 3 that 14 respondent (9.33 percent) education level fall under category was up to of primary school, 23 respondent (15.33 percent) education level matric, 46 respondent (30.67 percent) education level fall under category high education, 38 respondent (25.33 percent) education level was graduation, 20 respondent (13.34 percent) education level was post-graduation and 9 respondents (6 percent) had Ph.D.

Table 4 shows that majorly 68 (45.33 percent) respondents has 3 to 4 members in their family, follow by 36 (24 percent) respondents had 1 to 2 members in their family, 31 (21 percent) respondents had 5 to 6 members in their family and 15 respondents (10 percent) belonged to 7 to 8 family size.

Table 5 highlighted that majorly 119 (79.33 percent) respondents was married, 25 (16.67 per cent) respondents was single, 1 (0.67 per cent) respondents was divorces and 5 (3.33 per cent) respondents was widowed.

It has been observed from frequency table 6 that 108 (72 percent) respondents were belonging to urban area, followed by 27 (18 percent) respondents belonged to suburban area and 15 (10 percent) respondents were belonged to rural area.

It has been analyzed from table 7 that majority of the respondents i.e. 87 (58 percent) income fall under range of 20,000 to 30,000 earned 20,000 to 30,000, followed by 34 (22.67 percent) respondents earned 10,000 to 20,000, followed by 19 (12.66 percent) respondent earned 30,000 to 40,000 and 10 (6.67 per cent) respondents earned below 10,000.

Table 1: Customer demography

Customer demography	Frequency	Percentage
Male	116	77.33
Female	34	22.67
Total	150	100

Source: survey

Table 2: Age of the respondents

Age of the respondents	Frequency	Percentage
18 to 29 year old	33	22
30 to 49 year old	69	46
50 to 69 year old	48	32
Total	150	100

Source: survey

Table 3: Level of education of the respondents

Level of education of the respondents	Frequency	Percentage
Primary school	14	9.33

Matric	23	15.33
High education	46	30.67
Graduation	38	25.33
Post-graduation	20	13.34
Ph.D.	9	6
Total	150	100

Source: survey

Table 4: Family size of the respondents

Family size of the respondents	Frequency	Percentage
1 to 2	36	24
3 to 4	68	45.33
5 to 6	31	21
7 to 8	15	10
Total	150	100

Source: survey

Table 5: Marital status of the respondents

Marital status of the respondents	Frequency	Percentage
Single	25	16.67
Married	119	79.33
Divorces	1	0.67
Widowed	5	3.33
Total	150	100

Source: survey

Table 6: Area belongs to respondents

Area belongs to respondents	Frequency	Percentage
Urban	108	72
Suburban	27	18
Rural	15	10
Total	150	100

Source: survey

Table 7: Income Level of the respondents

Income Level of the respondents	Frequency	Percentage
Below 10,000	10	6.67
10,000 to 20,000	34	22.67
20,000 to 30,000	87	58
30,000 to 40,000	19	12.66
Total	150	100

Source: survey

Table 8: Perception & satisfaction of respondents toward Sarveshwar basmati rice

	Price	Brand	Availability	Taste	Advertisement	Package Design	Size of Pack	Nutritional Value
Mean	2.693	3.220	3.400	3.440	2.227	2.820	2.727	2.700
Median	2.000	4.000	3.000	4.000	2.000	3.000	2.000	3.000
Mode	2.000	4.000	4.000	4.000	3.000	2.000	2.000	3.000
Standard Deviation	1.003	1.423	0.811	0.839	0.913	1.254	1.061	0.712
Sample Variance	1.006	2.025	0.658	0.704	0.834	1.571	1.126	0.507

Count	150	150	150	150	150	150	150	150
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The table 8 depicts that one of the various factors regards perception 7 satisfaction of respondents towards Sarveshwar basmati rice, respondents depends most upon taste attribute (3.440) followed by availability (3.400) followed by brand (3.220), followed by packaging design (2.820) followed by size of pack (2.727) followed by nutritional value (2.700) and followed by price (2.639) respectively.

Table 9: Importance of performance attributes in sample area

	Overall Quality	Value	Purchasing Experience	First Experience	Usage Experience
Mean	3.74	2.68	3.09	3.39	4.36
Standard Error	0.05	0.07	0.07	0.05	0.06
Median	4.00	2.00	3.00	3.00	4.00
Mode	4.00	2.00	4.00	3.00	5.00
Standard Deviation	0.61	0.85	0.91	0.35	0.73
Count	150	150	150	150	150

Source: survey

The table 10 represent the influence of income on customer satisfaction. The table revealed that the factor of income doesn't shows positive relationship with the factors of the satisfaction. The table also showed that expected value in tabulated form is greater than the tabular value. Hence null hypothesis rejected.

The table 11 represent the influence of income on customer perception. The table revealed that the factor of income doesn't shoes a positive relationship with the factors of the perception. Hence table revealed that perception has no impact by any change in the income level of the respondents.

The table 12 represent that the influence of the education on the customer satisfaction and customer perception respectively. The table revealed that observed value shows greater value than the tabular value, hence hypothesis rejected. Which means, that the factors of education has no relationship with the factors of the satisfaction and perception level of has no impact on satisfaction and perception level of the respondent if there is any change in the education level of the respondents.

Table 10: Factors of customer satisfaction towards Sarveshwar basmati rice

<i>Regression Statistics</i>	
Multiple R	0.800
R Square	0.641
Adjusted R Square	0.612
Standard Error	0.628

Observations	150			
ANOVA				
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>
Regression	11	97.163	8.833	22.367
Residual	138	54.497	0.395	
Total	149	151.660		
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	2.760	0.585	4.722	0.000
Taste	0.389	0.084	4.612	0.000
Quality	0.529	0.089	5.919	0.000
Quantity	0.006	0.074	0.082	0.350
Availability	A	0.083	4.908	0.005
Packaging	0.634	0.067	9.480	0.000
Price	0.376	0.082	4.567	0.000
brand image	0.491	0.093	5.292	0.000
Advertisement	0.152	0.111	1.368	0.173
Aroma	0.552	0.093	5.945	0.000
Variety	0.173	0.083	2.077	0.040
Offers & discount	-0.567	0.082	-6.917	0.000

Source: survey

Table 11: Influence of Income on customer satisfaction in sample area

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	194.749 ^a	15	.000
Likelihood Ratio	219.284	15	.000
Linear-by-Linear Association	1.227	1	.268
N of Valid Cases	804		
a. 28 cells (46.7per cent) have expected count less than 5. The minimum expected count is .18.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	209.605 ^a	12	.000
Likelihood Ratio	183.738	12	.000
Linear-by-Linear Association	28.667	1	.000
N of Valid Cases	804		
a. 25 cells (41.7per cent) have expected count less than 5. The minimum expected count is .13.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	176.725 ^a	7	.000

Likelihood Ratio	169.690	7	.000
Linear-by-Linear Association	8.442	1	.004
N of Valid Cases	804		
a. 41 cells (62.1per cent) have expected count less than 5. The minimum expected count is .03.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	105.443 ^a	13	.000
Likelihood Ratio	104.335	13	.000
Linear-by-Linear Association	13.547	1	.000
N of Valid Cases	804		
a. 23 cells (47.9per cent) have expected count less than 5. The minimum expected count is .09.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	120.868 ^a	12	.000
Likelihood Ratio	132.266	12	.000
Linear-by-Linear Association	2.245	1	.134
N of Valid Cases	804		
a. 13 cells (32.5per cent) have expected count less than 5. The minimum expected count is 1.43.			

Source: survey

Table12: Influence of Education on customer satisfaction

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	253.031 ^a	12	.000
Likelihood Ratio	153.355	12	.000
Linear-by-Linear Association	43.562	1	.000
N of Valid Cases	804		
a. 15 cells (37.5per cent) have expected count less than 5. The minimum expected count is .58.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	214.343 ^a	12	.000
Likelihood Ratio	138.431	12	.000
Linear-by-Linear Association	9.182	1	.002
N of Valid Cases	804		
a. 19 cells (47.5per cent) have expected count less than 5. The minimum expected count is			

.29.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	214.343 ^a	8	.000
Likelihood Ratio	138.431	8	.000
Linear-by-Linear Association	9.182	1	.002
N of Valid Cases	804		
a. 19 cells (47.5per cent) have expected count less than 5. The minimum expected count is .29.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	696.893 ^a	12	.000
Likelihood Ratio	418.663	12	.000
Linear-by-Linear Association	207.077	1	.000
N of Valid Cases	804		
a. 20 cells (40.0per cent) have expected count less than 5. The minimum expected count is .44.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	156.225 ^a	7	.000
Likelihood Ratio	159.161	7	.000
Linear-by-Linear Association	.233	1	.629
N of Valid Cases	804		
a. 32 cells (53.3per cent) have expected count less than 5. The minimum expected count is .04.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	141.741 ^a	10	.000
Likelihood Ratio	132.246	10	.000
Linear-by-Linear Association	.124	1	.724
N of Valid Cases	804		
a. 44 cells (66.7per cent) have expected count less than 5. The minimum expected count is .01.			

Source: survey

Table13: Influence of Education& Income on customer perception

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	213.387 ^a	12	.000
Likelihood Ratio	185.036	12	.000
Linear-by-Linear Association	51.478	1	.000
N of Valid Cases	804		
a. 39 cells (59.1per cent) have expected count less than 5. The minimum expected count is .20.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	157.267 ^a	12	.000
Likelihood Ratio	160.013	12	.000
Linear-by-Linear Association	16.181	1	.000
N of Valid Cases	804		
a. 19 cells (39.6per cent) have expected count less than 5. The minimum expected count is 1.21.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	223.886 ^a	10	.000
Likelihood Ratio	218.708	10	.000
Linear-by-Linear Association	1.438	1	.230
N of Valid Cases	804		
a. 21 cells (43.8per cent) have expected count less than 5. The minimum expected count is .60.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	278.260 ^a	10	.000
Likelihood Ratio	259.249	10	.000
Linear-by-Linear Association	34.222	1	.000
N of Valid Cases	804		
a. 19 cells (31.7per cent) have expected count less than 5. The minimum expected count is .91.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	124.654 ^a	9	.000
Likelihood Ratio	127.872	9	.000

Linear-by-Linear Association	8.894	1	.003
N of Valid Cases	804		
a. 2 cells (10.0per cent) have expected count less than 5. The minimum expected count is 4.48.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	86.717 ^a	10	.000
Likelihood Ratio	98.320	10	.000
Linear-by-Linear Association	51.666	1	.000
N of Valid Cases	804		
a. 9 cells (40.9per cent) have expected count less than 5. The minimum expected count is .75.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	132.346 ^a	7	.000
Likelihood Ratio	137.859	7	.000
Linear-by-Linear Association	76.003	1	.000
N of Valid Cases	804		
a. 1 cells (6.2per cent) have expected count less than 5. The minimum expected count is 4.48.			
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.377 ^a	7	.000
Likelihood Ratio	32.768	7	.000
Linear-by-Linear Association	16.787	1	.000
N of Valid Cases	804		
a. 3 cells (18.8per cent) have expected count less than 5. The minimum expected count is 2.24.			

Source: survey

Conclusion and recommendations

Sarveshwar Brand is leading due to good perception level and response of the customers towards Sarveshwar Basmati Rice. Out of 150 respondents using Sarveshwar Basmati Rice 141 (94 per cent) liked Sarveshwar Basmati Rice. Sarveshwar XL brand is mostly preferred by the customers. The result also revealed that Hoarding is the major factor influencing Sarveshwar purchase. Majority of the respondents preferred to go to other shop to search for their preferred brand. The best thing is that majority of the respondents were not at all consider other brands at the time of presence of different competitors, Among all the factor respondents have showed higher response on taste attribute that means taste is the most

important factor affecting the customer perception.

The study also depicted that Sarveshwar Basmati rice (Ultra XL, Grand, and Unique) has earned a well brand equity and customer base in the sample area with having 75 per cent market share. The results also revealed that the most influencing factor of Perception identified is taste attribute (3.440) followed by availability (3.400), brand (3.220), packaging (2.820), price (2.639), etc of the product. The study also reflected that the demographic factor (Education and Income) has no impact or relation over the customer satisfaction and perception level.

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