

## **CUSTOMER PERCEIVED VALUE OF SHAMPOO IN TIRUCHIRAPPALLI DISTRICT**

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### **ABSTRACT**

This paper investigates the customer value of shampoo among college students. The objective of this paper is to measure the customer value of shampoo through a mathematical model. Customer value is one of the marketing tool through companies acquire new customers and retain existing customers. This study takes into account eight dimensions under customer value. Five dimensions under benefits perceived and three dimensions under sacrifices perceived. Customer value is found out by the difference between benefits perceived and sacrifices perceived.

**KEYWORDS:** Benefits Perceived, Sacrifices Perceived, Mathematical Model

### **INTRODUCTION**

The most valuable asset of any firm are their customers. It costs more to acquire and retain customers. Media and referrals play a significant role in acquiring and retaining customers. When customers are acquired customer equity increases. This will enhance future cash flow generated through his / her relationship with firm. Customers may generate direct network effect. Marketing cost will increase the product price. Awareness is important for a customer to know the availability of a product. So when buying habits are established the customer value will increase.

### **STATEMENT OF THE PROBLEM**

Hair plays a vital role in an individual's appearance and has a strong social and cultural significance. But in today's busy & mechanical life taking oil bath with shikkakkai are gradually disappearing. It becomes essential to have daily hair wash due to air pollution and hot climatic condition. Too many brands of shampoo are introduced in the market. Consumers are in a dilemma to choose among the brand.. Hence the product shampoo is selected for the study.

Girls in the age group of 20+ are chosen for the study as they are prepared for marital / work life for which appearance and fresh look is a must. This is possible through shampoo bath. Study is made to find out what are the benefits perceived and sacrifices perceived in the use of shampoo to find out the customer value.

### **OBJECTIVES OF THE STUDY**

To measure the customer value by finding out the difference between benefits perceived and sacrifices perceived.

### **HYPOTHESIS**

- There is no association between Age and Customer Value.
- There is no significant difference between the marital status and customer value.

- There is no significant difference between domicile and Customer Value.
- There is no significant difference between type of family and customer value.
- There is no association between number of family members and Customer Value.
- There is no association between nature of subject /course and Customer Value.
- There is no significant difference between monthly family income and customer value.
- There is no significant difference between brand preference and customer value
- There is no significant difference between period of usage of brand and customer value
- There is no significant difference between opinion regarding shifting of brand and customer value.
- There is no association between reason for shifting the brand and Customer Value.
- There is no significant difference between numbers of times shifted the brand and customer value.
- There is no significant difference between recommendation of brand to friends / relatives and customer value

## METHODOLOGY

The pilot study was conducted with a sample of 50 respondents. Final questionnaire was prepared after making certain additions and the questionnaire was tested on. The average of Cronbach's alpha for eight variables of this research are more than 0.70 which is more than the mean acceptable alpha of (0.70).

The sample size is 600 respondents and convenient sampling was followed based on the convenience of the respondents. The collected data had been classified and tabulated using Chi-square analysis, t-test and oneway annova.

## RESULTS AND DISCUSSIONS

Customer value is found out by the difference between benefits perceived and sacrifices perceived. A mathematical model is developed for the same.

## MATHETICAL MODEL

Maximize Customer Value = Z

Where  $Z = f(x) - g(x)$

Here  $f(x) = u(x_1) + u(x_2) + u(x_3) + u(x_4) + u(x_5)$

Where  $u(x_1) = \text{Quality Value}$

$u(x_2) = \text{Emotional Value}$

$u(x_3) = \text{Epistemic Value}$

$u(x_4) = \text{Social Value}$

$u(x_5) = \text{Conditional Value}$

(ie)  $f(x) = 5$

$$\sum_{i=1} u(x)$$

$$i=1$$

$$\text{And } g(X) = v(x_1) + v(x_2) + v(x_3)$$

Where  $v(x_1)$  = Monetary Cost

$$v(x_2) = \text{Time \& Effort Cost}$$

$$v(x_3) = \text{Health Risk Cost}$$

$$(Ie) \quad g(x) = 3$$

$$\sum_{j=1} v(x)$$

$$j=1$$

Condition  $Z > 0$ , if and only if

$$f(x) - g(x) > 0$$

$$(Ie) \text{ if } f(x) > g(x)$$

$$5 \quad 3$$

$$(Ie) \text{ if } \sum_{i=1} u(x) > \sum_{j=1} v(x)$$

$$I=1 \quad j=1$$

$$f(x) - g(x) > 0$$

$$f(x) - g(x)$$

**Table 1: Chi- Square Test Showing the Age in Completed Years and Customer Value**

Overall Customer Value	Age					P Value	Statistical Inference
	20 Yrs (n=142)	21 Yrs (n=238)	22 Yrs (n=129)	23 Yrs (n=61)	24 Yrs & above (n=30)		
Low	80(56.3%)	101(42.4%)	86(66.7%)	33(54.1%)	13(43.3%)	0.000	X <sup>2</sup> =21.918 Df = 4 P < 0.05 Significant
High	62(43.7%)	137(57.6%)	43(33.3%)	28(45.9%)	17(56.7%)		

**Source:** Compiled from primary data

Table 1 depicts that Customer Value is high for the respondents who have completed 21 years of age(57.6 %) and low for the respondents who have completed 22years of age(66.7 %). Chi-square result reveals that there is association between age and Customer Value (0.000) since the p-value (0.000) is less than 0.05. There is an association between Age and Customer Value.

**Table 2: T-Test Showing the Marital Status and Customer Value**

Marital Status	Mean	S.D	P Value	Statistical Inference
<b>Overall Customer Value</b>				T = -1.189 P > 0.05 Not Significant
Married (n=47)	68.47	16.920	.235	
Single (n=553)	71.22	15.072		

**Source:** Compiled from primary data

Table 2 states that Customer value is high for single (mean value = 71.22) and Customer value is low for married (mean value =68.47). T- Test result shows that there is no significant difference between the marital status and customer value since the p- value(0.235) is greater than 0.05.

**Table 3: Chi-Square Test Showing the Domicile and Customer Value**

Overall Customer Value	Domicile			P Value	Statistical Inference
	Rural (N=250)	Semi Urban (N=134)	Urban (N=216)		
Low	129(51.6%)	65(48.5%)	119(55.1%)	.474	X <sup>2</sup> =1.492 Df = 2 P > 0.05 Not significant
High	121(48.4%)	69(51.5%)	97(44.9%)		

Source: Compiled from primary data

Table 3 reveals that customer value is low for urban respondents (55.1%) and high for semi-urban respondents (51.5%). Chi-square analysis shows that there is no significant association between domicile and customer value as p-value (0.474) is greater than table value.05.

**Table 4: T-Test Showing the Type of Family and Customer Value**

Overall Customer Value	Mean	S.D	P Value	Statistical Inference
Nuclear (n=524)	70.82	14.916	.445	T = -.763 P > 0.05 Not Significant
Joint (n=76)	72.25	17.276		

Source: Compiled from primary data

Table 4 states that Customer value is high for joint family (mean value = 72.25) and Customer value is low for nuclear family (mean value =70.82). T – test result shows that there is no significant difference between type of family and customer value since the p- value(0.445) is greater than 0.05.

**Table 5: Chi-Square Test Showing the Number of Family Members and Customer Value**

Overall Customer Value	No. of Family Members			P Value	Statistical Inference
	Small (1 to 3)	Medium (4 to 5)	Large (6 & above)		
Low	181(51.4%)	109(52.4%)	23(57.5%)	.764	X <sup>2</sup> =.539 Df = 2 P > 0.05 Not Significant
High	171(48.6%)	99(47.6%)	17(42.5%)		

Source: Compiled from primary data

Table 5 explains that Customer value is high in small family (1to3). Customer Value is high for semi-urban respondents (51.5 per cent). Whereas the Customer Value is low for rural respondents (51.6 per cent) and urban respondents (55.1 per cent). Chi-square result shows that there is no association between domicile and Customer Value (0.474) since the p-value (0.764) is greater than 0.05.

**Table 6: T-Test Showing Nature of Subject / Course and Customer Value**

Subject Nature	Mean	S.D	P Value	Statistical Inference
Overall Customer Value				T = 2.195 P < 0.05 Significant
Arts (n=300)	72.36	16.520	.029	
Science (n=300)	69.64	13.707		

Source: Compiled from primary data

Table 6 reveals that Customer value is high for arts subject (Mean value = 72.36) and Customer value is low for science subject (Mean value =69.64). T – test result shows that there is a significant difference between nature of subject / course and customer value since the p- value(0.029) is less than table value 0.05

**Table 7: Oneway Showing the Monthly Family Income and Customer Value**

Income	Mean	S.D	SS	Df	MS	P Value	Statistical Inference
<b>Overall Customer Value</b>							
Between Groups			4493.883	5	898.777	.001	F = 3.973 P < 0.05 Significant
Less than Rs.10000 (n=255)	73.13	15.951					
Rs.10001 to 20000 (n=151)	67.87	13.714					
Rs.20001 to 30000 (n=86)	67.55	14.108					
Rs.30001 to 40000 (n=42)	72.19	11.110					
Rs.40001 to 50000 (n=26)	71.15	15.107					
Above Rs.50000 (n=40)	75.40	18.858					
Within Groups			134392.110	594	226.249		

**Source:** Compiled from primary data

Table 7 indicates that Customer value is high in the income group of above Rs. 50,000 (mean value = 75.40) and Customer value is low in the income group of between Rs.30001 to 40000 (mean value =67.55). One way annova explains that there is a significant difference between monthly family income and customer value since the p- value (0.001) is less than 0.05.

**Table 8: Oneway ANOVA Showing the Brand Preference and Customer Value**

Brand	Mean	S.D	SS	Df	MS	P- Value	Statistical Inference
<b>Overall Customer Value</b>							
Between Groups			5732.306	14	409.450	0.035	F = 1.799 P < 0.05 Significant
Clinic all clear (n=55)	71.78	14.004					
Clinic plus (n=85)	67.60	14.818					
Sunsilk (n=76)	72.12	17.083					
Chik (n=33)	67.64	14.502					
Garnier (n=7)	74.57	18.036					
Dabur (n=6)	72.33	21.575					
Head & shoulders (n=51)	71.90	12.294					
Dove (n=53)	73.87	13.041					
Pantene (n=111)	72.52	16.109					
Himalaya (n=21)	70.33	14.813					
Meera (n=38)	67.68	13.719					
Karthika (n=29)	66.86	11.895					
Amway-Santique (n=15)	79.73	21.717					
Nyle (n=4)	54.75	3.948					
Others (n=16)	75.25	16.957					
Within Groups			133153.688	585	227.613		

**Source:** Compiled from primary data

Table 8 states that Customer value is high for the brand Santique (mean value = 79.73) and low for the brand Nyle (mean value = 54.75). One way annova result says that there is a significant difference between brand preference and customer value since the p- value (0.035) is less than table value 0.05.

**Table 9: Oneway ANOVA Showing the Period of Usage of Brand and Customer Value**

Years	Mean	S.D	SS	Df	MS	P Value	Statistical Inference
<b>Overall Customer Value</b>							F = 2.282 P < 0.05 Significant
Between Groups			2617.292	5	523.458	0.045	
Less than 2 yrs (n=294)	70.24	15.699					
2 to 4 yrs (n=117)	72.26	14.150					
4 to 6 yrs (n=93)	74.55	15.071					
6 to 8 yrs (n=34)	70.09	15.420					
8 to 10 yrs (n=19)	64.32	10.848					
Above 10 yrs (n=43)	68.77	15.408					
Within Groups			136268.701	594	229.409		

Source: Compiled from primary data

Table 9 explains that Customer value is high for the period of usage between 4 to 6 years (mean value = 74.55) and low for a period of usage between 8 to 10 years. (Mean value = 64.32). One way annova result reveals that there is a significant difference between period of usage of brand and customer value since the p-value (0.045) is less than 0.05.

**Table 10: T-Test Showing Opinion Regarding Shifting of Brand and Customer Value**

Brand Shifted	Mean	S.D	P Value	Statistical Inference
<b>Overall Customer Value</b>				T = -1.819 P < 0.05 Not Significant
Yes (n=196)	69.38	15.708	.069	
No (n=404)	71.79	14.945		

Source: Compiled from primary data

Table 10 shows that Customer value is high for the respondents who have not shifted their brand. (Mean value = 71.79) and Customer value is low for the respondents who have shifted their brand. (Mean value =69.38). T - Test result indicates that there is no significant difference between opinion regarding shifting of brand and customer value since the p- value (0.069) is greater than 0.05.

**Table 11: Chi-Square Test Showing the Reason for Shifting the Brand and Customer Value**

Overall Customer Value	Reason for Shifting the Brand								Statistical Inference
	Advice of my Pear Parents (n=46)	Inconvenient Packaging (n=5)	Attractive & Interesting Advertising of their Brands (n=25)	Out of Market (n=7)	Not Available in the Market Continuously (n=9)	Does not Satisfy my Needs (n=74)	Not Satisfied with my Quality (n=30)	NA (n=404)	
Low	28(60.9%)	4(80%)	9(36%)	4(57.1%)	4(44.4%)	46(62.2%)	14(46.7%)	204(50.5%)	X <sup>2</sup> =9.631 Df = 7 P > 0.05 Not Significant
High	18(39.1%)	1(20%)	16(64%)	3(42.9%)	5(55.6%)	28(37.8%)	16(53.3%)	200(49.5%)	

Source: Compiled from primary data

Table 11 depicts that the Customer Value is high for the reason attractive and interesting advertising of their brands (64 per cent). Chi-square result shows that there is no association between reason for shifting the brand and Customer Value (0.210) since the p-value is greater than 0.05. There is no association between reason for shifting the brand and Customer Value.

**Table 12: Oneway Showing the Number of Times Shifted the Brand and Customer Value**

Number of Times Shifted the Brand	Mean	S.D	SS	Df	MS	P Value	Statistical Inference
Between Groups			529.501	4	132.375	.713	F = .531 P > 0.05 Not Significant
Once (n=80)	68.86	16.359					
Twice (n=78)	69.51	14.736					
Three (n=10)	64.40	14.826					
Four (n=8)	70.88	20.441					
Five (n=20)	72.85	15.928					
Within Groups			47584.800	191	249.135		

**Source:** Compiled from primary data

Table 12 says that Customer value is high when there the brand is shifted five times (mean value =72.85) and Customer value is low when there the brand is shifted three times. (Mean value =64.40). One way annova result says that there is no significant difference between numbers of times shifted the brand and customer value since the p-value (.713) is greater than table value 0.05.

**Table 13: T-Test Showing Recommendation of Brand to Friends / Relatives and Customer Value**

Recommendation of Brand to Friends /Relatives	Mean	S.D	P Value	Statistical Inference
Yes (n=378)	73.63	14.798	.000	T = 5.653 P < 0.05 Significant
No (n=222)	66.53	14.933		

**Source:** Compiled from primary data

Table 13 says Customer value is high when the brand is recommended to friends/ relatives (mean value =73.63) and Customer value is low when the brand is not recommended to friends/ relatives. (Mean value =66.53). T- test result shows that there is a significant difference between recommendation of brand to friends / relatives and customer value since the p-value is less than 0.05. Customer value is high when the brand is recommended to friends/ relatives (mean value =73.63).

## SUGGESTIONS

Company should give importance to Quality Value as quality conscious customers do not mind paying high prices for shampoo.

Advertising focusing on negative emotions can be avoided.

Multipurpose shampoo including conditioners can be introduced.

Easy availability of shampoo should be given due attention.

Enhance social status as college students are influenced through friends.

Harmful effects on the products can be eliminated as customers are nowadays health conscious.

## CONCLUSIONS

Firms should market their product and measure Customer Value regularly as a process and not aa a destination. Value guarantee customer satisfaction and customer loyalty. Therefore company should maximize the benefits perceived and minimize the sacrifices perceived. On the whole, the Customer Value of Shampoo is good as per the study.

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