A RESEARCH PAPER-PREFERENCES OF SAMPLES TOWARDS SOAP ATTRIBUTES : CONJOINT ANALYSIS

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ABSTRACT

Present study is an effort to understand the preferences of samples, towards the attributes of soap as a product, through research experiment.The product attributes used as variables viz. percentage of hydrogen (Ph), price, ingredients, and fragrances.The effort has been made through experimentation to find out part utility samples have towards selectedfeatures of soap using conjoint analysis.The analysis has approached using regression analysis. Dummy variables havebrought in use to define the attributes and ranking were taken from select samples purposively from every socio economic class. Two experiments were conducted with slight change in the combination of attributes to assess the change in preferences of samples. The result of conjoint analysis reveals that, among all the socio economic classes highest utility has been given to price followed by natural ingredients. Fragrances received highest utility among lowest socio economic classes, viz., D1, D2 and E2.

Key Words : Conjoint Analysis, Soap, ingredients, fragrance, socio economic class

INTRODUCTION

Purchasing a bathing soap is not an act of purchase, where an entire family gets involved into. However, each family memberhas their own preferences about type of soap they should use. Johansson Baby soap occupied its space in baby soap category. Lux in the category of beautysoap made for beauty conscious female.Cinthol for males with masculine personality,to name a few. This association can be termed as aresult of perfect positioning of these brands in the market. Researcher attempted to studythe nature of attributes associated with these kinds of soap in order to get the relative preferences that samples give to the attributes, while purchasingsoap. Along with the common attributes like, price and fragrances, researcher wanted to study the extent of preference sample has towards eco friendliness attribute of soap. Researcher identified major attributes associated with soap as, percentage of hydrogen (Ph),price, ingredients, and fragrances.An attempt has been made through experimentation to find out relative importance that, samplesgive to theattributes of product. Research has been conducted during May and June, 2014.

REVIEW OF LITERATURE

Researcher has studied articles that have used conjoint analysis technique for knowing the customer preferences towards particular product attribute.

(Ighomereho, 2011), observed that, the attribute levels that have a high utility value (above 0.50) are descending as follows: scent, solid, bathing and big. This indicates that the

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most preferred soap is a big solid bathing soap with Scent. It has also found that, scent of soap has a larger impact on decision making when considering buying soap. This is followed by use, type and size.In a similar research,(Majlath, 2009), where researcher studied the importance of green product attribute with conjoint analysis towards exercise book. It has observed that, the most preferred product therefore that with the highest utility score is a graph paper spiral exercise book which costs 179 HUF and has modern, colorful cover -the utility of which can be increased through recycled paper, and this only for environmentally friendly respondents.Recycled paper cannot increase the utility for non-environmentally friendly consumers. In a research (Arcadio A. Cerda, 2012) of organic apples, it has observed that estimation of the part-worth utilities of each attribute confirms that the Fuji variety, organic method of production, sweet apples and the lowest price are the most preferred characteristics of each attribute. However, an analysis of the relative utility index shows that price and variety are much more important for predicting consumer choice behavior than production method and flavor. As against this, a research (C. Yue, 2012), revealed that, the participants were willing to pay a price premium forbiodegradable containers, but the premium was not the same for different types of containers made up of different type of biodegradable material.(Gesiot, 2012), in aresearch,it isrevealed that, students attach a high importance to eco-labels, more than to other quality related attributes. In coffee products, they evaluate more the Fair Trade than Organic label, in tuna fish products, the MSC label more than Dolphin Safe one, but all these labels get a considerable importance. On a parallel line, (Engjell Skreli, 2013), a research revealed that,consumers from Albania clearlypreferred organic tomatoes tonon-bio tomatoes. Part worth utilities associated with bio product are all positive and significant among other attributes like, origin, technology and price.

It has observed that, very few researchers have used conjoint analysis technique for analyzing customer preferences towards the attributes of soap. In the category of eco friendly products, research has been done about organic food products mainly. It has found that researches exhibit contradictory findings. In some researches samples exhibited price sensitive preferences, while in other, preference to eco friendly attribute has been given by the samples.

This synthesis of research articles led researcher to come up with following objectives.

RESEARCH METHODOLOGY

Research has been conducted with objective of knowing the relative importance that samples give to attributes of soap. Another intention was to identify attribute of soap that has received higher importance among all the other attributes and to study the differences if any, among socio economic classes about relative importance to be given to attributes. Researchisexperimental in nature Forexperimentation, bathing soap has taken as sample product for which four attributes have considered.

1. Percentage of Hydrogen i.e. PH - High Ph and Neutral Ph.
2. Price of soap: Rs. 30, Rs. 50 and Rs. 155.
3. Ingredients: Chemical Ingredients and Natural Ingredients
4. Fragrances: Available in all fragrances and available in Few fragrances.

Purposive sampling has been used by which one sample from each socioeconomic class has selected

Show card displaying single combination on each card has been developed.

The combinations were sought from Orthogonal deigns using SPSS. The actual combinations of Products come to 24 i.e. two levels of percentage of hydrogen x three levels of price x two levels of ingredients x two levels of fragrances.

The Orthogonal design in SPSS has facilitated following eight combinations on which data has sought.

Card No	PH	Price	Ingredients	Fragrances
1	Neutral	Rs.30	Chemical Ingredients	All fragrances
2	Neutral	Rs.50	Natural Ingredient	Few Fragrances
3	Neutral	Rs.155	Natural Ingredient	All fragrances
4	High	Rs.30	Natural Ingredient	Few Fragrances
5	High	Rs.155	Chemical Ingredients	Few Fragrances
6	High	Rs.50	Chemical Ingredients	All fragrances
7	High	Rs.155	Natural Ingredient	All fragrances
8	Neutral	Rs.155	Chemical Ingredients	Few Fragrances

EXPERIMENT

Show cards mentioning these eight combinations weredisplayed to samples to rank as per their preferential order of choice. The ranking has converted into rating. The dummy variables were developed for four parameters viz. percentage of hydrogen, price, ingredients and fragrances.

DATA ANALYSIS

Using regression analysis the part utility of each sub attribute of parameter has measured for every SEC as follows.

Table No.1 Part worth utility of attributes for A1 to E2 SEC (Case-I)

Sr.	Attribute	Level	A1	Part Utility	Range of Utilities		A2		Range of Utilities		A3	Part Utility	Range of Utilities		B1		Range of Utilities		B2		Range of Utilities	
					Max	Min			Max	Min			Max	Min			Max	Min			Max	Min
	Multiple R		0.97				0.92				0.89				0.93				0.99			
	R Square		0.95				0.84				0.79				0.86				0.98			
	Adjusted R Square		0.81				0.44				0.25				0.50				0.92			
	SE		1.06				1.84				2.12				1.73				0.71			
	F =		7.07	Sig:	0.13		2.09	Sig:	0.36		1.47	Sig:	0.45		2.40	Sig:	0.32		16.40	Sig:	0.06	
1	PH1	High		1.25	1.25	-1.25		-0.50	0.50	-0.50		0.00	0.00	0.00		-0.50	0.50	-0.50		0.00	0.00	0.00
2	PH2	Neutral		-1.25	2.50			0.50	1.00			0.00	0.00			0.50	1.00			0.00	0.00	
3	Price 1	Rs. 30		0.58	1.08	-1.66		1.92	1.92	-2.34		1.83	1.83	-2.66		1.88	1.88	-2.71		2.33	2.33	-2.66
4	Price 2	Rs. 50		1.08	2.74			0.42	4.26			0.83	4.49			0.83	4.59			0.33	4.99	
5	Price 3	Rs. 155		-1.66				-2.34				-2.66				-2.71				-2.66		
6	Ingredient 1	Chemical		-1.25	1.25	-1.25		-0.50	0.50	-0.50		0.00	0.00	0.00		0.25	0.25	-0.25		-0.25	0.25	-0.25
7	Ingredient 2	Natural		1.25	2.50			0.50	1.00			0.00	0.00			-0.25	0.50			0.25	0.50	
8	Fragrance 1	All		0.50	0.50	-0.50		0.75	0.75	-0.75		0.00	0.00	0.00		-0.25	0.25	-0.25		0.75	0.75	-0.75
9	Fragrance 2	Few		-0.50	1.00			-0.75	1.50			0.00	0.00			0.25	0.50			-0.75	1.50	

Sr.	Attribute	Level	C1	Part Utility	Range of Utilities		C2	Part Utility	Range of Utilities		D1	Part Utility	Range of Utilities		D2	Part Utility	Range of Utilities		B2	Party Utility	Range of Utilities	
					Max	Min			Max	Min			Max	Min			Max	Min			Max	Min
	Multiple R		0.72				1.00				0.99				0.78				0.98			
	R Square		0.51				1.00				0.98				0.60				0.96			
	Adjusted R Square		-0.71				1.00				0.92				-0.40				0.88			
	SE		3.20				0.00				0.71				2.89				0.87			
	F =		0.42	Sig:	0.81			Sig:	0.00		16.40	Sig:	0.06		0.60	Sig:	0.72		10.80	Sig:	0.09	
1	PH1	High		-1.25	1.25	-1.25		0.50	0.50	-0.50		0.00	0.00	0.00		1.00	1.00	-1.00		0.25	0.25	-0.25
2	PH2	Neutral		1.25	2.50			-0.50	1.00			0.00	0.00			-1.00	2.00			-0.25	0.50	
3	Price 1	Rs. 30		0.50	0.50	-0.50		-0.67	1.33	-0.67		0.50	0.50	-0.50		1.58	1.58	-1.67		2.33	2.33	-2.67
4	Price 2	Rs. 50		-0.50	1.00			1.33	2.00			-0.50	1.00			0.08	3.25			0.33	5.00	
5	Price 3	Rs. 155		0.00				-0.67				0.00				-1.67				-2.67		
6	Ingredient 1	Chemical		-1.00	1.00	-1.00		-2.00	2.00	-2.00		-1.00	1.00	-1.00		-0.50	0.50	-0.50		-0.50	0.50	-0.50
7	Ingredient 2	Natural		1.00	2.00			2.00	4.00			1.00	2.00			0.50	1.00			0.50	1.00	
8	Fragrance 1	All		0.00	0.00	0.00		0.50	0.50	-0.50		2.00	2.00	-2.00		0.25	0.25	-0.25		0.50	0.50	-0.50
9	Fragrance 2	Few		0.00	0.00			-0.50	1.00			-2.00	4.00			-0.25	0.50			-0.50	1.00	

Table No.1 presented above, shows that the sample belongs to A1 SEC has endorsed greatest utility to price since the utility is 2.74, followed by PH and Ingredients has received the utility of 2.50 each and at the end fragrances receives utility of 1. Though ingredient has received second ranked utility the utility for natural ingredient is positive and amounts to 1.25 shows that sample belongs to A1 SEC favours natural ingredients Sample belongs to A1 SEC favours natural ingredients with utility 1.25.The combination of attributes provides highest utility to SEC A1 is, Soap with high Ph, or price Rs. 50 containing Natural Ingredients and with All Fragrances.It also exhibit that sample belongs to A2 SEC has endorsed greatest utility to price since the utility is 4.26, followed by fragrance utility of 1.5 and at the end PH and Ingredients has received the utility of 1.It shows that sample belongs to A2 SEC favours Price. The combination of attributes provides highest utility to SEC A2 is soap with High Ph, pricing Rs. 30 containing natural ingredients having all fragrances. Sample belongs to A3 SEC has endorsed greatest utility to price since the utility is 4.49, Other attributes received 0 utility, which indicates sample from A3 SEC favours Price. The combination of attributes provides highest utility to SEC A3, is a soap of price Rs. 30. Sample belongs to B1 SEC has endorsed greatest utility to price since the utility is 4.59, followed by Ph utility of 1 and at the end Ingredients and fragrance has received utility of 0.5 each. It shows that sample from B1 SEC favours Price. The combination of attributes provides highest utility to SEC B1 is, soap with Neutral Ph of price Rs.30 with chemical ingredients and having few fragrances. Sample belongs to B2 SEC has endorsed greatest utility to price since the utility is 4.99, followed by fragrance utility of 1.5 and Ingredients utility 0.5. Ph has received 0 utility. It indicates that, sample from B2 SEC favours price. The combination of attributes provides highest utility to SEC B2 is soap of Rs.30 with natural ingredients

and all fragrances. Sample belongs to C1 SEC have endorsed greatest utility to Ph of 2.5. Followed by ingredient utility of 2. Price has the utility of 1, followed by fragrance utility of 0.It indicates, sample from C1 SEC favours Ph. The combination of attributes provides highest utility to SEC C1 is, soap with neutral Ph, of Rs. 30 with natural ingredients. Sample belongs to C2 SEC has endorsed greatest utility to ingredient since the utility is 4, followed by Price has utility of 2, Ph and Fragrances has received same utility of 1. It shows that, sample from C2 SEC favours ingredient. The combination of attributes provides highest utility to SEC C2 is, soap with high Ph of price Rs.30, containing natural ingredients with all fragrances. Sample belongs to D1 SEC has endorsed greatest utility to Fragrances since the utility is 4, followed by Ingredient has utility of 2. Price has received utility of 1. PH has received 0 utility. It indicates that, sample from D1 SEC favours fragrance. The combination of attributes provides highest utility to SEC D1 is, soap of Rs.30, containing natural ingredient and with all fragrances. Sample belongs to D2 SEC has endorsed greatest utility to Price since the utility is 3.249 followed by PH has utility of 2. An ingredient has received utility of 1. At last Fragrances received utility 0.5. It shows that, sample from D2 SEC favours Price. The combination of attributes provides highest utility to SEC D2 is, soap with high Ph, of price Rs.30, containing natural ingredients with all fragrances. Sample belongs to E2 SEC has endorsed greatest utility to Price since the utility is 4.999 followed by Ingredient and Fragrances received utility 1. At last PH received utility 0.5. It indicates that, sample from E2 SEC favours Price. The combination of attributes provides highest utility to SEC E2 is, soap with high Ph, pricing Rs. 30 which contains natural ingredients with all fragrances.

It has observed that samples from A2, A3, B1,B2, D2 and E2 has endorsed greatest utility to Price, However samples from A1 and C2 has endorsed greatest utility to Ingredients. Samples from C1 have endorsed PH with greatest utility and Samples from D1 endorsed greatest utility to Fragrance. It has noted that samples have endorsed greatest utility to price.

In this experiment it has observed that samples were hardly aware about Ph and bother about it, hence, parameter Ph has been removed from next experiment. It has also observed that, some of the soaps available in the market are made up of natural as well as chemical ingredients; hence, the parameter composite ingredient has been added in the experiment. Price of soap Rs.155/- do not seem logical by the samples, as many samples have never thought about soap, worth price Rs.155/- hence the price of soap has brought down to Rs.90/- With these changes the new combinations were sought manually. The number of combinations comes to Price variations (3) x Ingredients (3) x Fragrances (2) = 18 combinations which were facilitated to samples. Following are those eighteen combinations on which data has sought.

Card No.	Price	Ingredients	Fragrances
1	Rs.30	Natural Ingredient	All Fragrances
2	Rs.30	Chemical Ingredient	All Fragrances
3	Rs.30	Composite of Natural and Chemical Ingredient	All Fragrances
4	Rs.30	Natural Ingredient	Few Fragrances
5	Rs.30	Chemical Ingredient	Few Fragrances
6	Rs.30	Composite of Natural and Chemical Ingredient	Few Fragrances
7	Rs.50	Natural Ingredient	All Fragrances
8	Rs.50	Chemical Ingredient	All Fragrances

Card No.	Price	Ingredients	Fragrances
9	Rs.50	Composite of Natural and Chemical Ingredient	All Fragrances
10	Rs.50	Natural Ingredient	Few Fragrances
11	Rs.50	Chemical Ingredient	Few Fragrances
12	Rs.50	Composite of Natural and Chemical Ingredient	Few Fragrances
13	Rs.90	Natural Ingredient	All Fragrances
14	Rs.90	Chemical Ingredient	All Fragrances
15	Rs.90	Composite of Natural and Chemical Ingredient	All Fragrances
16	Rs.90	Natural Ingredient	Few Fragrances
17	Rs.90	Chemical Ingredient	Few Fragrances
18	Rs.90	Composite of Natural and Chemical Ingredient	Few Fragrances

DATA ANALYSIS - PART II

Using regression analysis the part utility of each sub attribute of parameter has measured for every SEC as follows.

Table No.2 Part worth utility of attributes for A1 to E2 SEC (Case-II)

Sr.	Attribute A1	Level	A1	Part Utility	Range of Utilities		A2		Range of Utilities		A3	Part Utility	Range of Utilities		B1		Range of Utilities		B2		Range of Utilities	
	A1				Max	Min			Max	Min			Max	Min			Max	Min			Max	Min
	Multiple R		0.291				0.73				0.948				0.931				0.96			
	R Square		0.85				0.54				0.9				0.867				0.92			
	Adjusted R Square		-0.297				0.35				0.858				0.812				0.89			
	SE		5.843				4.32				2.014				2.317				1.77			
	F =		0.222	Sig.	0.95		2.8	Sig.	0.07	21.493	Sig.	0			Sig.	0			Sig.	0		
1	Price 1	Rs. 30		-0.111	1.22	-0.11		-4	3.5	-4		4.5	4.5	-5.33		4	4	-5.5		5	5	-5.67
2	Price 2	Rs. 50		-1.111	1.33			3.5	7.5			0.833	9.83			1.5	9.5			0.67	10.7	
3	Price 3	Rs. 90		1.222				0.5				-5.333				-5.5				-5.67		
4	Ingredient 1	Chemical		1.222	1.22	-1.28		-1.83	2.5	-0.667		0	1.5	-1.5		-0.5	1.67	-0.5		-0.67	1.67	-0.67
5	Ingredient 2	Natural		-1.278	0.06			2.5	3.167			1.5	3			1.67	2.17			1.67	2.33	
6	Ingredient 3	Composite		0.056				-0.67				-1.5				-1.17				-1		
7	Fragrance 1	All		-0.389	-0.39	0.39		1.28	1.178	-1.178		2.5	2.5	-2.5		2.39	2.39	-2.39		2.06	2.06	-2.06
8	Fragrance 2	Few		0.389	0.78			-1.28	2.356			-2.5	5			-2.39	4.78			-2.06	4.11	

Sr.	Attribute	Level	C1	Part Utility	Range of Utilities		C2	Part Utility	Range of Utilities		D1	Part Utility	Range of Utilities		D2	Part Utility	Range of Utilities		E2	Party Utility	Range of Utilities	
					Max	Min			Max	Min			Max	Min			Max	Min			Max	Min
	Multiple R		0.999				0.971				0.933				0.905				0.997			
	R Square		0.997				0.944				0.87				0.819				0.994			
	Adjusted R Square		0.996				0.92				0.815				0.743				0.991			
	SE		0.347				1.509				2.351				2.705				0.5			
	F =			Sig.	0			Sig.	0			Sig.	0.00			Sig.	0.00			Sig.	0.00	
1	Price 1	Rs. 30		6	6	-6		4.833	4.833	-5.5		4.889	4.889	-5.445		2.833	2.833	-3.5		3	3	-3
2	Price 2	Rs. 50		0	12			0.667	10.333			0.556	10.334			0.667	6.333			0	6	
3	Price 3	Rs. 90		-6				-5.5				-5.445				-3.5				-3		
4	Ingredient 1	Chemical		-1.833	2	-0.167		-0.833	1.5	-0.667		-2.944	2.222	-2.944		-2.667	3.167	-0.5		-0.5	1	-0.5
5	Ingredient 2	Natural		2	2.167			1.5	2.167			2.222	5.166			3.167	3.667			1	1.5	
6	Ingredient 3	Composite		-0.167				-0.667				0.722				-0.5				-0.5		
7	Fragrance 1	All		0.611	0.611	-0.611		2.5	2.5	-2.5		1.389	1.389	-1.389		3.056	3.056	-3.056		4.5	4.5	-4.5
8	Fragrance 2	Few		-0.611	1.222			-2.5	5			-1.389	2.778			-3.056	6.112			-4.5	9	

Table No.2 presented above shows that the sample belongs to A1 SEC has endorsed greatest utility to price since the utility is 1.333, which indicates sample from A1 SEC favours Price. The combination of attributes provides highest utility to SEC A1 issoap of Rs. 90 which contains chemical ingredients with few fragrances. Similarly, the sample belongs to A2 SEC has endorsed greatest utility to price since the utility is 7.5,followed by 3.167 to ingredient and 2.356 to fragrance. Which indicates sample from A2 SEC favours Price. The combination of attributes provides highest utility to SEC A2 is soap of Rs.50 which contains natural ingredients with all fragrances. Even sample belongs to A3 SEC has endorsed greatest utility to price since the utility is 9.833,followed by 5 to fragrance and 3 to ingredient Which indicates sample from A3 SEC favours Price. The combination of attributes provides highest utility to SEC A3 is soap of Rs. 30 with Natural Ingredients and All Fragrances. The sample belongs to B1 SEC has endorsed greatest utility to price since the utility is 9.5,followed by 4.778 to fragrance and 2.167 to ingredient Which indicates sample from B1 SEC favours Price. The combination of attributes provides highest utility to SEC B1 is, soap of Rs. 30 with natural ingredients and all fragrances. The sample belongs to B2 SEC has endorsed greatest utility to price since the utility is 10.667, followed by 4.112 to fragrance and 2.334 to ingredient Which indicates sample from B2 SEC favours Price. The combination of attributes provides highest utility to SEC B2is soap ofRs. 30 withnatural ingredients and all fragrances. Sample belongs to C1 SEC has endorsed greatest utility to price since the utility is 12, followed by 2.167 to ingredient and 1.222 to fragrance. Which indicates sample from C1 SEC favours Price. The combination of attributes provides highest utility to sec C1 is soap of Rs. 30 with natural ingredients and all fragrances. The sample belongs to C2 SEC has endorsed greatest utility to price since the utility is 10.333, followed by 5 to Fragrance and 2.167 to ingredient. Which

indicates sample from C2 SEC favours Price. The combination of attributes provides highest utility to SEC C2 is soap of Rs. 30 with natural ingredients and all fragrances. The sample belongs to D1 SEC has endorsed greatest utility to price since the utility is 10.334, followed by 5.166 to ingredient and 2.778 to fragrance. Which indicates sample from D1 SEC favours Price. The combination of attributes provides highest utility to SEC D1is soap of Rs. 30 withnatural ingredients and all fragrances. Sample belongs to D2 SEC has endorsed greatest utility to price since the utility is 6.333, followed by 6.112 to fragrance and 3.667 to ingredient. Which indicates sample from D2 SEC favours Price as well as fragrance. The combination of attributes provides highest utility to SEC D2 is soap of Rs. 30 withnatural ingredients with all fragrances. Sample belongs to E2 SEC has endorsed greatest utility to fragrance since the utility is 9, followed by 6 to price and 1.5 to ingredient. This indicates sample from E2 SEC favours fragrance. The combination of attributes provides highest utility to SEC E2is soap of Rs. 30 withnatural ingredients and all fragrances.

Researcher has observed that samples from all the socio economic class prefer soap with natural ingredients, with option of all fragrance and having lower price i.e.Rs.30/-. It indicates the price conscious behavior of samples. In the second experiment it has observed that sample belonging to A1 socio economic class expressed preference to chemical ingredient soap of price Rs.90/-with few fragrances. Sample of A2 socio economic class preferred natural ingredient soap of Rs.50/- with all fragrances.

Among all the socio economic classes highest utility has been given to price followed by natural ingredients. Fragrances received highest utility among lowest socio economic classes, viz., D1, D2 and E2.

FINDINGS AND DISCUSSION

Table 1, shows that, the combination of attributes provides highest utility to SEC A1 and A2 is, Soap with high Ph, which is made up of natural ingredients and which is available in all fragrances. Slight difference about preference towards price has been observed as, samples from A1 SEC ready to pay Rs.50 for such soap, while samples from A2 SEC ready to pay Rs.30 for such soap. However, samples from A3 exhibited price conscious behavior, as they had given highest utility to price. They are ready to purchase soap worth Rs.30, irrespective of its Ph, ingredient and fragrance.

The combination of attributes provides highest utility to SEC B1 and B2 is, a soap of Rs.30. Sample from B1 SEC prefer soap which is having neutral Ph, made up of chemical ingredients and having few fragrances, while sample from B2 SEC prefer soap with natural ingredients and all fragrances, as shown in table. To SEC C1 and C2, the combination of attributes provides highest utility is soap of Rs.30 with natural ingredient. Sample from C1 SEC preferred soap with neutral Ph. While sample from C2 SEC prefer soap with high Ph made up of natural ingredients as it has observed from table. Table also shows that, the combination of attributes provides highest utility to SEC D1 and D2 is, soap of Rs.30, containing natural ingredient and with all fragrances. For D2 SEC, high Ph soap also provides the highest utility.

The combination of attributes provides highest utility to SEC E2 is, soap with high Ph, pricing Rs. 30 which contains natural ingredients with all fragrances, as it is evident from table.

The findings of experiment conducted in case II reveals that the combination of attributes provides highest utility to SEC A1 is soap of Rs. 90 which contains chemical ingredients and available in few fragrances(Table2). This fluctuation in behavior of A1 SEC from previous experiment is unpredictable. However, the combination of attributes provides highest utility to SEC A2 and SEC A3 is soap which contains natural ingredients with all fragrances. The difference is observed in price preferences, Sample from SEC A2 prefers soap of Rs.50 and sample from SEC A3 prefer same soap at Rs.30,

as observed from table. Table also reveals that, the combination of attributes provides highest utility to remaining all SEC i.e.B1, B2, C1, C2, D1, D2 and E2 are similar i.e., soap of Rs. 30 with natural ingredients available in all fragrances.

CONCLUSION

Researcher has observed that samples from all the socio economic class prefer soap with natural ingredients, with option of all fragrance and having lower price i.e.Rs.30/-. It indicates the price conscious behavior of samples. In the second experiment it has observed that sample belonging to A1 socio economic class expressed preference to chemical ingredient soap of price Rs.90/-with few fragrances. Sample of A2 socio economic class preferred natural ingredient soap of Rs.50/- with all fragrances. Among all the socio economic classes highest utility has been given to price followed by natural ingredients. Fragrances received highest utility among lowest socio economic classes, viz., D1, D2 and E2. These results create need for differentiated marketing strategies, targeting samples from various socio economic classes. Researcher has concluded that samples are ready to prefer soap with natural ingredients, if it is made available at affordable price of Rs.30/- , as observed in this experiment.

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