LIBERALIZATION AND COLOR T.V. INDUSTRY IN INDIA

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Abstract

The Color TV industry in India has seen a gamut of changes in the past one decade as liberalization set in the Indian subcontinent making its market highly competitive and consumer driven. With the fast changing liberalization policies, changing and growing demands of the consumers made the industry competitive. The constant desire of the companies (domestic or international) to have a major share in the   market often leads them to die many deaths which has became a hackneyed phenomenon in this sector of Liberalized India if the companies are not in able to cope with changing reforms and the changing tastes and preferences of the consumers. The results revealed that the purchasing decision of the consumer depends on Quality, Goodwill Popularity, Affordability, Features, and Support Services of the product, this phenomenon observed in all income groups. The results also revealed that the brand preference is independent of age, income and education.

1. Backdrop of the paper

In this section we present our intuition about the color T.V. Industry and how economic liberalization has influenced the color

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T.V. Industry. Our intuition directed that in the countries like India the economic liberalization has influenced the consumer durable industry especially Color T.V. industry. The foreign player entered the Indian market since the Indian economy increasingly interdependent almost over the last one and half decades. Consumers in India with open markets on an average are enjoying lower prices, improved consumption, improved savings and rising standards of living. Before liberalization in India, the consumer was at the mercy of the producer and savings management were prevailing in the sense that individuals saved and then consumed. This might be because of no financing facilities, no credit card facilities and moreover demand side economic were prevailing. After liberalization the total scenario has changed- consumers in India moved from savings management to expenditure management. This is because of the availability of goods and services at lower price, availability of credit cards, availability of finance at low interest and in some cases zero interest and moreover the death of power of monopoly in many sectors because of the entry of the foreign players. Producers have become price takers rather than price setters. The tastes and preferences, life style and consumption patterns of the consumers have also changed. Like other third world countries, people in India have started spending much more money on eating out; started buying a flat or a car because of the availability of credit cards and easy financing facilities; more number of people have been traveling abroad after liberalization and there has been a distinct shift from joint family system to that of nuclear families.

As per the estimates of the confederation of Indian Industry (CII) the Indian consumer durable industry is Rs 20,000 crore business industry. The industry is highly dominated by the foreign players occupying the top slots in the market shares. From a recent data obtained from the Equitymaster.com the market share of all the MNCs in the color TV segment is about 65%. The biggest attraction for these players is the growing Indian middle class, which is approximately 250 million, and also low penetration levels characterize this market. Because of the entry of the foreign players we felt that in the Indian Color T.V. Industry the following Changes

have taken place, according to the father of Economics Adam smith in his book wealth of Nations (1776)

a- Economic substitutability and technical substitutability: The color T.V industry is facing intense competition and in the process new innovations in the form of giving additional features are taking place, b-Indifference in brand preference: The consumers are indifferent in choosing the brand because what ever the brand that the consumer is going to purchase gives the same satisfaction. This because the features of T.V in almost all the brands are same and there is a negligible difference in the prices. How ever in case of local made company products are cheaper. Hence we can define the indifference in brand preference as the locus of all brands in which the consumer gets the same level of satisfaction, c- Excludability: The producers are not excluding the customer before going to produce the product like how they well ventilated before liberalization. Without due care and attention, the relationship between producer and consumer becomes much more akin to a gibberish than a purchase and sale one.

d- Rivalry: in the information era economy the use or enjoyment will no longer necessarily involve rivalry. Especially with most tangible goods like TV, if X uses one brand of TV there is no guarantee that Y also uses the same brand. Free market price provides the producer with an ample award for its effort. It also leads to the appropriate level of production.

e- Transparency: The consumers know what they want and what they are buying so that they can effectively take the advantage of competition and comparison –shop and moreover the marginal cost of information is zero. Hence the producers should be transparent.

Keeping the cited intuition and the factors in this paper we made an attempt to determine the factors those influence the purchasing decision of the consumer and the degree of brand preference. The paper is organized as follows. We include a brief review of literature on in the next section; Section III deals with

research Methodology. Sections IV deal with Empirical investigation and Section V Offers conclusion and discussion.

2. Literature Review

Consumers buy not the products but bundle of emotions. Modern goods are recognized as essentially psychologically things, which are symbolic of personal attributes and goals and of social patterns and strivings. All commercial objects have a symbolic character, and making a purchase involves an assessment – implicit on explicit of this symbolism to decide whether or not it fits (Sidney Levey, 1959).

The research has shown repeatedly that positive free choice beliefs are related to concurrently claimed purchasing as brand usage (Barwise and Fhournberg 1985; Bind, Channan and Ehrenberg 1970; Costlebeny and Ehrenbag 1990). A "Usage factor" runs through the data. Many more people tend to associate a positive attribute with longer brands than associate it with smaller brands. The explanation is that a larger brand has more claimed user than a smaller brand and the users of brand are more likely than non-users to give a positive attribute response. This observation also lies in much evidence in the literature that familiarity in users liking (e.g., Harinsar 1977; Payme 1981; Sluckin, Hargreaves and Calman 1982; Zajanc 1968. Forced choice degree of association attitude done were similarly co-related with claimed usage in our study of six packaged goods categories (Haley and case 1979).

Barwise and Ehrenberg (1985) in addition showed that a smaller brand tended to get fewer positive belief brand associations than a larger brand even within each claimed brand usage grouping. Thus regular users of the brand leader scored that branch. This effect in known more generally as double jeopardy or DJ effect (e.g. Ehrenberg, Goodhardt, Cd Barwise 1990; McPhee 1963). DJ occurs simply as statistical selection effect due to the offering popularities on making shows of the brands. There need not be any perceived differences between the brands. In contrast to these relationships

with brand usage or market shares, very difference influences show up in respondent associates for same belief and brand combinations. For example, an either a physical attribute or an advertising claim that is particularly connected with a brand can enhance it score for that belief of the attribute. The aggregate score for that brand/belief combination then deviates markedly from what would be expected on the basis of brand usage alone. (Barwise and Ehrenberg 1985); Bird and Ehrenberg 1970; castteben and Ehrenberg 1990).

Pamela L. Alreck and Robert B.Settle (1999) felt that the principle objective of the marketer's is not simply to have a simple sale relation ship with buyer but also build relationship with buyer in the form of linking the brand to a particular need, associating it with a pleasant mood, appealing to subconscious motives; conditioning buyers to prefer the brand through reward; penetrating perceptual and cognitive barriers to create preferences and providing attractive models for buyers.

Lynda Chong (1996) analyzed the difficulties faced by department stores in Singapore and observed the losing prominence of these stores. The author has concluded that these stores have to adopt creative strategies such as tighter cost control, more recreational value, better customer service programmes, market expansion and niche marketing.

Sally Dibb (1996) felt that the trading environment in the Asia Pacific region is somewhat diverse, offering a attractive trading environment keeping in view the sound economic growth, a rising population and changing lifestyles.

Kotler (2000) his book mentioned that a company practicing market segmentation realizes that buyers differ in their needs and wants, purchasing behavior, demographic characteristics, product/service usage patterns, geographic locations, buying habits and other characteristics.

A summary of literature review in branding reveals that the brand perception is not predominantly depend upon on external parameters like age, income and education but depends on more on personality and psychological dimensions. The research is conducted to prove that the brand preference is independent of the above parameters age, income and education.

3. Research Design

With a view to gather all pertinent details for the market research, the research design that was to be adopted had to be descriptive in nature. The reason for adopting the descriptive research design was primarily to gather the following details:

1-To determine whom exactly the consumer is.
2-The overall consumer behavior in the consumer durables /electronics segment.
3-To determine the factors that plays an influential role.

Hence in order to serve the objectives we have adopted a sampling technique with questionnaires being the main tool. We conducted the survey through the direct interactions by taking the sample size of 400 consumers of Hyderabad, with respondents who would be exclusively the population of Hyderabad. The sampling units for consumer survey are the individuals who reside in Hyderabad and also the earning members of the family like, Professionals, Self-employed, Home makers etc., The convenience sampling technique is adopted.

After the data had been collected through the questionnaires it was being fed into the computer in Excel Sheets where all the ranked parameters were given the same ranks and scaling attributes by attaching specific weights to the respective scales. The Ownership of CTV along with the awareness of the features of the same were fed in the cells as a unit, which gives a total count of the ownership of the products. Hence using the properties of Excel we were able to calculate the total percentage of people who own a particular brand

such as   BPL, Sony, Videocon, LG etc. among a total population size of 400 out of the rest. After the data was fed we tried to analyze the data both statistically as well as qualitatively which is explained below.

Data Analysis

In the overall process of data analysis we have attempted to do the following kinds of analysis in our questionnaires:

1.Factor analysis: To analyze the important influential factors that the company should concentrate on in improving sales and brand image.

2. Chi- Sq analysis: To analyze the trends in the   Brand preferences taking into account the influences of age, income and education.

4. Empirical Investigation

We have the following results of Factor Analysis from the above types of classification:

Income Wise: 1) Less than 50,000

IT may be observed from table 1 that four components have been extracted and these components are particularly named according to the factors that are clubbed into as a component. Those factors, which are of the highest magnitude, would be clubbed together into a component. Following this methodology, the first component has three factors with high values namely 0% interest on finance, picture quality and sound quality. Considering all these factors together this component may be named as Quality by itself. As sound quality and picture quality by themselves attribute to quality of the product, the 0% interest on finance only enhances the affordability of these products for the consumers. The second component has as its clubbed factors Advertising, Price, and after sales service. Considering these factors it is well known that

consumers give preferences for the investment they make in a product, hence they may have apprehensions of their purchase whether the product purchased is of good quality or not. This apprehension can be warded off only by the assurance from the dealer or other sources of good after sales service. Moreover advertising would also build more confidence in the consumer about the purchase for it would enhance the popularity of the product. Hence clubbing theses aspects we arrive at Value for money as the second component. The third component becomes Accessible utility as the factors clubbed include Credit card facility, Additional features and Warranty. There may be certain incentives or factors, which may drive the consumer to buy a particular brand. While the consumer may not have ready cash the facility of credit card purchase would most likely make the product more accessible, the factors additional features and warranty are the utilities derived from the product. Hence these factors may be termed as Accessible utility. The last component includes the remaining factors namely suggestions of dealers and company name which directly relate to the opinions and perceptions about the brand among the dealers and the consumers. Hence this component is named as brand image. From the above results it could be concluded that the people belonging to this income category primarily place importance to the Components arrived at by clubbing those factors with almost similar magnitudes. Hence the marketer while targeting this income group should concentrate on these following components: 1.Quality 2.Value for money 3.Accessible utility 4.Brand Image

Income Wise: 2) 50,000 to 100,000

Table-2 presents the component matrix of income group 50,000 to 1, 00,000 and five components have been extracted. The reasons for the clubbing of variables were primarily due to the same degree of importance assigned to the variables clubbed by the consumers. Thus the first component comprised of picture quality and sound quality. As with the previous case these variables can be clubbed to form a single component Quality. The next factor is support services as it includes those variables, which would aid the

purchase of the product. These services include Credit card facility and the After-sales services offered for the product. The third component includes the variables Additional features, 0% interest on finance and Warranty, which can be termed as the Accessibility factor as the facility of 0% interest on finance and the warranty can bring about the assurance for the product to be accessible and reliable. The fourth component includes Advertising and suggestions of dealers, which can be coined into a new, factor namely popularity. While advertising enhances the image of the brand among the consumers, when a dealer suggests a brand, the product is conceived to be more popular. The last factor namely reliability includes the variables Price and Company Name as the image of the company along with the cost/ value of the product enhance the reliable nature of the brand. The following is the list of the factors, which have to be duly considered while targeting this income group: 1. Quality 2. Support Services 3. Accessibility 4. Popularity 5. Reliability

Income Wise: 3) 100,000 to 150,000

With the help of table –3 by similar combinations, the factors arrived at are described below with the first factor being Quality which includes Sound and picture quality. The second factor is Goodwill which includes Company name and after sales service. The third factor Popularity includes Advertising and suggestions of dealers as was with the previous income group. The next factor is affordability including Price and 0% interest on finance. While the cost of the product by itself explains the affordability, the same is enhanced by the various schemes available to the consumer to acquire such durables. The fifth factor is termed Features as it includes only one variable i.e. additional features of the product. The sixth factor includes Credit Card facility and Warranty, which may be clubbed under the named support services. Listing out the factors the following can be arrived at: 1. Quality 2. Goodwill Popularity 4.Affordability 5. Features 6. Support Services

Income Wise: 4) 150,000 to 300,000

It may be observed from table-4 that the first factor for this income group is Quality as with the previous cases, which again includes the two variables picture and sound quality. The second factor is termed value for money as it includes under its head the variables Price and Warranty. While the Price itself describes the worth of the product, the warranty variable further increases its reliability by assuring a good Quality. Thus these factors have been coined under the above-mentioned term. The third factor is Standardized utilities involving feature which relate to the utilities and After Sales Services which ensures the continued experience of the provided utility. The next factor Accessibility including 0% Finance, Advertising and Credit Card facility. As this factor is already explained no further explanations are provided. The next factor is Word of mouth as it includes the variable Suggestions of dealers. The last factor is termed the same as the variable it encompasses i.e. Company name. The factors recognized for this income category are: 1.Quality, 2.Value for Money, 3.Standardized utility, 4.Accessibility, 5. Word of Mouth, 6.Company Name

Income Wise: 5) 300,000 to 500,000

It is observed from table-5 that from this income age group the first factor arrived at was similar to that of the others, which is Quality comprising of the same variables. The second factors comprise the variables Company name and Price, which may be termed as reliability the reason for which was explained earlier. The third factor involves Features and Advertising, which may be clubbed to coin the term Brand outlook as these variables identify the innovations and the communication of the same to the public. The fourth factor includes the variables Suggestions of Dealers and credit Card Facility. As these variable serve as dividing lines between purchase and non-purchase of a brand the factor can be coined as Sales Enhancers. The last factor is Support Services as it includes 0% finance, Warranty and After Sales Services. Listing out all these

factors the following is arrived at: 1.Quality 2.Reliability 3.Brand Outlook 4. Sales Enhancer 5. Support Services

Income Wise: 5) Greater than 500,000

It may be observed from table –6 that the factors that were coined include Quality comprising Picture and Sound Quality. The Second factor Comprises Accessibility including Credit Card facility and Advertising. The third factor is value for Money, which includes Price and Warranty. The fourth factors is termed Utility as it includes the features and finance Schemes. The last factor is Goodwill as it includes Company name, After Sales Services and Suggestions of dealers. It may be observed from table - 7 to table 12 that the age, income and education are independent of brand preference.

5. Conclusion and Discussion

We made an attempt to analyze the factors that influence the buying decision of the consumer in choosing the brand preferences by taking the variables other than the family roles and social influences. It's concluded that that the purchasing decision of the consumer depends on Quality, Goodwill, Popularity, Affordability, Features, and Support Services of the product, this phenomenon observed in all income groups. It's also concluded that the brand preference is independent of age, income and education.

The reasons for this might be: a-Because of the availability of various ranges of products within the brand which cater various income segments, b- The availability of substitutes, c- The information about the product available with out any cost in the market as well from word of mouth from others

Hence we felt that the results quite encouraging indicting the characteristics such as Economic substitutability and technical substitutability, Indifference in brand preference, excludability, rivalry and transparency especially in color T.V. Industry. In the light of these revelations it is desirable for the companies to focus on

the following points to maintain growth rate besides ensuring product differentiation.

Since marketing is the business function directly deals with customers, the market, competitors, environment and the product–market relationships, its suggested that the managers are expected to have proper interactions with consumers to know what the consumer wants and needs of the consumers to maintain quality, good will, popularity, affordability, features and support services of the product other wise they will leave the market. The top management should see that all functional executives should also be understood the marketing which helps the top management to take appropriate strategic decisions.

Globalization has brought with its extensive marketing activities internationally. The global players L.G, Samsung etc have become popular brands these brands are giving cut throat competition to the Indian brands hence its suggested to the Indian managers to adopt proper product policy, pricing policy to tackle the differences in customers, product, locations or marketing environment. Since after sale service also contributes to the brand image, the managers are suggested to give top priority to the after sale service to maintain purchase and sale relationship as well as to attract new customers and retain the existing customers. In our interaction with customers we found that 80% of the customers does not know how to operate the additional features that contains by the Television hence it's suggested that additional features should be supported by giving proper operational knowledge to the customers.

Bibliography

AAKER, D.(1991).*"Managing Brand Equity"*.New York Free Press.

ALEXANDER L.(1993). *"Biel, converting Image into equity",* in David A. Aaker and Alexander L. Biel, eds., Brand equity and Advertising, (Hillsdale, N.J:Erlbaum, 1993), pp.67-82.

ALRECK, P. and SETTLE, R.(1999). "Strategies for building consumer brand preference, *Journal of product and Brand Management*: pp. 130-144.

BARNARD, N.; BARWISE, P. and EHRENBERG, A(1990). *"Brand Attitudes over time"*. CmaC working paper, London Business School

BARWISE, P. and EHRENBERG, A(1985). "Consumer beliefs and brand Usage, *Journal of market research society,* 27 April, pp. 81-93.

BIRD, M.; CHANNON, C., and EHRENBERG, A(1970). "Brand Image and Brand Usage", *Journal of Marketing Research*, 7 (August), pp. 307-14.

CHONG, L.(1996). "Department Stores in Troubled water: A Singapore encounter". *International Journal of Retail & Distribution Management*; 24; pp. 34-39.

DIBB, S.(1996). "The impact of the changing marketing environment in the Pacific Rim: four case studies", *International Journal of Retail & Distribution management,* 24; pp.16-29.

EHRENBERG, A.(1970). "Consumer Attitudes and brand usage". *Journal of market research society*, 12 (October), pp.233-47.

EHRENBERG, A; GOODHARDT, G. and BARWISE, P.(1990). "Double Jeopardy Revisited". *Journal of Marketing*, 54 (July) pp.82-91.

KELLER, K.(1993). "Conceptualizing, measuring, and Managing customer-based Brand equity", *Journal of Marketing*, 57 January, pp. 1-22.

KOTLER, P.(2000). *"Marketing management",* tenth edition, saddle River, NJ:Prentice-Hall.

MORRISON, D.(1979). "Purchase Intension and Purchase Behavior" *Journal of marketing*, 43 (Spring) pp. 65-74.

LEVEY, S.(1959). *"In symbols for sale",* HBR July-August, pp.117-124

OWEN, S.(1993). *"The labor image power Survey; A global assessment of Brand strength,"* in David A.Aaker and Alexander L. Biel, eds Brand equity and advertising (Hillsdale, N.J: Erlbaum,), pp, 11-30

ZAJANC(1968). "Attitudinal effects of mere exposure", *Journal of personality and social Psychology,* Monograph 9 (2, Part-2).

Table 1. Component Matrix (a)

Component*100				
	1	2	3	4
ADVTER	-5.94	57.1	54.3	-13.2
CARD	-27.1	52.4	-67.4	-6.8
FEATURES	57.9	31.1	-32.3	47.5
FINANCE	-70.1	38.5	-20.9	21.7
NAME	-64.6	-34	8.62	
PICT	79.2	-26.4	22.7	-10.7
PRICE	-11.4	-64.6	-28.1	-7.02
SERVICE	-13.4	-67.5	23.4	34.7
SOUND	77.1	19.9	-17	8.05
SUGGEST	-2.23	-3.73	-8.74	-95.2
WARRANTY	-14.4	44.1	72.7	9.04
Extraction Method: Principal Component Analysis.				
a 4 components extracted.				

Table 2. Component Matrix(a)

Component*100					
	1	2	3	4	5
ADVTER	44.70	-16.30	16.40	59.00	26.40
CARD	17.30	-53.20	-60.40	-25.60	-24.90
FEATURES	47.70	4.39	-45.70	17.90	44.80
FINANCE	-38.30	-50.30	39.20	0.27	-29.60
NAME	-44.80	2.47	-15.00	-41.10	50.20
PICT	72.60	34.30	36.40	-4.87	-24.80
PRICE	-48.10	33.80	-26.60	27.60	-50.70
SERVICE	-13.10	71.60	27.50	-40.40	13.30
SOUND	79.00	-9.14	14.40	-26.30	-15.60
SUGGEST	-28.30	38.80	-6.84	50.00	5.13
WARRANTY	-29.90	-50.80	52.30	7.99	28.30
Extraction Method: Principal Component Analysis.					
a 5 components extracted.					

Table 3. Component Matrix(a)

Component*100				
	1	2	3	4
ADVTER	-22.3	2.762	61.1	-51.2
CARD	-42.8	-10.1	-9.982	37.1
FEATURES	73	-12	4.34	11.3
FINANCE	-43.3	11.7	27.9	53.3
NAME	6.895	-75	3.908	15.5
PICT	78.8	19.4	7.737	21.1
PRICE	-24.4	-44.6	-32.9	-47
SERVICE	-10.2	61.2	-38.7	-35.3
SOUND	80.6	19	3.246	-6.985
SUGGEST	-26.4	34.3	65.1	1.556
WARRANTY	-29.4	36.5	-49.2	25.3
Extraction Method: Principal Component Analysis.				
a 6 components extracted.				

Table 4. Component Matrix(a)

Component*100						
	1	2	3	4	5	6
ADVTER	-31.80	-3.84	-37.90	-47.90	-27.50	51.40
CARD	-54.20	39.20	20.90	41.10	-17.10	8.20
FEATURES	11.20	42.50	65.40	-24.00	1.37	32.60
FINANCE	-30.50	37.00	-19.80	60.50	31.30	0.11
NAME	-38.50	-40.10	30.80	-33.90	13.30	-49.00
PICT	65.30	-29.60	35.50	27.30	13.60	-5.73
PRICE	-34.60	-70.50	-7.45	17.10	-10.30	0.64
SERVICE	45.30	12.50	-68.30	7.63	-12.40	-21.00
SOUND	65.80	-3.32	14.20	14.60	-54.40	6.54
SUGGEST	34.30	-12.90	-15.80	-14.10	71.80	37.40
WARRANTY	11.50	60.90	-9.15	-42.50	7.54	-46.60
Extraction Method: Principal Component Analysis.						
a 6 components extracted.						

Table 5. Component Matrix(a)

Component*100					
	1	2	3	4	5
ADVTER	37.50	-37.10	-35.60	45.60	40.20
CARD	-38.00	9.97	12.80	-76.20	34.80
FEATURES	-12.20	17.00	-88.60	-16.80	-18.10
FINANCE	-64.40	29.10	23.60	10.40	14.40
NAME	-42.10	-72.90	0.24	19.30	-1.95
PICT	82.40	23.00	4.86	5.97	20.60
PRICE	14.40	-76.10	36.00	-9.58	0.00
SERVICE	37.80	32.20	23.60	7.97	-66.40
SOUND	78.10	33.10	7.31	-13.50	7.79
SUGGEST	-61.90	36.50	-13.50	23.80	-32.00
WARRANTY	-31.40	49.60	30.40	46.40	30.90
Extraction Method: Principal Component Analysis.					
a 5 components extracted.					

Table 6. Component Matrix(a)

Component*100					
	1	2	3	4	5
ADVTER	-2.097	84.7	28.3	14.5	6.237
CARD	-10.2	-80.2	19.4	40	-3.367
FEATURES	-23.8	-10.9	37.5	-53.1	-63.7
FINANCE	-50.7	-12.3	32.9	51.9	37.6
NAME	-56.1	2.426	42.9	-36.3	27.8
PICT	78.8	22.4	-3.76	-14.9	25.1
PRICE	-47.6	14	-65.4	-27.8	22.8
SERVICE	76.4	-15.7	0.3133	-21	34.3
SOUND	78.2	-35	-2.179	9.276	-18.2
SUGGEST	28.3	57.8	22.5	45.8	-32.6
WARRANTY	-26.3	6.892	-72.8	30.5	-29.1
Extraction Method: Principal Component Analysis.					
a 5 components extracted.					

Table 7. Age Classification. Contingency Table (Brand Preference)

Brand	15-25	26-35	36-45	46 & above	Total
Sony	73	47	26	18	164
BPL	44	43	23	22	132
Onida	30	20	16	12	78
Philips	27	22	16	15	80
Samsung	53	45	26	18	142
Videocon	34	36	19	17	106
LG	52	39	35	23	149
Others	27	28	9	10	74
Total	340	280	170	135	925

Chi- square Value: 16.23, Alpha: 32.671. Null: Brand Preferences across all age groups are same. Alternative Brand Preferences across all age groups are not equal. Since calculated value is less than theoretical value null hypothesis is accepted

Table 8. Contingency Table(ownership)

Brand	15-25	26-35	36-45	46 & above	Total
Sony	15	15	5	2	37
BPL	37	30	14	16	97
Onida	17	11	9	3	40
Philips	12	17	7	2	38
Samsung	16	16	12	4	48
Videocon	18	28	20	9	75
LG	4	6	6	3	19
Others	22	15	16	15	68
Total	141	138	89	54	422

Chi sq Value:27.26044, Theoretical Value: 32.671 (at alpha 95%). Null Hypothesis: Brands of TVs owned are same across all age groups. Alternative Hypothesis: Brands of TVs owned are not same across all age groups. Since calculated value is less than theoretical value null hypothesis is accepted.

Table 9. Income Classification. Contingency table
(Brand preference)

Brand	<50	50-150	150-300	300-500	500& above	Total
Sony	14	27	28	487	29	164
BPL	16	33	31	27	17	133
Onida	11	23	18	14	7	79
Philips	8	16	21	24	5	80
Samsung	13	22	28	50	19	143
Videocon	12	25	19	31	13	106
LG	15	27	32	41	19	148
Others	12	10	14	16	18	74
Total	101	183	191	251	127	927

CSV: 44.04382323, Alpha: 49.786.Null: Brand preference across all income categories is same. Alternative: Brand preference across all income categories is not equal. Since calculated value is lesser than theoretical value the null hypothesis is accepted. Income Classifications in thousand.

Table 10. Contingency table(Ownership) (thousands)

	<50	50-100	100-150	150-300	300-500	500 & above	Total
Sony	3	4	5	14	7	3	36
BPL	8	17	24	27	14	7	97
Onida	6	10	9	6	6	3	40
Philips	4	3	10	14	3	4	38
Samsung	3	7	7	20	8	4	49
Videocon	7	10	20	25	8	5	75
LG	3	4	3	4	3	1	18
Others	7	16	15	14	11	4	67
Total	41	71	93	124	60	31	420

CSV: 28.80363819, Alpha: 49.786. Null: Brands owned across all income categories are same. Alternative: Brands owned across all income categories are not same. Since calculated value is lesser than theoretical value the null hypothesis is accepted.

Table 11. Education Classification. Contingency table (ownership)

Brand	10th	High S.	Grad.	Post-grad	Diploma	others	Total
Sony	1	2	20	11	3	0	37
BPL	8	11	59	46	9	2	135
Onida	5	8	34	29	3	1	80
Philips	2	6	34	31	6	1	80
Samsung	1	10	69	52	9	4	145
Videocon	2	11	55	32	5	2	107
LG	5	9	77	51	6	1	149
Others	5	4	23	30	11	0	73
Total	34	67	426	339	54	13	933

Note: High S.= High School, Grad.=Graduation. CSV: 45.64303, Alpha: 49.78. Null: Brands owned across all education categories are same. Alternative: Brands owned across all education categories are not same. Since calculated value is lesser than theoretical value the null hypothesis is accepted.

Table 12. Education and Brand Preference) Contingency table
(Brand Preference)

Brand	10th	High school	Graduation	Post-grad	Diploma	Others	Total
Sony	6	8	75	68	5	2	164
BPL	8	11	59	46	9	2	135
Onida	5	8	34	29	3	1	80
Philips	2	6	34	31	6	1	80
Samsung	1	10	69	52	9	4	145
Videocon	2	11	55	32	5	2	107
LG	5	9	77	51	6	1	149
Others	5	4	23	30	11	0	73
Total	34	67	426	339	54	13	933

CSV: 42.60155, Alpha: 49.78. Null: Brands owned across all education categories are same. Alternative: Brands owned across all education categories are not same. Since calculated value is lesser than theoretical value the null hypothesis is accepted.