

An Empirical Study on Brand Preference and Customer Satisfaction of Selected Household Durables in Vadodara City

Ms. Deepa Bhatia

*Assistant Professor and Research Scholar
Department of Commerce and Business Management,
Faculty of Commerce,
The Maharaja Sayajirao University of Baroda,
VADODARA, Gujarat
Email: deepabhatia14@yahoo.com*

Dr. Kalpesh D. Naik

*Assistant Professor and Research Guide
Department of Commerce and Business Management,
Faculty of Commerce,
The Maharaja Sayajirao University of Baroda,
VADODARA, GUJARAT
Email: kalpeshnaikmsu@gmail.com*

Abstract

Consumer behaviour is a study of how consumers make purchase decisions. Consumer durable industry in India is divided into two categories viz. consumer appliances called as white goods and consumer electronics called as brown goods. White goods consist of home appliances for domestic use like air conditioners, refrigerators, and washing machines whereas brown goods consist of electronic appliances like smartphones, computers, laptops, televisions, and digital watches. There has been an increase in the growth of this industry due to an increase in the disposable income of the consumer. This study was undertaken to understand the pre-purchase and post-purchase behaviour of consumers towards five household durables, viz. refrigerators, televisions, washing machines, air conditioners, and cars. The purpose was to examine brand preference, factors influencing the purchase of durables, and the satisfaction level of customers towards these durables. This study was conducted among respondents belonging to Vadodara city in Gujarat state. Chi-square and ANOVA tests were applied to test the hypothesis. The results of the study indicated that consumers possess well-known brands of durables like Samsung, LG, Whirlpool, Maruti, and Hyundai. The most important factors motivating consumers in the purchase of durables were company reputation, brand name, technology model/design, and after-sales service.

Keywords: Brand Preference, Consumer Behaviour, Consumer Durable Industry, Customer Satisfaction, Household Durables, White Goods.

1. Introduction

Consumer behaviour is the study of how consumers purchase various goods and services. There are various factors which affects the consumers' decision making for goods and services. These factors are cultural, social, psychological, and personal factors. An attempt has been made in this study to understand the buying behaviour of consumers residing in Vadodara city of Gujarat state towards selected household durables. Household durables or consumer durables are those goods which are high involvement type, lasts for a long period of time and is disposed of when it is not in use, or not working or has become obsolete. These goods include goods which are purchased by consumers for personal use or for domestic consumption

purpose. Consumers consider these durables as necessity and not luxury and therefore it is seen in every household in Vadodara city. So, to understand which factors affect the consumers in their purchase decision, a survey was conducted among households residing in urban areas of Vadodara city, possessing selected household durables.

There is intense competition in durable market due to entry of foreign companies in Indian market. The revenue from consumer durable industry is expected to reach to US \$ 34 billion by 2025.¹

Brand

“Brand is a name, term, sign, symbol, or combination of them, intended to identify goods and services of one seller and to distinguish them from those of others.” (Kotler, 1998).

Brand Preference

“Brand preference is the extent to which a consumer favours the designated service provided by his or her present company, in comparison to the designated service provided by other companies in his or her consideration set.” (Hellier et al. 2003).

Customer Satisfaction

“Customer satisfaction is a person’s feeling of pleasure or disappointment resulting from comparing a product’s perceived performance in relation to his or her expectations.” (Kotler, 1998).

Household Durables

Household durables are “those consumer goods that do not quickly wear out and yield utility over a long period of time.”² Consumer durable market in India can be divided into two groups, viz., white goods and brown goods.³ White goods consists of consumer or domestic appliances such as air conditioners refrigerators, washing machines, ceiling fans, etc. which was painted in olden times in white colour and companies manufactured these durables in white colour only. But, today, they are available in other colours also, but still today, they are considered as white goods.⁴ Brown goods refer to small appliances which were earlier made from Bakelite in earlier times. They are named brown goods because, earlier, these goods used to be covered with a wooden frame. These goods consist of electric appliances like blenders, grinders, pressure cookers, microwave ovens, irons, and consumer electronics like televisions, smartphones, tablets, digital watches, and home entertainment systems.⁵ White goods are generally purchased for household work purposes, whereas brown goods are generally purchased for educational or entertainment purposes. The market value of Indian consumer appliances and consumer electronics industry was US\$ 31.48 billion during the year 2017 which is expected to increase and reach to US\$ 48.37 billion by the year 2022.⁶ White goods market in India reached to \$13.66 billion in the F.Y. 2021.⁷

2. Review of Literature

(Dharamraj, 2017) examined consumer behaviour towards durable goods in the Arni region of Tamil Nadu state. The durable goods included in his study were television, mobile phone and electric fan. The purpose of undertaking this research study was to know the brands of television, mobile phone and electric fan possessed by consumers, to know the attributes considered before purchasing these durables and to know the overall satisfaction from these durables. A survey was carried out among 100 respondents residing in Arni city through simple random sampling method. 56% own Samsung mobile phones, 38% own LG televisions, and 42% own Usha fans. 64% relied upon advertisements on television for getting information about

durables. 72% preferred to buy durables from the showroom. The main attributes preferred before making purchase decision was quality, price and technology.

(Kulshreshtra, Bajpai, and Tripathi, 2017) examined consumer preferences for electronic durable goods. Consumer preferences were affected by brand equity, price, advertisements, celebrity endorsements and country of origin. Conjoint analysis was used to understand the impact of various factors on preferences of the consumers towards electronic goods and also the relative importance given by respondents to various factors while evaluating various brands. Conjoint analysis is a technique used to measure consumer preferences. It measures the utility or weightage that a consumer gives to various attributes of a product before making a purchase decision. Their findings reveal that Indian consumers prefer to purchase Indian brands of durables rather than foreign brands, and that price is not very important factor while making a purchase decision for electronic durables. Respondents gave more weightage to brands, advertisements, and Indian manufacturers while purchasing durables.

(Rana and Jha, 2018) examined the buying behaviour of consumers towards selected white goods in the Delhi-NCR region. The objectives of their research work were to identify various factors influencing the buying behaviour towards durable white goods, viz. refrigerators, televisions, air conditioners washing machines, televisions, and microwave ovens. A survey was conducted among 150 respondents in Delhi-NCR region and only those respondents were included in the survey who possessed white goods. They depend upon television advertisements and electronic media for getting information about the durables. Their study found out that the respondents consider features, model, brand name, price, durability, size, and maintenance facilities of the white. Goods while making purchase decision.

(Karupusamy and Veerapan, 2019) carried out a study on "Consumer Buying Behaviour of Durable Products in the Puducherry region." The durables selected in this study were televisions, refrigerators, washing machines, and air conditioners. This study was conducted to examine various brands of these durables possessed by consumers and to identify major factors influencing their purchase of these durables. The study found out that all respondents own televisions, 94% possess washing machines, 97% possess refrigerators and 90% possess air conditioners. The most popular brands possessed by respondents were Samsung, LG, Sony, Whirlpool, IFB, Voltas, and Daikin. Further, among various factors influencing respondents to make purchase decisions, they assigned the 1st rank to quality, 2nd to features and 3rd to warranty/guarantee. No significant association was found between age, education, occupation, and income and the brands of these durables possessed by respondents.

(Muruganantham and Janani, 2020) examined customer satisfaction of people towards Godrej refrigerators in Coimbatore city. The main objectives of the study were to identify the main factors influencing the purchase of a Godrej refrigerator and to measure their satisfaction level with the refrigerator. Respondents gave the first rank to durability; the second rank to after-sales service; and the third rank to style and design while purchasing Godrej refrigerators. Sources of information considered by them before purchasing durables were television and newspaper advertisements. 70% of them purchased refrigerators on credit. 52% were strongly satisfied with the Godrej brand and would recommend it to others. 84% said that they were satisfied with the Godrej brand and would not switch over to another brand in the future.

(Sharma and Kaur, 2020) in their study examined the effects of advertising and branding on the buying behaviour of consumers for white durable goods, viz., washing machines, inverters, and microwave ovens. This study was conducted in the NCR region with a sample size of 80 respondents. This study was undertaken to find out the effect of advertising and branding on buying behaviour of consumers towards white goods. The results of the hypothesis indicated that there is significant effect of advertising media types and branding on buying behaviour towards white goods. The other factors influencing them to purchase white goods were accessibility, warranty and guarantee, and after-sales service.

(Kalimuthu and Santhiya, 2020) examined factors influencing the purchase of Whirlpool brand home appliances and also measured customer satisfaction of respondents, taking into account a sample of 120 respondents. To select a sample from the population, only those respondents who possessed Whirlpool brand of home appliances were included in the sample. If they possessed another brand other than Whirlpool, they were not included in the sample. Major home appliances were included in this study, which are possessed by the majority of households, like televisions, refrigerators, washing machines, and air conditioners. Respondents assigned ranks according to weightage given to factors which most influenced them to purchase the Whirlpool brand of home appliances. They ranked customer service first, guarantee and warranty second, and discounts and special offers third. 52% purchased Whirlpool brand products due to their good quality. 53% agree that any product of the Whirlpool brand is of the latest technology. They were satisfied with the Whirlpool brand of home appliances.

(Talukdar, 2020) conducted a study to examine the pre-purchase behaviour of respondents with regard to durables in Kamrup district belonging to Assam. 100 respondents were selected through a quota sampling method from two districts of Assam state. Durables included in the survey were refrigerators, televisions, electric fans, and mobile phones. Respondents were asked the various reasons for purchasing these products, to which they said that, these goods are necessary items and the use of these products makes their lives more comfortable. The purchase decisions for the refrigerator and television were influenced by the income level of households. They purchased electric fans and mobile phones because they considered them as their main needs or essential requirements. The main factors influencing brand selection of these durables were price, design, brand name, features, popularity and guarantee / warranty.

(Dixit and Srivastav, 2020) undertook a study to examine the buying behaviour of consumers towards four-wheelers by selecting a sample of 250 respondents from Greater Noida city through a convenience sampling method. The main objectives of their research study were to examine various brands of cars owned by respondents, various factors influencing their purchase of four-wheelers, and the impact of different attributes of a product influencing them to buy four-wheelers. The results of their study indicated that family need, status, company name, and brand image are various product attributes which consumers consider while buying a car. Price, television advertisements and the internet are the most influential factors during the purchase of a car by them.

(Srikanth and Madhavi, 2020) carried out a study entitled “Consumer behaviour towards passenger car segment with reference to Andhra Pradesh”, examined the buying behaviour of consumers who were owners of cars. They in their research study made an attempt to examine brands of cars owned by consumers and various attributes of cars influencing their decision to buy a car. This study was conducted in Andhra Pradesh among 190 respondents, who were selected through a convenience sampling method. Respondents gave importance to fuel efficiency (55%), price (49%), comfort (44%), and engine power (42%) during the purchase of a car. By testing the hypothesis through a chi-square test, it was observed that no significant relationship exists between the demographic profile of respondents and brand preference of cars.

3. Statement of the Problem

Customer evaluate multiple brands with regard to price, brand image, company reputation, technology, offers, maintenance, credit facilities, and after-sales services. Finally, he comes to a decision where he selects his most preferred brand. It is very difficult to understand their buying preferences. Their tastes and preferences may change over a period of time due to changes in technology, an increase in online shopping, credit facilities, easier availability and accessibility, and innovative features in the product. Therefore, this study was undertaken to understand the various factors influencing the purchase of durables, reasons for choosing their preferred brand of durables and finally their satisfaction level was also measured.

4. Scope of the Research Study

This study was carried out in Vadodara, a city in Gujarat state. The durables selected for the study were refrigerators, televisions, washing machines, air conditioners, and cars. These five durables were selected as they are very common, possessed by many Indian households, and are now considered necessity goods. Only those respondents were included in this study who possessed all these selected durables.

5. Objectives of the Research Study

- To understand the brands of selected durables possessed by respondents,
- To identify various factors influencing the purchase of selected household durables by respondents.
- To understand the reasons for selecting respondents' most preferred brand of durables,
- To measure the satisfaction level of respondents towards these selected household durables.

6. Hypotheses of the Research Study

Four major hypotheses were framed to test that whether there is a significant relationship between two or more variables or not.

Ho₁: There is no relationship between the demographic variables of the respondents and durable brands preferred by them.

Ho₂: There is no direct relationship between higher income and the purchase of costly durables by the respondents.

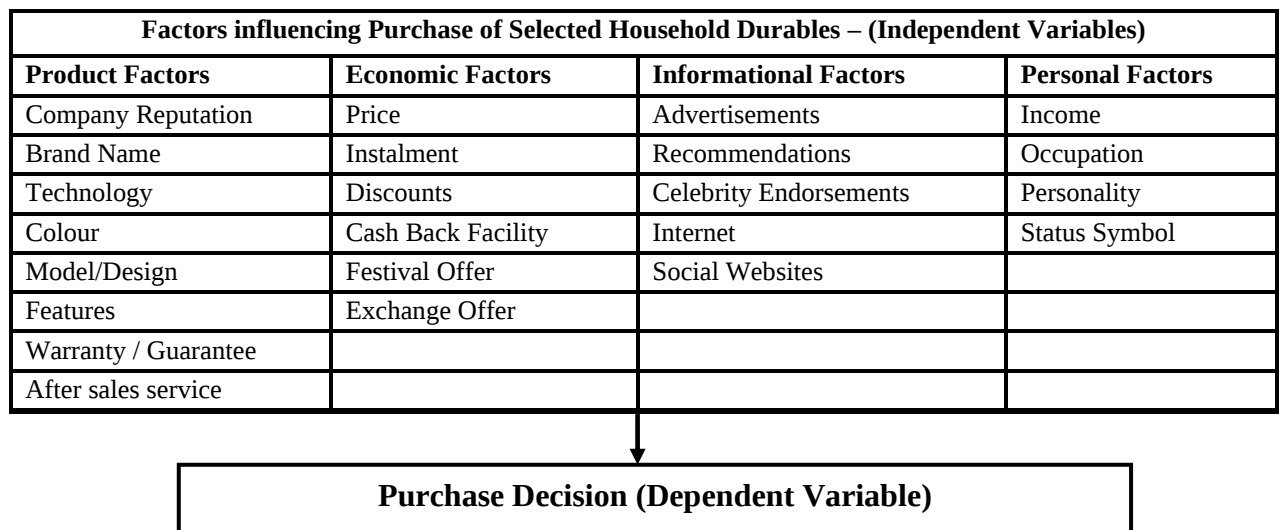
Ho₃: Factors influencing the purchase of durables are indifferent to various demographic factors of respondents.

Ho₄: Respondents' level of satisfaction towards various features of durables is not dependent upon their demographic variables.

7. Conceptual Framework of the Research Study

The conceptual model of the research study is shown in figure 1.

Figure 1: Conceptual Model of the Research Study



Source: Compiled by the Researcher

8. Research Methodology

Research Design

The research design used for the research study was descriptive because it describes the various dimensions of buying behaviour of consumers toward selected household durables.

Sources of Data

(i) Secondary Data

Secondary data was obtained by referring to various journals, websites, and reports on the consumer durable industry in India.

(ii) Primary Data

Primary data for the research study was collected through survey by distributing a structured non-disguised questionnaire, to the respondents to ascertain necessary information about their demographic profile and buying behaviour for selected durables.

Sampling Decisions

(i) Population

Respondents belonging to the age group of 25 to 60 years, residing in urban areas and possessing all five household durables constitute the population in this study.

(ii) Sampling Unit

A sampling unit consists of a family or household staying in urban areas of Vadodara city and possessing all five durables, viz., refrigerator, television, washing machine, air conditioner and car.

(iii) Sample Size

Sample size was restricted to 100 respondents as it was a pilot study.

(iv) Sampling Method

To select these 100 respondents from the population, convenience sampling method was used and respondents residing in urban areas of Vadodara city only were approached.

(v) Area Covered in the Research Study

This study was conducted in various urban areas of Vadodara, a city in Gujarat state.

Research Instrument

A structured, non-disguised questionnaire was drafted and was administered to only those respondents who possessed all the selected durables.

Statistical Tests applied in the Research Study

The collected data which was collected through survey was analysed through SPSS software version 21. Mean, percentage frequency distribution, standard deviation, chi-square test, ANOVA and factor analysis was performed to analyse the data and test the hypotheses to interpret the results.

9. Limitations of the Research Study

- This study was conducted only in Vadodara city, including only urban areas. So, its findings cannot be generalized.
- The consumer durable industry consists of so many durables like electronic appliances, kitchen appliances, furniture, etc. So, to understand the buying behaviour, only five durables were selected. Their buying behaviour might vary for other types of durables.
- The sample size of the study were 100 respondents as it was a pilot study.
- The results might differ if this study had been conducted in some other city.
- Possession of second-hand durables by respondents was not included in this study.

10. Data Analysis and Interpretations

Table 1: Demographic Profile of the Respondents

Demographic Variables	Frequency	Percentage
Gender		
Male	32	32
Female	68	68
TOTAL	100	100
Age Group		
Below 30 Years	41	41
31-45 Years	34	34
45-60 Years	21	21
60 Years & above	04	04
TOTAL	100	100
Marital Status		
Married	71	71
Unmarried	29	29
TOTAL	100	100
Educational Qualifications		
Up to 12 th	07	07
Diploma	02	02
Graduates	35	35
Post Graduates	22	22
Professional Degree	34	34
TOTAL	100	100
Occupation		
Service	61	61
Business	08	08
Profession	10	10
Retired	4	4
Home Maker	17	17
TOTAL	100	100
Monthly Income		
Up to 15,000	9	9
15000 to 30,000	24	24

30,000 to 45000	17	17
50,000 & above	50	50
TOTAL	100	100
Number of Members in Family		
1-4 Members	58	58
4-8 Members	35	35
More than 8 Members	07	07
TOTAL	100	100
Type of Family		
Joint	48	48
Nuclear	52	52
TOTAL	100	100

In table 1, the percentage frequency distribution of various demographic variables of respondents is given. Out of a total of 100 respondents, 32% were males and 68% were females. 71% were married and 29% were unmarried. 35% were graduates and 34% possessed professional degrees. Hence, they were well educated. 61% of them were doing service and very few women were homemakers, i.e., 17%. 50% belonged to the income group of Rs.50000/- and above. 48% belonged to joint families and 52% belonged to nuclear families.

Table 2: Brands of Selected Household Durables Possessed by Respondents

Refrigerator		Television		Washing Machine		AC		Car	
Brand Name	%	Brand Name	%	Brand Name	%	Brand Name	%	Brand Name	%
LG	42	Samsung	28	Samsung	22	Blue Star	18	Maruti Suzuki	47
Samsung	33	Sony	27	LG	44	Electrolux	2	Hyundai	26
Videocon	01	Onida	8	IFB	12	Samsung	7	Tata Motors	9
Godrej	05	LG	18	Godrej	3	Hitachi	11	Mahindra	1
Haier	05	BPL	3	Electrolux	1	Daikin	17	Honda Cars	6
Hitachi	02	Haier	0	Haier	2	Voltas	6	Chevrolet	1
Whirlpool	11	Panasonic	6	LG	6	LG	14	Others	10
Panasonic	01	Mi	3	Whirlpool	4	Onida	08		
Others	0	Others	7	Others	6	Others	17		
TOTAL	100	TOTAL	100	TOTAL	100	TOTAL	100	TOTAL	100

In table 2, the brand name of selected durables possessed by respondents is shown. It is seen that they own the well-known and most popular brands of these durables. 42% own the LG brand of refrigerator, 28% own Samsung, and 27% own the Sony brand of television. Regarding washing machines, the LG brand is the most famous, owned by 44% of respondents, and for air conditioners, 18% own Blue Star 17% own Daikin and 14% own the LG brand. Regarding cars, Maruti Suzuki and Hyundai are dominant players in the market. 47% own various models of Maruti brand and 26% own the various models of Hyundai brand of cars.

Table 3: Amount Spent in Purchase of Selected Household Durables by Respondents

Price (In Rupees)	Refrigerator (Percentage)	Television	Washing Machine	Air Conditioner
Up to 10,000	1	1	16	1
10,000 to 25000	52	37	49	35

25,000 & above	47	62	35	64
TOTAL	100	100	100	100

From table 3, it is observed that 52% purchased refrigerators at a price between Rs.10000/-to Rs.25000/- 62.2% spent more than Rs.25000/-on the purchase of a television, 49% spent between Rs.10000/-to Rs.25000/-for a washing machine, and 64% spent more than Rs.25000/-for the purchase of an air conditioner.

Table 4: Amount Spent in Purchase of a Car by Respondents

Price (In Rupees)	Number & Percentage
Up to 3.5 Lacs	6
3.5 Lacs to 10 Lacs	73
10 Lacs & above	21
TOTAL	100

From table 4, it is observed that 73% of respondents purchase cars priced between 3.5 lacs and 10 lacs, and 21% own luxurious cars priced above 10 lacs.

Table 5: Respondents' Rankings with regard to Reasons for Purchasing their Preferred Brand of Household Durables

Reasons	Respondents' Rankings								Rank
	1	2	3	4	5	6	7	Average Score	
Brand Name	25	26	14	14	7	9	5	3.0	2
Company Reputation	15	21	16	13	16	12	7	3.58	3
Past Experience	18	6	11	21	11	8	25	4.25	5
Reasonable Price	10	16	18	15	19	9	13	3.96	4
Latest Technology	26	21	24	12	11	5	1	2.80	1
Cash back offer	4	4	12	14	18	31	17	5.0	6
No Cost EMI	3	5	6	11	19	25	31	5.37	7

From table 5, it can be observed that the most important reasons for selecting the most preferred brand of durables are technology, which is ranked 1st, followed by brand name and company reputation, which were ranked 2nd and 3rd by respondents.

Table 6: Reliability Score for Scale Items

Variables	Cronbach Alpha	Number of Items
Factors influencing Purchase of Durables	0.70	23
Overall Satisfaction	0.65	5
Features of Refrigerator	0.60	5
Features of Television	0.74	5
Features of Washing Machine	0.65	4
Features of Air Conditioner	0.63	5
Features of Car	0.55	5
All Features	0.79	24

From table 6, it is seen that the data is considered reliable as the value of Cronbach alpha is above 0.5.

Table 7: Kaiser Meyer Olkin (KMO) Measure of Sampling Adequacy and Bartlett 's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.766
Bartlett's Test of Sphericity	Approx. Chi-Square	644.088
	Degrees of Freedom	253
	Significance	.000

It can be seen from table 7, that the value of KMO is 0.566 and the p-value of Bartlett's test of Sphericity is 0.00, which indicates that factor analysis can be performed on this data.

To identify the most influencing factors out of 23 factors factor analysis was done in SPSS software version 21. Principal component analysis method was used to perform factor analysis and determine which are the most important factors influencing respondents' purchases of durables. A reliability test was also performed on these factors and the value of Cronbach alpha was 0.7. Hence, the data was considered as consistent.

Table 8: Factor Analysis - Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.581	15.570	15.570	3.581	15.570	15.570	2.791	12.137	12.137
2	2.773	12.057	27.627	2.773	12.057	27.627	2.300	9.999	22.136
3	2.056	8.940	36.567	2.056	8.940	36.567	2.123	9.230	31.366
4	1.553	6.750	43.317	1.553	6.750	43.317	1.982	8.619	39.985
5	1.514	6.581	49.897	1.514	6.581	49.897	1.836	7.985	47.969
6	1.408	6.121	56.019	1.408	6.121	56.019	1.621	7.048	55.017
7	1.171	5.090	61.108	1.171	5.090	61.108	1.401	6.091	61.108
8	1.000	4.348	65.456						
9	.958	4.165	69.620						
10	.943	4.100	73.720						
11	.795	3.455	77.175						
12	.756	3.287	80.462						
13	.726	3.156	83.618						
14	.630	2.737	86.355						
15	.525	2.283	88.638						
16	.499	2.170	90.808						
17	.430	1.869	92.677						
18	.404	1.755	94.432						
19	.349	1.519	95.951						
20	.297	1.291	97.242						
21	.280	1.218	98.460						
22	.184	.800	99.260						
23	.170	.740	100.000						

Extraction Method: Principal Component Analysis.

From table 8, it can be seen that a total of 7 factors were extracted out of a total of 23 factors with a variance of 61%. To examine the most influencing factors considered by respondents during purchase of these selected durables, variables with eigen values greater than one is considered. So, out of 23 factors, 7 factors show greater influence while purchasing these durables by respondents.

Table 9: Factor Analysis – Rotated Component Matrix

Factors	Component						
	1	2	3	4	5	6	7
Company Reputation							.796
Brand Name				.549			
Technology					-.619		
Colour							
Model/Design			.678				
Features			.657				
Warranty	.676						
After Sales Service	.643						
Price	.526						
Instalment							
Discount				.789			
Cash Back offer				.751			
Festival Offer	.723						
Exchange Offer	.710						
Advertisements							
Recommendations			.690				
Celebrity Endorsements		.724					
Internet							
Social Websites		.780					
Income							
Occupation		.520					
Personality						.596	
Status						.675	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 31 iterations.

From table 9, it is observed that, which variables have higher factor loadings in explaining the factors. Factor 1 shows 15% of the total variance with factor loadings. Warranty, after-sales service, price, festival offer, and exchange offer are all part of Factor 1.

Table 10: Factor Loadings

Component	Percentage of Variation	Variables	Name of the Factor
	15.570	Warranty	

1		After Sales Service	Offers & Schemes
		Price	
		Festival offer	
		Exchange Offer	
2	12.057	Celebrity Endorsements	Awareness
		Social networking websites	
		Occupation	
3	8.940	Model/Design	Product Attributes
		Features	
		Recommendations	
4	6.750	Brand Name	Popularity of Brand
		Discount	
		Cash Back offer	
5	6.581	Technology	Updated Technology
6	6.121	Instalment	Status Symbol
		Personality	
		Status	
7	5.090	Company Reputation	Company Image

Respondents' opinion was taken on 23 variables, which were reduced to 7 factors through factor analysis, which is shown in table 10. These seven factors are named as offers and schemes, awareness, product attributes, popularity of a brand, updated technology, status symbol, and company image. Also, by calculating the mean score of ratings assigned by respondents on a five-point Likert scale to these variables, the highest mean score was found for technology, followed by company reputation and brand name. Hence, these three factors were considered as the most important factors by the respondents while making purchase decision for household durables.

Testing of Hypotheses

H₀₁: There is no relationship between demographic variables of the respondents and the durable brands preferred by them.

Table 11: Chi Square Test Showing Relationship between Demographic Variables and Durable Brands Preferred by Respondents

Demographic Variables	Chi-Square Value	Degrees of Freedom	p-value	Results
Age Groups				
Refrigerator	27.86	7	0.014*	S
Television	20.641	6	0.029*	S
Washing Machine	17.413	7	0.016*	S
Air Conditioner	26.195	7	0.019*	S
Car	15.636	7	0.027*	S
Marital Status				
Refrigerator	7.602	7	0.369	NS
Television	7.183	6	0.304	NS
Washing Machine	6.537	7	0.479	NS
Air Conditioner	8.340	7	0.304	NS

Car	5.686	7	0.577	NS
Education				
Refrigerator	23.686	28	0.698	NS
Television	24.225	24	0.449	NS
Washing Machine	26.128	28	0.566	NS
Air Conditioner	28.375	28	0.445	NS
Car	17.099	28	0.947	NS
Occupation				
Refrigerator	43.663	28	0.018*	S
Television	35.476	24	0.380	S
Washing Machine	46.352	28	0.019*	NS
Air Conditioner	25.295	28	0.612	NS
Car	45.154	28	0.019*	S
Monthly Income				
Refrigerator	34.025	21	0.029*	S
Television	13.050	18	0.798	NS
Washing Machine	16.830	21	0.721	NS
Air Conditioner	34.609	21	0.012*	S
Car	36.844	21	0.046*	S
Family Size				
Refrigerator	27.600	14	0.01	S
Television	12.320	12	0.420	NS
Washing Machine	15.179	14	0.366	NS
Air Conditioner	11.549	14	0.642	NS
Car	17.929	14	0.210	NS

*Significant at 0.05 level

From table 11, it is revealed that there exists a significant association between age groups, income and occupation, and durable brands possessed by respondents. No association was found between marital status, gender, and family size and the durable brands possessed by respondents.

H₀₂: There is no direct relationship between higher income and the purchase of costly durables by respondents.

Table 12: Chi Square Test showing association between monthly income and amount spent in purchase of selected household durables by the respondents

Monthly Income	Chi-Square Value	Degrees of Freedom	P-Value	Results
Refrigerator	9.207	6	0.162	NS
Television	13.321	6	0.038*	S
Washing Machine	1.588	6	0.102	NS
Air Conditioner	17.967	6	0.024*	S
Car	15.497	6	0.017*	S

*Significant at 0.05 level

From table 12, it can be seen that as the p-value is less than 0.05, the null hypothesis is rejected and therefore there exists a significant relationship between the income of the respondents and the purchase of costly durables by them.

H₀₃: Respondents' opinions on factors influencing the purchase of selected household durables were indifferent across various demographic groups of respondents.

Table 13: ANOVA of Demographic Factors and Opinion of Respondents on Factors Influencing Purchase of Durables

Selected Factors	Age Group		Income		Education		Occupation	
	f-value	p-value	f-value	p-value	f-value	p-value	f-value	p-value
Company Reputation	4.235	0.023	0.386	0.786	0.749	0.561	0.354	0.840
Brand Name	0.962	0.414	1.094	0.355	2.813	0.024*	0.534	0.711
Technology	1.947	0.127	4.233	0.007*	3.036	0.021*	1.879	0.120
Features	2.943	0.039*	1.948	0.127	1.459	0.221	3.258	0.045*
Price	2.132	0.101	0.605	0.613	0.487	0.745	0.934	0.447
Instalment	1.646	0.184	0.042	0.988	1.031	0.395	3.240	0.035*
Discount offer	2.844	0.042*	0.911	0.439	0.121	0.975	1.271	0.287
Cash back offer	0.594	0.620	3.384	0.023*	0.762	0.553	2.860	0.048*
Advertisements	0.350	0.789	0.992	0.400	3.282	0.013*	5.749	0.000*
Internet	0.700	0.554	1.805	0.359	0.531	0.713	1.706	0.155

*Significant at 0.05 level

The above hypothesis is framed to understand the effect of demographic variables on respondents' opinions on factors influencing the purchase of durables. The difference between the mean scores of respondents' opinions on factors influencing the purchase of durables with respect to the demographic variables of respondents was measured by conducting one-way ANOVA test. The purpose of conducting an ANOVA is to understand whether the opinions of respondents differ across various demographic groups of respondents. Table 13 indicates that there exists a significant difference in the opinions of respondents on factors like brand name, technology, features, instalments, discounts, company reputation, advertisements, and the internet with regard to their age groups, education, income, and occupation. Hence, the demographic factors play a significant role in the buying behaviour of consumers for durables.

H₀₄: Respondents' level of satisfaction towards various features of household durables is not dependent upon their demographic variables.

Table 14: ANOVA of Demographic Factors and Level of Satisfaction towards Various Features of Household Durables

Satisfaction Level	Age Group		Income		Education		Occupation	
	f-value	p-value	f-value	p-value	f-value	p-value	f-value	p-value
Refrigerator								
Price	1.413	0.244	1.428	0.239	0.320	0.864	0.412	0.800
Brand Name	0.188	0.904	2.735	0.053*	0.826	0.512	0.647	0.630
Cooling System	1.869	0.140	1.353	0.262	0.844	0.501	1.739	0.148

Energy Saving	0.553	0.648	0.109	0.955	2.713	0.03*	1.980	0.104
Storage Space	0.311	0.817	0.886	0.451	1.559	0.192	0.983	0.420
Television								
Price	2.435	0.070	2.923	0.038*	1.712	0.154	0.569	0.686
Brand Name	3.804	0.013*	0.382	0.766	1.624	0.175	0.952	0.438
Display Clarity	0.281	0.839	0.844	0.473	0.753	0.558	1.871	0.122
Screen Size	0.539	0.657	2.175	0.096	0.585	0.674	0.638	0.637
Sound Quality	0.292	0.831	0.435	0.729	0.610	0.656	0.422	0.793
Washing Machine								
Price	2.435	0.07	0.309	0.819	1.531	0.200	3.237	0.015*
Brand Name	3.798	0.014*	0.645	0.588	0.217	0.928	2.204	0.074
Convenience	0.281	0.839	0.831	0.840	1.529	0.200	0.857	0.493
Loading Capacity	0.539	0.657	1.520	0.212	0.637	0.637	0.872	0.484
Air Conditioner								
Price	0.215	0.886	0.034	0.992	0.728	0.575	1.804	0.135
Brand Name	1.918	0.132	0.768	0.515	0.300	0.877	0.400	0.808
Power Consumption	1.377	0.254	0.440	0.725	1.209	0.312	1.744	0.147
Cooling Time	2.814	0.043	0.133	0.940	0.794	0.532	1.173	0.328
Remote Control	0.311	0.818	0.211	0.889	0.969	0.428	1.249	0.296
Car								
Price	1.527	0.213	0.549	0.650	0.400	0.808	0.344	0.848
Brand Name	1.639	0.185	1.092	0.356	0.637	0.637	0.442	0.778
Mileage / Average	0.399	0.754	0.832	0.480	1.627	0.174	1.240	0.299
Fuel Efficiency	3.434	0.029*	0.889	0.450	0.560	0.692	3.492	0.010*
Safety Features	2.848	0.042*	1.517	0.215	0.436	0.782	1.607	0.179

*Significant at 0.05 level

ANOVA test was performed to understand the satisfaction level of respondents towards various features of durables based upon their demographic variables. The results of the ANOVA test are shown in table 17. According to table 14, the level of satisfaction for features durables varies across various age groups and occupation groups, but not across income and education groups of respondents.

11. Findings of the Research Study

The demographic profile of the respondents revealed that 68% were females, 40% were very young in age, i.e., below 30 years, 70% of them were married, and most of them possessed graduation degrees (34%) and professional degrees (34%). 61% were employees and 50% belonged to an income group of Rs. 50000/-and above. They own well-known and popular brands of these durables like Samsung, LG, Blue Star, IFB, and Godrej. Regarding car brands, Maruti Suzuki is dominating the market in Vadodara city, followed by Hyundai and Tata. They prefer to pay in instalments for expensive durables such as cars and air conditioners, and make cash payments for the rest. The main reasons for purchasing their preferred brand of durables were technology, brand name, and company reputation. By performing factor analysis, a total of 23 factors were reduced to 7 factors, which were named as offers and schemes, awareness, product attributes, popularity of brand, updated technology, status symbol, and company image. There exists a significant association between age, income, education, and occupation and the durable brands possessed by respondents. Respondents belonging to the higher income group had purchased costly durables. Significant differences were found in the opinions of respondents towards factors influencing the purchase of durables with respect

to their age groups, education, income, and occupation. Their level of satisfaction with various features of durables varies according to their age and occupation.

12. Implications of the Study

The results of the study reveal that respondents possessed mostly foreign brand of durables because of good features and technology. The demographic factors of the respondents had an impact on purchase of durables by them. Consumer durable manufacturing companies are facing intense competition in the market and also many foreign players have entered the Indian market and are dominating the market, due to which domestic firms like Onida, Godrej, and Videocon are lagging behind. So, from this study, it is understood that Indian firms should upgrade their technology and perform innovations to bring new models and designs of the product to the market and create brand image of their product to increase their sales. They should offer various schemes and benefits which attracts customers to make purchases. They schemes are festival/exchange/discount offers, credit facilities, after sales services and maintenance facilities. Foreign companies should create brand awareness and brand image of their durables to increase their market share.

13. Conclusions and Suggestions

This research study was carried out to examine consumer pre-purchase and post-purchase behaviour for five household durables, which were a refrigerator, television, washing machine, air conditioner, and car. These five durables selected in this study are very common and are possessed even by middle and lower-income groups. The main reasons for purchasing respondents' preferred brands of durables were technology, brand name, and company reputation. The result of the factor analysis shows that the main factors which influenced the consumers to purchase the household durables were reasonable price, technology, company reputation, brand name, price, features, model/design, and discounts.

End notes

- ¹ <https://www.ibef.org/industry/indian-consumer-market#>.
- ² https://en.wikipedia.org/wiki/Durable_good#
- ³ Consumer Durables Report, Feb. 2023, p. 7, www.ibef.org
- ⁴ <https://marketbusinessnews.com/financial-glossary/white-goods-definition-meaning/>
- ⁵ <https://marketbusinessnews.com/financial-glossary/brown-goods/>
- ⁶ Consumer Durables, June, 2022, www.ibef.org.
- ⁷ <https://www.investindia.gov.in/sector/consumer-goods/white-goods>

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