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A STUDY ON CONSUMER SATISFACTION WITH REGARD TO WARRANTY BASED CONSUMER DURABLE GOODS

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ABSTRACT

A warranty is a contractual agreement associated with the sale of a product that requires the manufacturer to either rectify or compensate for any failures over the warranty period. Consumer satisfaction is influenced by various factors connected with the product, price, brand, warranty and so on. Therefore, this study has been commenced to measure the various factors influencing consumer satisfaction on while purchasing warranty based consumer durable goods. This study is carried out with a sample of 100 consumers; data has been collected by using questionnaire among the durable goods consumers. The survey instrument is constructed with four parts, such as demographic profile, consumer perception, factors influencing consumer satisfaction and problems in accessing warranty services. This study employed simple percentage analysis, Friedman's chi-square test, t-test, and factor analysis to analyse the collected data. It was concluded that different factors have influence on consumer satisfaction with regard to the purchase of warranty based durable goods.

KEYWORDS

consumer perception, consumer satisfaction, durable goods, warranty.

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1. INTRODUCTION

At present, marketing firms around the world recognize that the consumer is king. Knowing why and how people consume helps manufacturers to improve their existing product and can build consumer loyalty. The era of liberalization, privatization and globalization has brought about changes in people's society and way of life. A notable development of the eighties is that even low-income groups have begun to acquire a wide range of consumer durables. Products which were once considered luxury items have become a necessity because of the changing lifestyle and rising income levels. With growth in disposable incomes, the demand for high-end products such as television, washing machine, refrigerator, and air conditioners has increased considerably. It is also facilitated by the easy availability of finance and prevalence of nuclear families. Increasing in demand for consumer durable in the market the fall in prices as Indian consumers are continue to attach a high degree of importance to value for money.

It is very important that the defendant keep the client for a very long time, because the level of competition has increased, so that the supply of quality products of popular brands at a reasonable cost and on time is considered very important for loyal consumers. Product warranty is an important part of the new product marketing and sales program. In the decision to buy a product, buyers often compare the characteristics of comparable models of competing brands. When competing brands are almost identical, it is often very difficult to choose a particular product based solely on product-related characteristics, such as price, special features, perceived quality and reliability of the product, financing offered by the manufacturer, and so on. Moreover, marketing firms in durable goods segment changing its policies so as to increase consumer satisfaction. Consumer satisfaction directly connected with the influencing productivity of the firms.

2. BACKGROUND OF THE STUDY

Consumers need assurance that the product will perform at a satisfactory level during the useful life of the product. Manufacturers must not only provide this assurance, but most importantly, ensure consumer satisfaction. Without this, survival in a highly competitive global market environment would be impossible. Warrantees play an important role in this context. The use of the warranty is generalized and serves many purposes. These include the legal protection of the manufacturer and the buyer, the signs of product quality, the warranty that the product will work at a satisfactory level, a way of compensating the buyers when a purchased item does not work as expected and the solution of disputes between the buyer and the manufacturer. Many types of warrantees have been studied in detail from different angles. A warranty of any kind, insofar as it involves an additional service associated with a product, will result in potential cost other than those associated with the design, manufacture and sale of the product. In fact, these costs are unpredictable future costs and have a significant impact on the total profits of a manufacturing company.

A warranty is a contractual agreement associated with the sale of a product that requires the manufacturer to either rectify or compensate for any failures over the warranty period. The warranty is an obligation attached to the products which oblige the issuers of the warranty to indemnify the consumers in accordance with the terms of the warranty when the guaranteed products do not fulfil their predefined functions under normal use the warranty. According to this definition, a warranty contract must include at least three characteristics: the period of coverage, the method of compensation and the conditions under which this compensation would be offered. The last characteristic is closely related to the execution of the warranty, as it clarifies the rights of consumers and protects issuers from warrantees against excessive misrepresentation. From the point of view of cost, the first two characteristics are more important for manufacturers because they determine the extent of protection against premature failures and the direct cost associated with these failures.

3. REVIEW OF LITERATURE

Warranty plays a remarkable role in business marketing; it protects the rights of consumers and promoting the product image, sales and reputation of manufacturers (Fang & Huang, 2010). Warranty is becoming as important as the price of the product, thus it arouses the attention of manufacturers to develop a satisfying warranty policy, and product price and after-sales service (Sarfaraz, et al. 2014). Therefore, not only warranty is privilege limited to the contract between the consumer and the manufacturer, but it also carries out the dimensions of social responsibility, legal provisions and compliance with product features (Jeon & Sohn,

2015). Notably, there are anecdotal evidences which consider generous warranty policy is an indicator of high product quality leading to high consumer satisfaction, in other words, tempting warranty conditions entail higher product quality and consequently better consumer satisfaction (Jeyakumar et al. 2016; Shafiee & Chukova, 2013). Warranty discipline seeks to develop new algorithms to determine product reliability by predicting product failure occurrence from warranty data (Wu & AKbarov 2012). Specifically, it is involved in optimizing the firm's business processes by scrutinizing the warranty database to estimate warranty cost and failure date and to develop policies for consumer relationship (Tong et al. 2014). The consumer durable goods industry is operating in a highly competitive, complex and rapidly changing business environment (Eswari & Subramanian, 2017).

4. OBJECTIVES OF THE STUDY

This study has been commenced with the objectives stated below.

1. To analyze the demographic profile of consumers purchasing consumer durable goods.
2. To scrutinize the consumer perception with regard to warranty on consumer durable goods.
3. To examine the factors influencing consumer satisfaction to warranty on consumer durable goods.
4. To measure the problems of consumers while accessing warranty for the consumer durable goods.

5. RESEARCH METHODOLOGY

This study has been started with a sample of 100 consumers intended to purchase various consumer durable goods in Erode District of Tamil Nadu. The desired sample for the study is gathered on the premise of simple random sampling. Accordingly, this study identified the consumers who are seeking to purchase different type of consumer durable goods from the retail outlets. A detailed survey instrument that is, structured and non-disguised questionnaire is presented to gather data from the identified samples. The survey instrument is constructed with four parts, that is, the first part collect information on demographic profile of consumers. The second part intends to collect consumer perception with regard to durable goods. The third part contains the various factors influencing consumer satisfaction in purchase of durable goods. Finally, fourth part collects the various problems involved in accessing warranty for the durable goods. In order to obtain reliable and highest relevant results, the survey instrument has been pre-tested with 15 consumers, which intended to discover the facets connected with consumer satisfaction. The study is constructed with the strength of descriptive research and it widely used primary data. Demographic profile of consumers is analysed with simple percentage analysis. Descriptive statistics has been used to analyse consumer perception. Factor analysis has been used to examine various factors influencing consumer satisfaction and t-test has been used to assess problems in accessing warranty.

6. RESULTS AND DISCUSSIONS

6.1 DEMOGRAPHIC PROFILE OF CONSUMERS

The demographic profile of consumers has been analyzed with the gender, age, educational qualification, marital status, occupation, monthly income, experience in purchase, and residential area. The results are presented in table-1.

TABLE 1: ANALYSIS OF DEMOGRAPHIC PROFILE OF CONSUMERS

Characteristics	Distribution	Sample	Frequency
Gender	Male	78	78%
	Female	22	22%
Age	18 – 25 years	18	18%
	26 – 35 years	32	32%
	36 – 50 years	28	28%
	51 years & above	22	22%
Marital Status	Married	76	76%
	Unmarried	24	24%
Educational Qualification	Uneducated	11	11%
	School education	29	29%
	Degree/ Diploma	41	41%
	PG/ Professional	19	19%
Monthly Income	Less than Rs. 25,000	44	44%
	25,000 – 50,000	38	38%
	More than Rs.50,000	18	18%
Experience in Purchase	Less than 3 years	11	11%
	3 – 5 years	23	23%
	6 – 10 years	27	27%
	More than 10 years	39	39%
Residential Area	Rural	38	38%
	Semi-urban	23	23%
	Urban	39	39%

Source: Primary data

Table-1 reveals that gender consists of 78% are male and 22% are female. Age of the consumers revealed that 18% are in 18 – 25 years of age, 32% are in 26 – 35 years of age, 28% are in 36 – 50 years of age, and 22% are in 51 years and above. Marital status shows that 76% are married and 24% are unmarried. Educational qualification discloses that 11% are uneducated, 29% are falling under school education category, 41% are completed their degree or diploma, and rest 19% are completed professional or post graduate degree. Monthly income shows that 44% are in less than Rs. 25,000, 38% of the consumers' monthly income ranges from Rs. 25,000 to 50,000, and 18% are in more than Rs. 50,000. Experience in purchase of consumers reveals that 11% of the consumers are in less than 3 years of experience, 23% are in 3 – 5 years of experience, 27% are having experience of 6-10 years of experience, 39% are having more than 10 years of experience. Residential area of consumers divulges that 38% are in rural, 23% are in semi-urban areas and 39% are in urban areas.

6.2 CONSUMER PERCEPTION ON WARRANTY

Consumer perception on warranty of consumer durable goods has been examined with Friedman chi-square test. In order to assess the consumer perception with regard to warranty of durable goods, null hypothesis has been proposed and it states that the rank of consumer perception do not vary with the expected value on 5% significant level. In a constant sample, higher value of chi-square test, the greater is the difference among the each factors rank such and its expected value. The chi-square value is 118.234 for these ranking, degrees of freedom are up to the number of variable less than 1, and asymptotic importance is estimated probabilities of achieving factors are not essentially different. Therefore, chi-square value with 10 degrees of freedom is unlikely to have happened by change, it is evaluated that the 100 respondents do not impacted by all these variables.

TABLE 2: DESCRIPTIVE STATISTICS

Perception on Warranty	Mean Rank	Mean Score	Std. Deviation	Chi-Square
Reliability of product	10.71	3.581	1.721	118.234 P value 0.00
Safety of product	8.91	2.603	1.462	
Higher durability	8.53	3.911	1.259	
Repairs and maintenance	9.39	3.642	1.569	
Easy after sale service	7.94	3.748	1.675	
Better agreement	8.26	2.342	1.712	
Care of dealers	7.61	3.739	1.694	
Easy installation	6.99	2.545	1.841	
Fulfillment of conditions	8.61	2.542	1.598	
Increase of product value	9.22	2.821	1.862	

Source: Primary data

Table-2 exhibits that the consumer perception on warranty of durable goods. It was found that among different factors, warranty increases reliability of the product and it is ranked first with mean value of 10.71. It is followed by repairs and maintenance (9.39), increase of product value (9.22), safety of product (8.91), fulfilment of conditions (8.61) and higher durability (8.53) are ranked as fourth, fifth, and sixth respectively. Consecutively, better agreement (8.26), easy after sale service (7.94), care of dealers (7.61) and easy installation (6.99) are ranked. Null hypothesis is accepted and it can be concluded that all consumer perception do not vary with the expected value on 5% level of significance.

6.3 FACTORS INFLUENCING CONSUMER SATISFACTION

Consumer satisfaction is influenced by various factors concerning dealer service, product quality, service delivery, assistance, and personnel behaviour. It is examined through rotated component matrix, the results are provided in table-3.

TABLE 3: ROTATED COMPONENT MATRIX

Labels	Variables	Dealer Service	Product Quality	Service Delivery	Assistance	Personnel Behaviour
CS05	Warranty agreement	.842	.046	.253	.107	-.041
CS09	After sale service	.831	.088	.089	.143	.308
CS10	Low price	.798	-.175	.147	-.098	.145
CS16	Availability of models	.785	.130	.246	.154	.131
CS21	Sales promotion	.757	.099	.174	.093	.057
CS22	Shop cleanliness	.683	.096	.136	-.021	.088
CS01	Originality of products	.137	.816	.079	.182	.098
CS11	Reliability of products	.060	.776	.158	.043	.112
CS12	Variety of products	.171	.756	.051	.253	-.184
CS13	Packing of products	.114	.684	.043	.189	.086
CS14	Price discount	.136	.656	.152	.114	.293
CS15	Durability of products	.142	.637	-.056	.079	.243
CS19	Brand availability	.283	.597	.242	.174	.235
CS20	Brand value	.135	.582	.144	.058	.134
CS03	Service quality	.088	.148	.808	.223	.127
CS06	Service accessibility	.165	.211	.742	.258	.188
CS23	Parking facilities	.156	.283	.681	.193	.064
CS24	Delivery process	.074	.113	.635	.074	-.047
CS02	Warranty claims	-.097	.053	.002	.811	.113
CS17	Easy installation	-.085	.077	.159	.753	.067
CS18	Lighting facilities	-.154	.036	.121	.691	.115
CS25	Credit facilities	.162	.084	.140	.673	.086
CS04	Prompt response	.167	.147	.086	.112	.802
CS07	Exchange opportunities	.157	.225	.042	.127	.735
CS08	Employee behavior	.155	.046	.136	.126	.643
Eigen values		6.889	5.153	2.333	1.892	1.326
% Variance		21.46	14.92	11.23	8.57	6.78
Cumulative % Variance		21.46	36.38	47.61	56.18	62.96
Cronbach's α		0.812	0.792	0.781	0.716	0.685

(Source: Primary data)

Table-4 exhibits that the extracted factor loadings and significant variables formed under each factor are highlighted in bold. The factor loading cut-off rate is fixed as 0.5. Exploratory factor analysis reveals the factors influencing consumer satisfaction and which accounts for cumulative variance of 62.96% explained in the data. The Cronbach's alpha values for the factors identified have good reliability values i.e., $\alpha > 0.5$. Subsequently, the factors are identified and named as influence of dealer service, product quality, service delivery, assistance, and personnel behaviour. Dealer service is the predominant factor, which is observed with the explained variance of 21.46%. It is loaded with six factors like warranty agreement, after sale service, low price, availability of models, sales promotion and shop cleanliness; it has higher impact on consumer satisfaction.

Product quality is a significant factor with explained variance of 14.92%. It includes originality of products, reliability of products, variety of products, packing of products, price discount, and durability of products, brand availability, and brand value. Service delivery explains 11.23% of variance in data; it is loaded with four factors like, service quality, service accessibility, parking facilities and delivery process. Furthermore, assistance factor is loaded with warranty claims, easy installation, lighting facilities and credit facilities which accounts for 8.57% variance in data. Eventually, personnel behaviour is loaded with three variables such as, prompt response, exchange opportunities and employee behaviour, which together explains 6.78% variance in data. It is proved that all the variables have sizable influence on consumer satisfaction with regard to consumer durable goods.

6.4 PROBLEMS IN ACCESSING WARRANTY

Consumers face difficulty in accessing warranty on durable goods. Moreover, the problems can also be varied among male and female consumers, therefore, problems in accessing warranty is classified into male and female category. The consumers are asked to rank the problems at five point scale that is, highly agree, agree, neutral, disagree, and highly disagree with grades of 5, 4, 3, 2, and 1 respectively. The mean scores are calculated and it has been analyzed by using t-test, which is presented in table-4.

TABLE 4: MEAN SCORE ANALYSIS

S. No	Variables	Mean Score		t-test
		Male	Female	
1	Lack of service response	4.124	4.068	2.536
2	Lack of care for repairs	3.985	3.765	2.643
3	No consumer value	4.251	4.134	2.834
4	High cost of repairs	3.824	3.689	2.563
5	No scope for replacement	4.122	4.034	2.359
6	Failure in promise fulfillment	3.768	3.722	1.239
7	Delay for maintenance	3.924	3.932	2.862
8	Expensive spares	4.131	4.126	1.947
9	Defective service	3.923	3.756	2.986
10	Conflict with dealers	4.057	3.964	2.258

Source: Primary data

Table-4 displays that the problems in accessing warranty. The problems can be differed from type of product and consumer. The main problem in accessing warranty is no consumer value (4.251), expensive spares (4.131), lack of service response (4.124), no scope for replacement (4.122), and conflict with dealers (4.057) among the male consumers. Among the female consumer, the significant problems in accessing warranty is no consumer value (4.134), expensive spares (4.126), lack of service response (4.068), and no scope for replacement (4.034). Subsequently, lack of care for repairs, delay for maintenance, defect service, high cost of repairs and failure in promise fulfillments provides high cost of repairs moderate problems to both male and female consumers. The problems in accessing warranty shows that all the variables are significant at 5% level. It indicates that both male and female consumer have identical problems in accessing warranty.

7. FINDINGS AND CONCLUSION

Warranty is a specific kind of guarantee that concerns particular goods or services rendered by a seller to a buyer. Warranty has been an important issue since the beginnings of human civilisation and it covered various products and services. Warranty increases the reliability of product, brand, and dealer and guides the buyer to purchase goods without fear and hesitation. Therefore, this study has endeavoured to measure the various factors influencing consumer satisfaction. The demographic profile shows that 78% are male, 32% are in 26 – 35 years of age, 76% are married, 41% are completed degree/ diploma, 44% are in the monthly income group of less than Rs. 25,000. Besides, 39% are having experience of more than 10 years in durable goods purchase, and 39% are belongs to urban areas. Friedman's test presents that warranty increases reliability, repairs and maintenance, increase of product value, safety of product, and fulfilment of conditions are forms consumer perception on durable goods purchase. The exploratory factor analysis concerning factors influencing consumer satisfaction explains 62.96% variance in data, with five broad factors such as dealer service, product quality, service delivery, assistance, and personnel behaviour. The main problem in accessing warranty is no consumer value, expensive spares, lack of service response, no scope for replacement, and conflict with dealers to both consumers. It was concluded that different factors have influence on consumer satisfaction with regard to the purchase of warranty based durable goods.

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