Impact of Brand Equity on Customer Satisfaction and Purchase Intention of Air Conditioners in Chennai

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Abstract:
Global warming is the concern for all in the world. Everyone knows the impact of rise in temperature every year. To adjust the situation many resort to buying of air conditioners. Earlier in 1950's only rich people had air conditioners at home. Today even middle income group tend to buy Air Conditioners to have a good cool at summer at home. In this situation it becomes essential to study the impact of brand equity on customer satisfaction and purchase intention of air conditioners in Chennai. Brand equity helps the marketers to sell profitably. Brand awareness is nothing but having good knowledge about the brand. Marketers do this by intense advertising. This research paper aims to study the brand equity and its impact on customer satisfaction and purchase intention of air conditioners users in Chennai. The methodology used for this research paper is stratified random sampling by collecting questionnaire from 650 respondents in Chennai. That data will be analyzed using statistical tools using SPSS software. The results will be useful to air conditioners makers and marketers to sell profitable.

Keywords: Brand Equity, Customer Satisfaction, Purchase Intention, Air Conditioners.

1. Introduction

Every year there is rise in temperature of 2 to 3 degrees. Global warming is the concern for all. The main reason for the global warming is the industrial pollution and use of CFC.CFC is used in air conditioners and refrigerators. People wish to keep away from heat by buying air conditioners and coolers. Earlier in 1950's only rich people had air conditioners at home. Today even middle income group tend to buy Air conditioners to have a good cool at summer at home. In this situation it becomes essential to study the impact of brand equity on customer satisfaction and purchase intention of air conditioners in Chennai. There are many brands of air conditioners available in the market. They include Samsung, Panasonic, National, Carrier, OGeneral, Voltas, etc. Everyone tries to sell maximum number in summer by intense advertising.

1.1. Brand Equity

Brand equity is a term used in the marketing that explains the worth of having a popular brand name. Based on this concept, that the user of a well known brand can generate more cash flow from products than from products with a less popular name.
Brand equity can be measured in terms of seller point of view and customer point of view. In this research emphasis is laid on customer perspective. Two models are available in brand equity. They are Keller's brand equity model and David Aakar's brand equity model. The factors considered for the present study is

   i. Brand awareness
  ii. Perceived quality
 iii. Brand loyalty
 iv. Brand association and
  v. Brand Trustand
 vi. Overall Brand Equity.

1.2. Brand Awareness

Brand awareness is the limit or scope to which a brand is acknowledged by prospective customers and rightly connected with a particular product. Brand awareness includes brand recognition and brand recall. The respondents were asked how familiar with the particular brand of air conditioners, how easily they can recognize the brand among other company's brand, etc...

1.3. Brand Association
Brand association is those things which have penetrated in customer mind about the brand. The respondents were asked how they associate with the quality of the product. Whether particular air conditioner brand is associated with any particular personality, whether the particular brand has very unique brand image compared to competing brands.

1.4. Perceived Quality
Consumers option of a products ability to fulfill his or her expectations. The users of air conditioners were asked whether particular brand has consistent and good quality. Whether the reliability of particular brand is high etc...

1.5. Brand Trust and Brand Loyalty
Brand trust and brand loyalty refers to the customers repeated purchase of the same product. The respondents were asked about which brand is worth trusting. Whether that particular brand delivers the quality as promised. The users were asked whether the confidence on the particular brand is always continuous and consistent. Whether brand has good reputation etc.

1.6. Statement of the Problem
Due to global warming everyone even the middle class people tend to buy air conditioner for cooling themselves in hottest Chennai summer. The research article tries to find the reason for such purchase and the impact of brand equity on customer satisfaction and purchase intention of air conditioners in Chennai.

1.7. Objectives of the Research Study
1. To study and analyze the Inter-relationship among the various dimensions of brand equity with reference to air conditioners in Chennai.
2. To examine the effect of brand awareness, brand association, perceived quality, brand loyalty and brand trust on overall brand equity (OBE) related to air conditioners in Chennai.

2. Review of Literature
1. R. Patel Niraj (2009)–the object of the study was to understand "how personal factors of consumer influence buying behavior with reference to Air Conditioner in Surat city." The findings of the study was that majority of the customers came to know about the brand from television advertising.
2. Reena Roy 'etal (2012)–they studied the factors affect marketing of AMC of Air Conditioners in Tamil Nadu. Data was collected using primary data. The findings of the study were that majority of the consumers who answered the questionnaire are aware of AMC and they avoid AMC due to poor quality of service, time taken to attend the compliant and delay in services given.
3. Dr. Debasis Ray 'etal (2015) – their study revealed the circumstances affecting consumer decisions for purchasing the home appliances items based on market sectionalization. The results were useful in understanding the consumer perception for the benefits of organization as well as customer₹
4. CelilKoparal 'etal (2014) – in their research article they have studied the causes and reasons for finding out the consumer innovativeness and perceived risk in high technology product acquisition. The outcome of the study was technological advancement, perceived risks taking, creative recycle; consumer innovativeness, intellectual innovativeness, technology upgrades and technological sophistication are the major factors in purchase intention of hi-tech products.
5. Dr. K. Uma and P. Sasikala (2014) – the research paper aimed at analyzing the consumer buying behaviour for chosen home appliances products in Madurai region. Data was collected using both primary and secondary data. The finding of the study is that consumer behavior and preference have a great impact on the home appliances products.

- Hypothesis to be Tested
  → H_o -Brand name of the air conditioners has no impact on the various dimensions of brand equity and OBE
  → H_O– There is no significant relationship between the years of usage of air conditioners and the various dimensions of brand equity
  → H_o- there is no significant interconnection between the years of usage of air conditioners and the OBE.
  → H_0- there is no significant relationship among the various dimensions of brand equity of air conditioners
  → H_o - there is no significant relationship between the customer satisfaction and purchase intention of air conditioners

3. Research Methodology
The data for this research has been collected from both primary data and secondary data. 650 samples were collected for this purpose. The collected data has been analyzed using descriptive method and hypothesis test using t-test, p-test, one-way ANOVA and Pearson Correlation. Secondary data were collected from sources like website, newspaper, journal etc.

4. Results and Discussion

4.1. Descriptive Statistics - Demographic Profile

(Sample Size =650)

Variables	Options	Frequencies	(%)
Gender	Male	280	43.10
	Female	370	56.90
Age	18 Years – 30 Years	Open ended Question (Scale Variable)	72.80
	31 Years - 50 Years		22.30
	51Years- 78 Years		4.90
Qualification	School Level	121	18.60
	Diploma	101	15.50
	UG / PG	311	47.80
	Professional	117	18.00
Occupation	Salaried Job	253	38.90
	Business / Self-employed	112	17.20
	Professional	115	17.70
	Student	36	5.50
	Home Maker	134	20.60
Monthly Family Income (INR)	Less than ₹50,000	301	46.30
	₹50,001 – ₹1,00,000	169	26.00
	₹1,00,001 – ₹2,00,000	110	16.90
	Above ₹2,00,001	70	10.80
Marital Status	Married	422	64.90
	Unmarried	228	35.10
Type of Family	Joint Family	222	34.20
	Nuclear Family	428	65.80

Table 1
Source: Primary Data

➢ Interpretation

→ The sample consists of a sizeable preponderance (280, 43.10%) of male respondents over female (370, 56.90%) respondents.

→ 72.80% of the respondents associated to the age category of 18 - 30 Years, followed by 22.30% of the respondents correspond to the age group of 31 - 50 years and remaining 4.90% of the respondents associated to the age group of 51 - 78 years.

→ In terms of academic qualifications, it is not surprising that majority (311, 47.80%) of the respondents completed UG/PG degrees followed by School level education with 18.60% (121).

→ Majority of the respondents are Salaried employees (253, 38.90%) followed by Business/Self-employed with 17.20% (112), Professional (115, 17.70%), Students (36, 5.50%) and Home Maker (134, 20.60%).

→ In terms of Monthly Family Income, vast category of the respondents (301, 46.30%) belongs to the income of less than ₹50,000 followed by ₹50,001 – ₹1,00,000 (169, 26%),₹1,00,001 – ₹2,00,000 (110, 16.90%) and Above ₹2,00,001 (70, 10.80%).

→ Majority of the respondents are Married (422, 64.90%) and remaining (228, 35.10%) of the respondents are Unmarried.

→ In terms of type of family, 65.80% (428) of the respondents k from Nuclear family and rest of them (222, 34.20%) belong to Joint Family.

4.2. Air Conditioner

(Sample Size =650)

Variables	Options	Frequencies	(%)
Name of the Brand	Samsung	280	43.10
	Voltas (TATA)	215	33.10
	LG	101	15.50
	Hitachi	21	3.20
	Others	33	5.10
Years of Usage	1 Year– 3 Years	Open ended Question (Scale Variable)	30.90
	4 Years – 6 Years		44.00
	7Years – 11 Years		25.10

Table 2
Source: Primary Data

> Interpretation
❖ Majority of the respondents used the Air-conditioner Samsung (280, 43.10%) followed by Voltas (TATA) (33.10%, 215), LG (15.50%, 101) Hitachi (3.20%, 21) and other brands (5.10%, 33).
❖ In terms of Years of Usage of Air-conditioner, 30.90% of the respondents used 1 – 3 Years, 44% of them used 4 – 6 Years and 25.10% of them used 7 – 11 Yea₹

4.3. Hypothesis 1
> H_0: Brand Name of the Air Conditioner has no impact on the various dimensions of Consumer Brand Equity and Overall Brand Equity (OBE).

Variable	Brand Name of Air Conditioner					*F* - Value	*P* - Value
	Samsung (280)	Voltas (215)	LG (101)	Hitachi (21)	Others (33)		
BRAND AWARENESS	22.48	21.40	20.12	19.48	19.39	2.385	0.020
	2.468	2.524	2.483	2.400	3.112		
BRAND ASSOCIATION	21.98	20.29	19.14	18.47	17.14	1.905	0.033
	2.283	2.017	2.107	2.182	2.048		
PERCEIVED QUALITY	21.38	20.23	19.06	18.38	17.67	2.490	0.023
	2.518	2.702	2.361	2.872	2.780		
BRAND TRUST	21.65	20.97	19.83	18.86	16.97	2.643	0.012
	2.367	2.318	2.030	2.496	2.481		
BRAND LOYALTY	21.09	19.71	19.37	18.57	17.03	2.818	0.014
	4.366	4.163	4.393	4.739	4.469		
OVERALL BRAND EQUITY (OBE)	**21.42**	**20.50**	**19.16**	**18.52**	**17.67**	**2.687**	**0.031**
	1.920	**1.983**	**1.943**	**2.112**	**2.175**		

Table 3

Source: Primary Data No. of respondents are shown in brackets

> Interpretation

A one --way between-groups Analysis of Variance (ANOVA) was conducted to explore the significant difference among the various brands of Air Conditioner with respect to the various dimensions of Consumer Brand Equity and Overall Brand Equity (OBE).

VARIABLE	*F* - Value	*P* - Value	Level of significance	RESULT	
				Significance	Null Hypothesis
BRAND AWARENESS	2.385	0.020	0.05	Insignificant	Accepted
BRAND ASSOCIATION	1.905	0.033	0.05	Insignificant	Accepted
PERCEIVED QUALITY	2.490	0.023	0.05	Insignificant	Accepted
BRAND TRUST	2.643	0.012	0.05	Insignificant	Accepted
BRAND LOYALTY	2.818	0.014	0.05	Insignificant	Accepted
OVERALL BRAND EQUITY (OBE)	**2.687**	**0.031**	**0.05**	**Insignificant**	**Accepted**

Table 4

As the *P* value is lesser than Sig. Value (0.05) in all the cases including Overall Brand Equity (OBE) Score, the Null Hypotheses are rejected in these variables. It is concluded that there is a statistically significant difference among the various brands of Air Conditioner with respect to the various dimensions of Consumer Brand Equity and Overall Brand Equity (OBE)**.**
Apart from reaching statistical significance, the actual difference in mean scores among the various brands of Air Conditioners also large (17.67 to 21.42).

4.4. Hypothesis 2
> H0 - Years of Usage of Air Conditioner - Dimensions of Consumer Brand Equity

AKarl Pearson product moment correlation was run to determine the interconnection between the Years of Usage of Air Conditioner and the various dimensions of Consumer Brand Equity.

VARIABLES	N	'r' VALUE	P - VALUE	RELATIONSHIP	REMARKS	
					SIGNIFICANT	RESULT
YEARSOF USAGE - BRAND AWARENESS	650	0.237**	0.001	Positive	Significant	REJECTED
YEARSOF USAGE - BRAND ASSOCIATION	650	0.333**	0.001	Positive	Significant	REJECTED
YEARSOF USAGE - PERCEIVED QUALITY	650	0.458**	0.001	Positive	Significant	REJECTED
YEARSOF USAGE - BRAND TRUST	650	0.414**	0.001	Positive	Significant	REJECTED
YEARSOF USAGE - BRAND LOYALTY	**650**	**0.587****	**0.001**	**Positive**	**Significant**	**REJECTED**

Table 5: Years of Usage of Air Conditioner – Various Dimensions of Consumer Brand Equity
**. Correlation is significant at the 0.01 level (2-tailed).

➢ Interpretation

As the P value is lesser than Sig. Value (0.01) in all the cases, the Null Hypotheses are rejected. There are small to moderate positive correlations between the Years of Usage of Air Conditioner and the perception on various dimensions of brand equity. The relationships between them are highly significant.

Out of five dimensions of brand equity, Years of Usage of Air Conditioner has stronger relationship with Brand Loyalty (r = 0.587) than other dimensions. Hence, Years of Usage of Air Conditioner has an influence on the perception on various dimensions of brand equity.

4.5. Hypothesis 3

➢ H_0: There is no significant relationship between the Years of Usage of Air conditioner and the Overall Brand Equity (OBE).

A Karl Pearson product moment correlation was run to determine the relationship between the Years of Usage of Air Conditioners and the Overall Brand Equity (OBE).

VARIABLES	N	'r' VALUE	P - VALUE	RELATIONSHIP	REMARKS	
					SIGNIFICANT	RESULT
Years of Usage (Air Conditioner) – Overall Brand Equity	650	0.415**	0.001	Positive	Significant	REJECTED

Table 6: Years of Usage of Air Conditioners – Overall Brand Equity (OBE)
**. Correlation is significant at the 0.01 level (2-tailed).

➢ Interpretation

As the P value is lesser than Sig. Value (0.01) in all the cases, the Null Hypotheses are rejected. There are moderate positive correlations between the Years of Usage of Air Conditioner and the perception on Overall Brand Equity. The relationships between them are highly significant.

4.6. Hypothesis 4

➢ H_0: There is no significant relationship among the various Dimensions of Brand Equity of Air conditioners

A Pearson product-moment correlation was run to determine the relationship among the various Dimensions of Brand Equity of Home Appliances.

VARIABLES	N	'r' VALUE	P - VALUE	RELATIONSHIP	REMARKS	
					SIGNIFICANT	RESULT
Brand Awareness– Brand Association	650	0.383**	0.001	Positive	Significant	REJECTED
Brand Awareness – Perceived Quality	650	0.504**	0.001	Positive	Significant	REJECTED
Brand Awareness – Brand Trust	650	0.565**	0.001	Positive	Significant	REJECTED
Brand Awareness – Brand Loyalty	650	0.276**	0.001	Positive	Significant	REJECTED
Brand Association – Perceived Quality	**650**	**0.079***	**0.001**	**Positive**	**Significant**	**REJECTED**
Brand Association – Brand Trust	650	0.474**	0.001	Positive	Significant	REJECTED
Brand Association – Brand Loyalty	650	0.423**	0.001	Positive	Significant	REJECTED
Perceived Quality – Brand Trust	**650**	**0.596****	**0.001**	**Positive**	**Significant**	**REJECTED**
Perceived Quality– Brand Loyalty	650	0.562**	0.001	Positive	Significant	REJECTED
Brand Trust – Brand Loyalty	650	0.551**	0.001	Positive	Significant	REJECTED

Table 7: Brand Awareness - Brand Association, Perceived Quality, Brand Trust and Brand Loyalty
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

➢ Interpretation

As the P value is lesser than Sig. Value (0.05 and 0.01) in all the cases, the Null Hypotheses are rejected. There are strong positive correlations among the various dimensions of brand equity of Air Conditioners'. The relationships among the various dimensions of brand equity of Air conditioner are highly significant.

Among the various relationships, the relationship between Perceived Quality and Brand Trust is comparatively higher (r = 0.596) than others There is a lesser (r = 0.079) relationship between Brand Association and Perceived Quality when compared with others

4.7. Hypothesis 5:

➢ H_0: There is no significant relationship between the Customer Satisfaction and Purchase Intention of Air conditioners.

A Pearson product-moment correlation was run to determine the relationship between the Customer Satisfaction and Purchase Intention of Air Conditioner.

VARIABLES	N	'r' VALUE	P - VALUE	RELATIONSHIP	REMARKS	
					SIGNIFICANT	RESULT
Customer Satisfaction –Purchase Intention	650	0.607**	0.001	Positive	Significant	REJECTED

Table 8: Customer Satisfaction – Purchase Intention of Air Conditioners
**. Correlation is significant at the 0.01 level (2-tailed).

➢ Interpretation

As the P value is lesser than Sig. Value (0.01), the Null Hypothesis is rejected. There is a strong positive correlation (r = 0.607) between the Customer Satisfaction and Purchase Intention of Air Conditioner.

It is inferred that the Customer Satisfaction has strong influence (impact) on the Purchase Intention of Air Conditioner.

4.8. Findings of the Study

1. Brand Name of the air conditioner has an impact on the various dimensions of consumer based brand equity and overall brand equity (OBE) various dimensions of Consumer Brand Equity**.**
2. There is no significant relationship between the years of usage of air conditioners and the various dimensions of OBE.
3. There is significant relationship between the years of usage of Air Conditioners and the Overall Brand Equity.
4. Overall there is a strong and significant positive relationship among various dimensions of Brand Equity.
5. There is a significant relationship between the customer satisfaction and purchase intention of air conditioners.

5. Conclusion

From the study is very evident that brand equity has a great significant impact on customer satisfaction and purchase intention of Air conditioners if the marketer and manufacturers understand the brand equity concept it will help them in selling air conditioners better.

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