



A STUDY ON RELATIONSHIP BETWEEN CUSTOMER DEMOGRAPHICS AND THEIR PURCHASE PATTERN OF DOMESTIC REFRIGERATORS IN COIMBATORE

N. Karthick

PhD Research Scholar (P.T), BSMED
Bharathiar University
Coimbatore – 641046
Tamil Nadu, India
pmnkarthick@gmail.com
Mobile: +919382363738

Dr G. Sridharan

Associate Professor, BSMED
Bharathiar University
Coimbatore – 641 046
Tamil Nadu, India
sridharan@buc.edu.in
Mobile: +919894247055

ABSTRACT

This study aims to find the relationship between customer demographics and their purchase pattern of domestic refrigerators in Coimbatore. Components like refrigerator type, brand, capacity, time of purchase, customers mode of finance and their preferred shop of purchase of refrigerator were considered for the study. Data were collected through a questionnaire from 470 individuals. According to the findings of the study, there was a significant relationship exist between a customer's preferred shop and their age, educational qualification, income, family size, and opinion on replacing the same brand of refrigerator. The study also found that there was a significant relationship exist between a customer's preferred mode of financing and their marital status, employment type, income, refrigerator type, and refrigerator capacity.

Keywords: Customer Preference, Refrigerator, Brand, Type, Mode of Finance, Preferred Shop

INTRODUCTION

In Indian homes of the middle class, refrigerators are among the pieces of furniture and appliances that are sought for the most. The market for refrigerators can be broken down into two distinct submarkets. Both the Direct Cool and the more modern Frost-Free varieties are available. It is anticipated that growth in the refrigerator market would range from 18% to 20% to 22% over the course of the next five years.

The book titled 'India Refrigerator Market Outlook, 2022' gives readers an in-depth analysis of the market for refrigerators in India. The industry of long-lasting customer goods is going through an exciting time in India right now. Since the beginning of the process of liberalization, there has been a tremendous expansion in the domestic market for customer

electronics and home devices. The industry has developed into a critical component of the Indian economy, which has resulted in the creation of jobs for millions of people while simultaneously improving the standard of living across the country.

The market for refrigerators is not a new category in India; yet, due to low penetration and a big user base, the market for refrigerators is expanding rapidly. Refrigerators were once regarded as a luxury good; but, as temperatures have continued to rise and more people have gained discretionary income, they are now regarded as a requirement in every home. Other factors that may be contributing to the double-digit growth of refrigerator sales in India include an increase in the number of nuclear families, the availability of cheap financing, a shifting lifestyle, the debut of new models, technological advancement, and increasing customer awareness.

LITERATURE REVIEW

Sarika (2011) says home appliances have been an integral part of our daily lives. The demand for household appliances will expand naturally as the proportion of working women rises. It reduces several problems associated with household maintenance. For the investigation, a blender, a grinder, a refrigerator, and a washing machine were chosen. The respondents' refrigerator and washing machine brand preferences were identified. In the case of refrigerators, swirl pool dominated the preference indication, followed by Godrej, BPL, Kelvinator, Voltas, LG, Videocon, and Samsung to a lesser amount. In the case of washing machines, the preference indicator was dominated by Whirlpool and Samsung. The purchase of both items was heavily influenced by factors such as brand name, family, friends, and relatives, and salespeople.

Li et al. (2011) conducted research into the demand characteristics and market segmentation of rural Chinese refrigerator purchasing behavior. According to the conclusions of the study, the demand for Chinese peasant refrigerators varies by price, brand, quality, and region. On the basis of analyses of consumer demand attributes, it is revealed that the Chinese rural market is divided into three market segment types: "the type of comprehensive benefit," "the type of brand orientation," and "the type of price advantage." The most important finding was that peasant consumer evaluations of product qualities differed by region and market. Therefore, segmentation is essential in the highly competitive refrigerator business. When developing marketing policies, organizations must consider customer evaluations of product aspects and the fundamental demand characteristics of various groups.

Goswami (2011) investigated the most important considerations while purchasing a refrigerator. The study found that refrigerators were incredibly valuable to consumers due to their various important features and functions. Price, cooling capabilities, anti-germ capability, storage capacity, modern features, absence of poor order, overall quality, user-friendliness, warranty, after-sales service, customer care, and ease of maintenance were the major criteria investigated for this study. Quality as a whole, warranty, user-friendliness, and after-sales service were the most influential factors in the purchasing of refrigerators. According to the results of the poll, the age, marital status, level of education, monthly income, and occupation of the respondents influenced their views on the overall importance of refrigerators.

Rastogi and Chaudhary (2012) investigated purchasing motivations for refrigerators in rural Meerut, including necessity, social status symbolism, marketing influence, and brand repute.

The principal findings of the survey indicate that the majority of rural consumers prefer to purchase new products of the same brand from the same company. When purchasing a new product, the second most important factor is the product's price, followed by the company's special offers. Buyers like the company's after-sales service and discounts when purchasing a new product.

Rajarajan and Priyanga (2013) evaluated customer behavior with respect to a variety of home appliances, including refrigerators, induction cookers, mixer grinders, wet grinders, kitchen stoves, and microwave ovens. This study found that consumer behavior has a substantial effect on the clusters' home appliance products. In a setting of consumption, a person chooses a product or brand that has the most potential to define or elaborate his lifestyle identity. A person, on the other hand, defines or actualizes his lifestyle by the products or brands he chooses in a consumption context. The household appliance products chosen for the study were once regarded as lifelong investments, but people are growing more amenable to the idea of replacing old appliances with new ones. Thus, the relationship between consumer behavior and home appliance products can be understood as an individual's purchases and use of products and services, where these selections are an expression and reflection of the consumer's lifestyle.

OBJECTIVES OF THE STUDY

- To study the demographic characteristics of the customers.
- To find the relationship between the demographic characteristics of the customers and their purchase pattern in refrigerator.

METHODOLOGY

Primary data has been used to collect information from customers. The data was collected from customers of Coimbatore city. The Judgemental Sampling method was followed for the study. The sample size was 470.

DATA ANALYSIS

Table 1: Frequency Distribution for Demographic Characteristics of the Customers

<i>Variable</i>	<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
<i>Age</i>	<= 30	91	19.36
	31 - 35	145	30.85
	36 - 40	171	36.38
	> 40	63	13.40
<i>Marital Status</i>	Married	337	71.70
	Unmarried	133	28.30
<i>Education Qualification</i>	10+2 or below	125	26.60
	Under Graduation	274	58.30
	Post-Graduation & Above	71	15.11
<i>Employment Type</i>	Salaried	268	57.02
	Self Employed	202	42.98
<i>Income</i>	Below 20,000	95	20.21
	20,001- 30,000	241	51.28
	30,001 - 50,000	107	22.77
	Above 50,000	27	5.74
<i>Family Size</i>	2-4	228	48.51
	5-6	184	39.15

	Above 6	58	12.34
--	---------	----	-------

(n=470)

The frequency distribution of customers' demographic characteristics is shown in the table above. The majority of customers, or 67%, are between the ages of 31 and 40. Most of our customers are married (72%). 51% of customers make between 20,001 and 30,000 each month, according to the income category. When it comes to their level of education, most of them (58%) have at least a bachelor's degree. 57% of customers work for a company that pays them a salary. 49% of customers have two to four people in their families.

Table 2: Frequency Distribution for Customer's Purchase Decision on Refrigerator

<i>Variable</i>	<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
<i>Type</i>	Frost Free – Bottom Mounted	61	12.98%
	Frost Free – Top Mounted	166	35.32%
	Single Door	243	51.70%
<i>Brand</i>	Godrej	63	13.40%
	LG	98	20.85%
	Panasonic	10	2.13%
	Samsung	68	14.47%
	Whirlpool	186	39.57%
	Other Brand	45	9.57%
	<i>Capacity</i>	Less than 200 L	162
	200L-220 L	146	31.06%
	220-240 L	64	13.62%
	240L-300 L	98	20.85%
<i>Time of Purchase</i>	0-2 Years	64	13.62%
	2-5 Years	135	28.72%
	5-10 Years	187	39.79%
	>10 Years	84	17.87%
<i>Replace Same Brand</i>	Yes	119	25.32%
	No	351	74.68%
<i>Mode of Finance</i>	Cash	208	44.3%
	Finance (EMI)	262	55.7%
<i>Preferred Shop</i>	E-Commerce	86	18.3%
	Modern Trade Outlets	140	29.8%
	Retail Trade Outlets	244	51.9%

(n=470)

The above table shows the frequency distribution of customers' refrigerator purchase decisions based on type, brand, capacity, time of purchase, cause for replacement, and replacement opinion on the same brand. The majority of customers (52%) favored refrigerators with a single door. 60% of buyers liked the refrigerator brands Whirlpool and LG. 66% of buyers favored refrigerators with a capacity of less than 220 litres. 82% of customers had acquired refrigerators within the past 10 years. 33% of the customers cite an upgrade to a higher capacity as the reason for replacement. The majority of customers (75%) believe they will not replace their current refrigerator brand. The majority of customers (39.6%) buy Whirlpool products.

Table 3: Relationship between the age of the customer and their mode of finance, preferred shop for the purchase of refrigerator

Variables		Mode of Finance		Preferred Shop		
		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Age	<= 30	30	61	8	33	50
	31 - 35	73	72	38	44	63
	36 - 40	71	100	28	48	95
	> 40	34	29	12	15	36
Total		208	262	86	140	244
Pearson Chi Square		9.807 (p < .05)		14.907 (p < .05)		

The above table shows that there is a significant relationship between the age of the customers and their mode of finance. There is a significant relationship between the age of the customers and their preferred shop for purchase.

Table 4: Relationship between the marital status of the customer and their mode of finance, preferred shop for the purchase of refrigerator

Variables		Mode of Finance		Preferred Shop		
		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Marital Status	Married	167	170	67	96	174
	Single	41	92	19	44	70
Total		208	262	86	140	244
Pearson Chi Square		13.558 (p < .05)		2.326 (p > .05)		

The above table shows that there is a significant relationship between the marital status of the customers and their mode of finance. There is no significant relationship between marital status of the customers and their preferred shop for purchase.

Table 5: Relationship between the educational qualification of the customer and their mode of finance, preferred shop for the purchase of refrigerator

Variables		Mode of Finance		Preferred Shop		
		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Educational Qualification	10+2 or below	64	61	29	43	53
	Under Graduation	117	157	39	78	157
	Post-Graduation & Above	27	44	18	19	34
Total		208	262	86	140	244
Pearson Chi Square		3.828 (p > .05)		11.249 (p < .05)		

The above table shows that there is no significant relationship between the educational qualification of the customers and their mode of finance. There is a significant relationship between educational qualification of the customers and their preferred shop for purchase.

Table 6: Relationship between the employment type of the customer and their mode of finance, preferred shop for the purchase of refrigerator

Variables		Mode of Finance		Preferred Shop		
		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Employment Type	Salaried	96	172	52	73	143
	Self Employed	112	90	34	67	101
Total		208	262	86	140	244
Pearson Chi Square		17.981 (p < .05)		2.026 (p > .05)		

The above table shows that there is a significant relationship between the employment type of the customers and their mode of finance. There is no significant relationship between employment type of the customers and their preferred shop for purchase.

Table 7: Relationship between the income of the customer and their mode of finance, preferred shop for the purchase of refrigerator

Variables		Mode of Finance		Preferred Shop		
		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Income	Below 20000	45	50	13	33	49
	20001 – 30000	111	130	36	68	137
	30001 – 50000	47	60	27	35	45
	Above 50000	5	22	10	4	13
Total		208	262	86	140	244
Pearson Chi Square		7.945 (p < .05)		17.115 (p < .05)		

The above table shows that there is a significant relationship between the income level of the customers and their mode of finance. There is a significant relationship between income level of the customers and their preferred shop for purchase.

Table 8: Relationship between the family size of the customer and their mode of finance, preferred shop for the purchase of refrigerator

Variables		Mode of Finance		Preferred Shop		
		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Family Size	2 - 4	97	131	42	57	129
	4 – 6	86	98	22	73	89
	Above 6	25	33	22	10	26

Total	208	262	86	140	244
Pearson Chi Square	.762 (p > .05)		29.083 (p < .05)		

The above table shows that there is no significant relationship between the family size of the customers and their mode of finance. There is a significant relationship between family size of the customers and their preferred shop for purchase.

Table 9: Relationship between the type of refrigerator and the customers mode of finance, preferred shop for the purchase of refrigerator

<i>Variables</i>		Mode of Finance		Preferred Shop		
		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Type	Frost Free – Bottom Mount	33	28	11	14	36
	Frost Free – Top Mount	53	113	26	58	82
	Single Door	122	121	49	68	126
Total		208	262	86	140	244
Pearson Chi Square		16.109 (p < .05)		4.593 (p > .05)		

The above table shows that there is a significant relationship between the type of refrigerator and the customers mode of finance. There is no significant relationship between the type of refrigerator and the customers preferred shop for purchase.

Table 10: Relationship between the capacity of refrigerator and the customers mode of finance, preferred shop for the purchase of refrigerator

<i>Variables</i>		Mode of Finance		Preferred Shop		
		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Capacity	Less than 200L	95	67	28	50	84
	200L – 220L	58	88	22	39	85
	220L – 240L	12	52	20	19	25
	240L – 300L	43	55	16	32	50
Total		208	262	86	140	244
Pearson Chi Square		31.687 (p < .05)		10.965 (p > .05)		

The above table shows that there is a significant relationship between the capacity of refrigerator and the customers mode of finance. There is no significant relationship between the capacity of refrigerator and the customers preferred shop for purchase.

Table 11: Relationship between the time of purchase and the customers mode of finance, preferred shop for the purchase of refrigerator

<i>Variables</i>	Mode of Finance	Preferred Shop
------------------	-----------------	----------------

		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Time of Purchase	0 – 2 Years	33	31	9	21	34
	2 – 5 Years	50	85	34	31	70
	5 – 10 Years	91	96	27	68	92
	> 10 Years	34	50	16	20	48
Total		208	262	86	140	244
Pearson Chi Square		6.195 (p > .05)		12.432 (p > .05)		

The above table shows that there is no significant relationship between the time of purchase of refrigerator and the customers mode of finance. There is no significant relationship between the time of purchase of refrigerator and the customers preferred shop for purchase.

Table 12: Relationship between customer preference on replacing same brand of refrigerator and their mode of finance, preferred shop for the purchase of refrigerator

Variables		Mode of Finance		Preferred Shop		
		Cash	Consumer Finance	E-Commerce	Modern Trade Outlets	Retail Outlets
Replace Same Brand	No	153	198	56	114	181
	Yes	55	64	30	26	63
Total		208	262	86	140	244
Pearson Chi Square		.249 (p > .05)		7.56 (p < .05)		

The above table shows that there is no significant relationship between the customer preference on replacing same brand of refrigerator and the customers mode of finance. There is a significant relationship between the customer preference on replacing same brand of refrigerator and the customers preferred shop.

FINDINGS

- Examining the demographic features of customers was the first objective. Approximately 67% of users are between 31 and 40 years of age. 72 percent of all customers are married. Seventy-three percent of customers held at least a bachelor's degree. 14% is close to parity between salaried and self-employed customers. 74% of customers have an annual income between Rs. 2,00001 and Rs. 48.5% of customer families consist of two to four people. 51.5% of customer families consist of more than four people.
- The second objective was to find the relationship between the demographic characteristics of the customer and their purchase pattern on refrigerators. There was a significant relationship between customer mode of finance and their age, marital status, employment type, income, refrigerator type, refrigerator capacity. There was a significant relationship between customer preferred shop and their age, educational qualification, income, family size, opinion on replacing same brand of refrigerator.

CONCLUSION

This paper emphasizes the relationship between customer demographics and their purchase pattern on domestic refrigerators. Results show that there was a significant relationship between

customer mode of finance and their age, marital status, employment type, income, refrigerator type, refrigerator capacity and also there was a significant relationship between customer preferred shop and their age, educational qualification, income, family size, opinion on replacing same brand of refrigerator.

REFERENCES

1. Amutha, G.G. and Sulthana, M . (2011). A Study on Replacement Attitude of Consumers towards Home Appliances. *Journal of Marketing and Management*, 2(2), 108–116.
2. Dr.M. Rajarajan and T. Priyanga, "Consumer Behaviour towards selected household appliances in Ramanathapuram", *Primax International Journal of Commerce and Management Research*, Vol. 1, Issue No. 1, April - June 2013.
3. Goswami, S 2011, 'Important parameters considered during their purchase: An exploratory study in Guwahati city in India', *Asian Journal of Management Research*, vol. 2, no. 1, pp. 390-404.
4. Gupta, S & Chundawat 2002, 'Family and social influences in buying decision making - A study of refrigerator', *Management Review*, vol. 14, no. 1-2, pp. 31-41.
5. Li, B, Wang, L & Li, B 2011, 'Demand attributes and market segmentations; An evaluation of refrigerator purchase behaviour in rural China, *International Journal of China Marketing*, vol. 1, no. 2, pp.13-32.
6. Matai, R & Bhat, AK 2013, 'Underlying dimensions of the purchase decision process for consumer durables: A confirmation of the customer-value hierarchy model', *Indian Journal of Marketing*, vol. 43, no.5, pp. 16-23.
7. Minakshi Thaman and Priya Ahuja (2010). Consumer behaviour in the purchase process of Television, Refrigerator and Food processor With special reference to Income level *International Journal of Research In Commerce and Management*, 1(7) 126–135.
8. Mumtaz Ali, Jing Fengjie and Naveed Akhtar Qureshi (2010). An exploratory study on consumer buying Behaviour from a Pakistani Perspective. *Asian Journal of Management Research*, 1(1), 216–228.
9. N Ramya and Dr SA Mohamed Ali, "Factors Affecting Consumer Buying Behaviour, *International Journal of Applied Research*, 2016, Vol.2, Issue 10, pp76-80.
10. Neha, S & Manoj, V 2013, 'Impact of Sales Promotion Tools on Consumer's Purchase Decision towards White Good (Refrigerator) at Durg and Bhilai Region of CG, India', *Research Journal of Management Sciences*, vol. 2, no. 7, pp. 10-14.
11. Rastogi, R & Chaudhary, S 2012, 'Psychology and buying behaviour rural consumers with special reference to television, washing machine and refrigerator in the rural areas of Meerut region, *International Journal of Trade and Commerce*, vol.1, no.2, pp. 249-259.
12. Sudharsana Reddy, G. and Rajalashmi, P.S. (2007). Buyer Behaviour of Home Appliances with special reference to Microwave products in Bangalore city. *Indian Journal of Marketing*, 37(2), 19–24.