
MARKET RESEARCH ON CONSUMER BUYING BEHAVIOUR FOR MICROWAVE OVENS IN THANE DISTRICT

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Abstract:

The Indian consumer durables industry has witnessed a considerable change in the past couple of years. Changing lifestyle, higher disposable income coupled with greater affordability and a surge in advertising has been instrumental in bringing about a sea change in the consumer behavior pattern. Apart from steady income gains, consumer financing and hire-purchase schemes have become a major driver in the consumer durables industry. In the case of more expensive consumer goods, such as refrigerators, washing machines, color televisions and personal computers, retailers are joining forces with banks and finance companies to market their goods more aggressively. Percentage household penetration of microwave ovens is low that is 5.3% over washing machine (10%), Air conditioner (6.8%) and Refrigerator (31%). Microwave oven sales suffered during the last three years as with all other categories since consumers were cutting discretionary spend on lifestyle products. The objective of the research paper is to understand the consumer buying behavior and way of thinking in case of microwave ovens. The paper also emphasizes on consumer decision making for buying decisions, gender wise , occupation wise perception about the microwave ovens and important factors affecting the buying consumer behavior.

Key Words: Home appliances, Auto cook Menu, CAGR, market share, Buying Behavior

Literature Review and Research Problem:

In the case of the microwave oven, the influence of publicity becomes almost nil with the passage of time, with word of mouth or internal influence being more relevant. (Martinez, Eva; Polo, Yolanda; Flavian, Carlos, 1998)

Microwaves in India witnessed moderate growth of 4% in volume terms and 10% in current retail value in 2015. The volume growth was restricted due to inflation and price rises in the year, which resulted in value growth being much higher than volume growth. Similar appliances such as OTG and induction cookers are growing in popularity, causing microwaves to suffer from a lower growth rate. Microwaves is estimated to grow by a volume CAGR of 5% and a value CAGR of 3% at constant 2015 prices over the forecast period. The rising disposable incomes and increasing need for reheating food by urban customers is likely to drive growth. (Euromonitor Report on Microwaves, 2015)

International microwave oven manufacturers are also entering Indian markets with new features and designs that are suitable for Indian families and their lifestyle. Leading companies are offering large product portfolio for different economic groups as low end models are dominating the Indian market. Companies are focused towards launching of smart appliances with modern technologies not only to enhance convenience to customer's daily lives but also to reduce energy consumption. (Research and Markets: India Household Microwave Ovens Market Report: Forecast & Opportunities to 2017, published by businesswire, 2015)

Most of the researches have taken many factors in to the consideration such as influence of gender, family, occupation, features, availability on decision making process in case of microwave ovens. This leads to the gap existing between consumer preferences, priorities and standard offerings by microwave oven OEMs. The objective of this research is to analyze the factors contributing to the decision making process for microwave ovens.

Background:

Consumer durables are one of the fastest growing industry segments in India. This sector attracted significant investments even during global recession. During FY03-FY13, the industry expanded at a healthy CAGR of 13 per cent. Urban markets account for the major share (65 per cent) of total revenues in the consumer durables sector in India. Rural markets are expected to grow at a compound annual growth rate (CAGR) of 25 per cent. Also, increasing electrification of rural areas would augment the demand.

Indian Consumer Electronics market has been witnessing sustained double digit growth rate in the past few years. Increasing product awareness, affordable pricing, innovative products and the high disposable incomes have aided in the strong growth in the consumer electronics market in India. Rapidly shrinking replacement cycle for consumer durables is observed as sustaining demand in urban India. The existing low penetration rates and the increasing usage of consumer durables have catapulted rural India to the high demand generating segment. The consumer electronics market in India is characterized by technological advancements, innovative product introductions, price fluctuations and intense competition.

India's monolithic young and working population is indirectly reshaping dynamics of several industries and Indian microwave ovens market is one of those industries, as increasing disposable income is pushing Indian families to opt for consumer durable goods such as microwave ovens

Objectives of the research:

- 1) To find out the consumer buying behavior and way of thinking in case of microwave ovens.
- 2) To know the features that consumer prefers most while purchasing the microwave ovens.
- 3) To find out the consumer awareness about the microwave ovens.
- 5) To know the problems faced by the consumers of the microwave ovens.

Research Design:

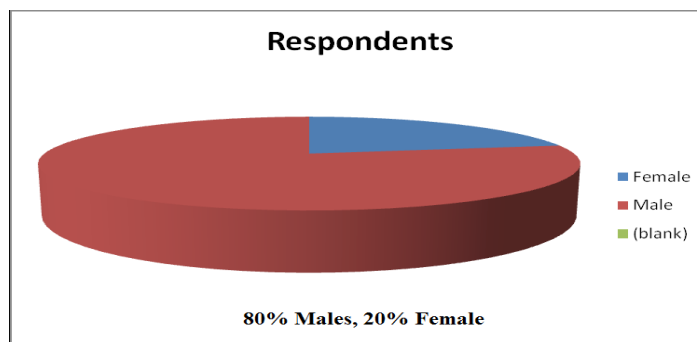
Initially a study was conducted using secondary data on the microwave oven market in thane district. For the exploratory studies internet, magazines and books were referred. A questionnaire was then developed with relevant variables to understand the consumer buying behaviour for microwave ovens. This was done through primary data collection. 150 people responded to the questionnaire giving their views and opinions. Also a likert scale rating was used indicating 1 as the highest rating and 5 as the lowest rating. The researches have used statistical methods like Anova, Chi-squares, frequency charts etc on MS Excel to analyse the data.

Data Sources:

Collection of data was done through offline and online surveys. There were mainly closed ended questions to identify the consumer buying behavior of microwave ovens.

Sample Details

Chart 1.1



Analysis:

Analysis 1 :

Hypothesis 1 :

H0r : Average rating of microwave features given by males and females is the same

Har : Average rating of microwave features given by males and females is not the same

H0c : Average rating across different microwave features are the same

Hac : Average rating across different microwave features are not the same

	Average of capacity range in liters	Average of no autocook menu	Average of auto defrost	Average of anti bacteria cavity	Average of rotisserie	Average of child safty lock
Female	2.91	2.12	2.33	2.61	3.00	3.09
Male	2.71	1.87	2.37	2.59	2.92	2.97
Grand Total	2.75	1.93	2.36	2.59	2.94	3.00

Average of energy saving	Average of humidity sensor	Average of next step guide	Average of steam clean	Average of deodorizer	Average of power levels	Average of timer
2.58	3.18	2.48	2.64	3.73	3.03	2.33
2.20	3.00	2.64	2.90	3.83	3.28	2.44
2.28	3.04	2.61	2.84	3.81	3.23	2.41

Anova: Two-Factor Without Replication

SUMMARY	Count	Sum	Average	Variance
Female	13.00	36.03	2.77	0.19
Male	13.00	35.72	2.75	0.25
Avg of capacity range in liters	2.00	5.62	2.81	0.02
Avg of no of autocook menu	2.00	3.99	2.00	0.03
Avg of auto defrost	2.00	4.70	2.35	0.00
Avg of anti bacteria cavity	2.00	5.20	2.60	0.00
Avg of rotisserie	2.00	5.92	2.96	0.00
Avg of child safty lock	2.00	6.07	3.03	0.01
Avg of energy saving	2.00	4.77	2.39	0.07
Avg of humidity sensor	2.00	6.18	3.09	0.02
Avg of next step guide	2.00	5.13	2.56	0.01
Avg of steam clean	2.00	5.53	2.77	0.03
Avg of deodorizer	2.00	7.56	3.78	0.01
Avg of power levels	2.00	6.31	3.16	0.03
Avg of timer	2.00	4.77	2.38	0.01

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	0.00	1.00	0.00	0.19	0.67	4.75
Columns	5.03	12.00	0.42	21.46	0.00	2.69
Error	0.23	12.00	0.02			
Total	5.27	25.00				

Since for rows, $F_{observed} < F_{critical}$, accept the null, therefore Average rating of microwave features given by males and females is the same

Since for columns, $F_{observed} > F_{critical}$, reject the null, therefore Average rating across different microwave features are not the same

We also observe that autocook menu has got the highest rating which indicates that this feature is most important.

Analysis 2:

Hypothesis 2 :

H0r: Average rating of microwave features across occupation is the same

Har : Average rating of microwave features across occupation is not the same

H0c : Average rating across different microwave features are the same

Hac : Average rating across different microwave features are not the same

	Average of capacity range in liters	Average of no of autocook menu	Average of auto defrost	Average of anti bacteria cavity	Average of energy saving	Average of rotisserie
Student	2.54	1.91	2.23	2.20	2.29	3.20
Service	2.67	2.04	2.29	2.74	2.29	3.08
Professional	3.07	1.74	2.58	2.67	2.26	2.49

Average of humidity sensor	Average of next step guide	Average of steam clean	Average of child safty lock	Average of power levels	Average of timer	Average of deodorizer
3.03	2.43	2.71	3.29	3.34	2.29	3.43
2.88	2.71	3.00	2.96	3.07	2.39	4.01
3.33	2.58	2.67	2.84	3.40	2.56	3.77

Anova: Two-Factor Without Replication

SUMMARY	Count	Sum	Average	Variance
Student	13.00	34.89	2.68	0.26
Service	13.00	36.13	2.78	0.25
Professional	13.00	35.95	2.77	0.28
Average of capacity range in liters	3.00	8.28	2.76	0.08
Average of no of autocook menu	3.00	5.70	1.90	0.02
Average of auto defrost	3.00	7.10	2.37	0.04
Average of anti bacteria cavity	3.00	7.61	2.54	0.09
Average of energy saving	3.00	6.83	2.28	0.00
Average of rotisserie	3.00	8.77	2.92	0.15
Average of humidity sensor	3.00	9.23	3.08	0.05

Average of next step guide	3.00	7.72	2.57	0.02
Average of steam clean	3.00	8.39	2.80	0.03
Average of child safty lock	3.00	9.08	3.03	0.05
Average of power levels	3.00	9.81	3.27	0.03
Average of timer	3.00	7.23	2.41	0.02
Average of deodorizer	3.00	11.21	3.74	0.09

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	0.07	2.00	0.03	0.67	0.52	3.40
Columns	8.23	12.00	0.69	13.17	0.00	2.18
Error	1.25	24.00	0.05			
Total	9.54	38.00				

Since for rows, $F_{observed} < F_{critical}$, accept the null, therefore Average rating of microwave features across occupation is the same

Since for columns, $F_{obs} > F_{critical}$, reject the null, therefore Average rating across different microwave features are not the same

Also when we look at the features with respect to occupation, it is observed that again autocook menu is the most important feature.

Analysis 3 :

Hypothesis 3 :

H_0 : Decision maker and the important feature considered are independent of each other

H_a : Decision maker and the important feature considered are NOT independent of each other

Test : CHI SQUARE TESTING

Alpha : 0.1

Probability : 0.9

Critical : 18.55

Observed : 16.80

p-value : 0.16

Degree of Freedom : 12

	Brand	Design	Easy Usage	Health	Price	Quality	Service	Grand Total
Entire Family	11.99	10.33	2.89	6.61	9.92	11.57	8.68	62.00
Spouse	10.25	8.83	2.47	5.65	8.48	9.89	7.42	53.00
Yourself	6.77	5.83	1.63	3.73	5.60	6.53	4.90	35.00
Grand Total	29.00	25.00	7.00	16.00	24.00	28.00	21.00	150.00

Brand	Design	Easy	Health	Price	Quality	Service	Grand
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	Usage							Total
Entire Family	2.10	1.30	1.24	0.39	0.09	1.81	0.01	6.93
Spouse	2.69	0.08	0.09	0.32	0.27	0.98	0.05	4.47
Yourself	0.01	1.38	3.43	0.02	0.06	0.33	0.17	5.39
Grand Total	4.79	2.76	4.76	0.73	0.42	3.11	0.22	16.80

Since p value is more than alpha, we accept the null. Therefore, Decision maker and the important feature considered are independent of each other

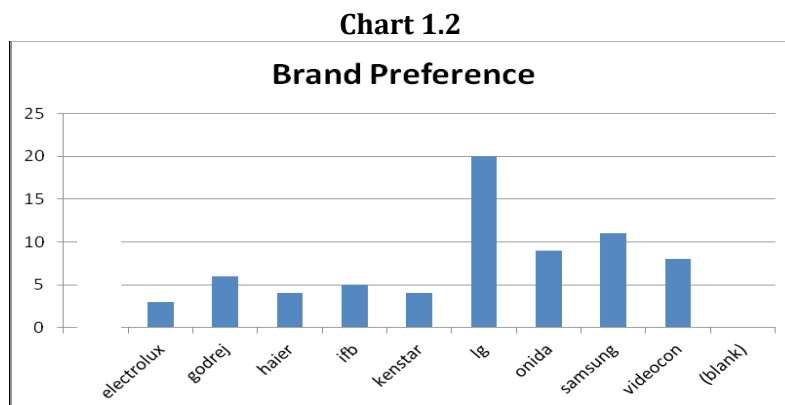
Analysis 4 :

Table 1.1

Row Labels	Average of Price affecting decision
Student	2.69
Service	2.63
Professional	2.88
Grand Total	2.71

As per the above table , it is observed that Service people are more sensitive to price compared to students and Professionals. Overall the average rating does not differ much.

Analysis 5 :



As per the above chart, it is observed that the respondents prefer LG brand of microwave ovens compared to the other brands such as Electrolux, Godrej, Haier, IFB, Kenstar, Onida, Samsung, Videocon and others. Samsung has got the second preference according to this survey.

Conclusions and findings:

Analysis 1 shows that autocook menu has got the highest rating which indicates that this feature is most important followed by energy saving feature as the second preference. Gender does not have a significant impact on the preference of microwave features.

Analysis 2 shows that occupation-wise preferences for microwave features are the same. Professionals and students have given a higher rating of 1.74 and 1.91 respectively for autocook menu, whereas , Service has given a rating of 2.04 for auto cook menu.

Analysis 3 indicates that decision maker such as the entire family, spouse or yourself and the important features considered such as brand, design, easy usage, health, price, quality and service are independent of each other

In Analysis 4, it is observed that Service people are more sensitive to price compared to students and Professionals. The average price rating for service is 2.63, for students its 2.69 and Professionals have given an average rating of 2.88

Analysis 5 observes that the respondents prefer LG brand of microwave ovens compared to the other brands such as Electrolux, Godrej, Haier, IFB, Kenstar, Onida, Samsung, Videocon and others. Samsung has got the second preference according to this survey.

Limitations of the market research:

- 1) Consumer feedback may depends upon consumer perception thus may have rational approach.
- 2) Consumer feedback may be biased sometimes regarding particular products.
- 3) Analysis and result may vary depending upon the area under the research. That is feedback received from Thane area does not necessarily same for other area.
- 4) Feedback depends upon the consumer awareness, knowledge, preferences, experiences about the products.

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