

A STUDY OF DIVERSITY IN RETAIL PURCHASE BEHAVIOUR IN FOOD AND GROCERY IN NORTH MAHARASHTRA REGION AND TO FORMULATE RETAIL STRATEGY IN DIGITAL ERA

¹Anil Sharma, ²Prof. Preeti Agarwal

¹Research Scholar, ²Research Supervisor & Director

¹North Maharashtra University, ²G. H. Raison Institute of Business Management, Jalgaon

Abstract

Retailing, in India, is witnessing the transition period as the organized retail players are attempting to gain market share from the traditional age-old formats. That in turn is now turning retailing into a fiercely competitive industry where wafer thin margins, floating buyers and intensive promotion have been accepted as necessary evils. So there is a need to find out the difference in retail purchase behaviour of people with different demographics and geographic locations which is particularly important in case of Food and Grocery segment. This paper projects the variation in Retail Purchase Factors across customers with different demographics and geographic locations and suggests a way out for formulating retail strategy for the upcoming retailers.

Keywords: Demographic & Geographic Variables, Food & Grocery, Indian Retailing

Introduction

India is witnessing a retail revolution as organized retailing is spreading to not only to metro towns but also to the tier 2 and 3 cities. The Indian retail sector has seen unprecedented growth in the last few years owing to the favorable demographic and psychographic changes in the Indian consumer class, rising income, international exposure, availability of quality retail space, wider brand choice and better marketing communication. Retailing business is mostly localised. Consumer behavior in a particular area, for example Mumbai, may not be the same as those of consumers in another city such as Chennai. Thus, the consumer's needs differ widely across the country. Therefore, distinct strategies should be adopted for different regions. What one must keep in mind is that if one is opening a store such as a grocery store then one has a catchment area. It is a much localized business that has to be built bottom up. It is not a business that can be pushed from top to down

A store is what its attributes convey to customers. Retail store attributes are the characteristics of retail stores on which the retail store is patronized. Customer perceive the store on these store attributes and creates a mental sketch of the store and once this mental frame has been created he keeps following his mental picture for future purchase situations. So it is thought that by identifying the important store attributes these vulnerable traditional grocery stores would be advised to plan out their strategies in more effective manner and would be able to face the challenges posed by the organized players.

Statement of the Problem

Organized retailing is in a state of flux. It is vindicated from the entry of leading domestic business houses and global retail giants into this growing segment. The buoyancy in consumers' spending power and increasing disposable income makes this segment very lucrative. The conglomerates are investing billions in setting up back-end and front-end operations. The conglomerates are adopting different retail formats suiting to their operations and ensure their access to the customers. The retail organisations are facing many difficulties in finding out the consumer preferences and perceptions towards the organizational variables of the retail outlets.

* Dr, Preeti Agarwal, Director G. H. Raison Institute of Business Management, Jalgaon

** Mr. Anil Sharma, Research Scholar, North Maharashtra University, Jalgaon

Objective of the Study

The main objectives of the present study are as follows:

- To study the diversity in retail purchase behaviour.
- To examine the influence of demographic factors on retail purchase behaviour
- To suggest a way out to formulate an effective retail strategy in digital age

Table 1 : Various Researchers & Categories of Attributes

<i>Author/Researcher</i>	<i>No. of Categories</i>	<i>Categories of Attributes</i>
Martineau (2008)	4 Categories	symbols and color, layout and architecture, advertising, and sales personnel
Fisk (2011-12)	6 Categories (30 attributes)	locational convenience, merchandise suitability, value for price, sales effort and store service congeniality of the store, and post-transaction satisfaction
Kunkel and Berry(2009)	12 Categories (37 attributes)	price of merchandise, quality merchandise, assortment of merchandise, fashion of merchandise sales personnel, locational convenience, other convenience factors, service, sales promotion, advertising, store atmosphere, and reputation on adjustments
Oxenfeldt (2011)	3 Categories (20 attributes)	Tangible Reality Factors , Intangible but genuine substantive benefits , Fantasies
Lindquist (2013)	9 Categories (35 attributes)	Merchandise, Service, Clientele, Physical facilities, Convenience, Promotion, Store atmosphere Institutional factors, Post-Transaction, and Satisfaction.
Hansen and Deutcher (2010)	9 Categories (41 attributes)	Merchandise, Service, Clientele, Physical Facilities, Convenience, Promotion, Store Atmosphere Institutional, Post-transaction Satisfaction
Schiffman et al.(2009)	5 Categories	convenience of store location, best price and/or "deals," guarantee/ warranty policies, salesmen's expertise, and variety of merchandise to choose from

Methodology

A questionnaire has been designed keeping in view the above said objectives. The researchers have chosen to study the general category of retailers in North Maharashtra region viz Jalgaon ,Dhule , Nandurbar and Nasik City. For this purpose, 360 shoppers have been surveyed, to collect their opinions, their perceptions about the activities and expectations from these leading organised retailers in respective cities. The secondary data and information have been collected from various research papers/articles published in various magazines, journals and data made available to the public by various retail store operators through their websites. The probability sampling method was adopted in the study.

Hypothesis of the Study

H1: Geographic areas affect the retail preference of people

H2: Demographics affect the retail choice for different product categories

Research Sample

The respondents were chosen from different geographic locations of North Maharashtra Region viz Jalgaon, Dhule, Nandurbar & Nasik. The respondents belonged to different cultural backgrounds with different demography. A sample of 90 respondents comprising people of Jalgaon, Dhule , Nandurbar & Nasik equally was chosen to give response to 21 statements (refer Appendix I) on 5-itmes Likert Scale (1=Strongly disagree to 5=Strongly agree) in order to find out whether any consumption scale could be formed with the help of Factor analysis. The selection was

strictly made using stratification sampling on the basis of age and gender. Equal weightage was given for 5 age groups viz. 18-25, 25-35, 35-45, 45-60 and above 60, whereas the male–female ratio was 3:2.

Appendix-I

Questionnaire

Catchment Area: Jalgaon, Dhule, Nandurbar & Nasik

Age: 18-25, 25-35, 35-45, 45-60, & >60

Give your comment on the following statements as per the 5-itmes Likert Scale as below.

1. Strongly Disagree, 2. Disagree, 3. Neither Agree nor Disagree, 4. Agree, 5. Strongly Agree
- a) As long as products are branded, price is not the factor.
- b) You would prefer a shop that keeps everything your need.
- c) You make all the purchases from the shops in your neighbourhood.
- d) You only go to those shops which advertise regularly.
- e) You go to shopping malls since the salespeople are very helpful.
- f) You make all your purchases during the discount offers.
- g) The local shops do not need to advertise since you will go anyway.
- h) You love to shop as per your own and hence do not want any help service.
- i) You would prefer a shop that specializes in few products but with wider varieties.
- j) You always look around for help in a big shop since you are at loss with so many products.
- k) The products available during the discount offer are not of good quality.
- l) Advertisements of shopping malls in TV or paper are helpful since you know what are available.
- m) You are ready to go long way to avail maximum amount of choices.
- n) You prefer going to discount shops (like Big Baazar, Bazaar Kolkata) sine the prices are lesser than other shops.
- o) Advertisements are wastage of money for retail shops.
- p) You love going to malls irrespective of their distance from your house or workplace.
- q) You love to pick up your own stuffs from the shops with no or occasional help.
- r) You generally avoid well-decorated and sophisticated shops as you think prices will be high.
- s) You prefer to go to department stores even if when you want to purchase daily necessity items.
- t) You do not find anything wrong in shops that keep unrelated products.

You love to shop where there is some good music, soothing colours on walls and the products are nicely displayed.

Data Collection Tool

A consumer survey was carried out using a structured questionnaire. The selected respondents responded to 21 statements on 5-point Likert Scale (1=Strongly disagree to 5=Strongly agree). The data was collected using a face to face interview.

Data Analysis

Factor analysis was used to find out major factors of concern in retail purchase decision-making, which is required to find RPF (Retail Purchase Factor) scale. Bartlett's test of sphericity is a test statistics used to examine the hypothesis that the variables are uncorrelated in the population, i.e. checks whether the population correlation matrix is an identity matrix where each variable correlates perfectly with itself ($r=1$) but has no correlation with the other variables ($r=0$). Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is an index used to examine the

appropriateness of factor analysis. High values (between 0.5. to 1) indicate that factor analysis is appropriate whereas values below 0.5 imply that the factor analysis may not be appropriate.

Next in the factor analysis, communality is found out, which is the amount of variance a variable shares with all the other variables being considered. Communalities indicate the amount of variance in each variable that is accounted for. Initial communalities are estimates of the variance in each variable accounted for by all components or factors. For principal components extraction, this is always equal to 1.0 for correlation analyses. Extraction communalities are estimates of the variance in each variable accounted for by the components. If any communality is very low in a principal components extraction, we may need to extract another component, whereas high communalities indicate that the extracted components represent the variables well. Cronbach's alpha for RPF scale was found out to test the reliability of the scale.

In order to understand the influence of demographics on purchase decision- making ANOVA test was used along with Levene test of homogeneity of variances.

Factor Analysis

Bartlett's test of sphericity (Approx. Chi-Square=399.150, $df=2.76$, $p<.05$) is significant implying that the variables are correlated in the population so that further data reduction is necessary. The very high value (=0.846) of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy indicates that the factor analysis is appropriate (Table 2). Factor analysis selections produce a solution using principal components extraction (Table 3), which is then rotated for ease of interpretation (Table 4). Components with eigen values greater than 1 are saved. High communalities indicate that the extracted components represent the variables well.

Table 2: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.846
Bartlett's Test of Sphericity	Approx. Chi-Square	399.150
	df	2.76
	Sig.	.000

The extracted components explain nearly 83.2 per cent of the variability in the original ten variables. So we can considerably reduce the complexity of the data set by using these components, with only a 16.8 per cent loss of information. The rotated component matrix helps in table 4 helps in determining what the components represent

Table 3: Rotated Component Matrix

Rotated Component Matrix ^a					
	Component				
	1	2	3	4	5
Statement_1	.839	-.142	.046	.132	-.095
Statement_2	.792	.213	.006	-.027	.129
Statement_3	.429	.311	.207	-.368	-.082
Statement_4	-.002	.752	.024	.315	.212
Statement_5	-.025	.702	.381	.063	.110
Statement_6	.262	.580	-.307	.150	-.240
Statement_7	.035	.101	.772	.028	-.038
Statement_8	.263	.023	.677	.325	.299
Statement_9	.431	.005	-.489	.391	.192
Statement_10	.239	.198	-.007	.783	.057
Statement_11	-.186	.256	.257	.702	-.046
Statement_12	-.018	.046	-.211	.243	.709

Statement_13	.413	-.144	.190	-.046	.669
Statement_14	-.184	.272	.181	-.145	.574
Statement_15	.839	-.142	.046	.132	-.095
Statement_16	.792	.213	.006	-.027	.129
Statement_17	.429	.311	.207	-.368	-.082
Statement_18	-.002	.752	.024	.315	.212
Statement_19	.839	-.142	.046	.132	-.095
Statement_20	.792	.213	.006	-.027	.129
Statement_21	.429	.311	.207	-.368	-.082

Table 4 lists the factors extracted for Retail Purchase factor (RPF) scale.

Factor	Factor Designation	Variables
F1	Proximity	Statement_3, Statement_13, Statement_12, Statement_15
F2	Product Assortment	Statement_2, Statement_4, Statement_9, Statement_19, Statement_21
F3	Service	Statement_5, Statement_8, Statement_10, Statement_20, Statement_16
F4	Price	Statement_1, Statement_6, Statement_11
F5	Ambience	Statement_7, Statement_14, Statement_17, Statement_18

Reliability Analysis of RPF Scale: Cronbach's alpha of 0.831 being computed for the 5 items in the RPF indicates a relatively good internal consistency for the scale.

ONE-WAY ANOVA

Influence of Geographical Difference on Expectation of Proximity in the Food & Grocery Sector

The results of the one-way ANOVA comparisons of Proximity scores of all the four geographic areas for food and grocery sector indicated that no significant difference in importance of proximity existed ($F(2,197) = .896, p > .10$). So we may conclude that proximity of food & grocery is equally important irrespective of geographic areas. The high scores of the four geographic areas (Nasik = 9.1; Jalgaon = 8.9; Dhule = 8.1 & Nandurbar = 7.8) also signify that this factor is very important for the customers.

Influence of Geographical Difference on Product Assortment in the Food & Grocery Sector

The results of the one-way ANOVA comparisons of Product Assortment scores of all the four geographic areas for grocery sector indicated that no significant difference in the importance of product assortment existed ($F(2,197) = 1.395, p > .10$). So we may conclude that Product Assortment of grocery is equally important irrespective of geographic areas. The preference pattern score of all the elements summing up to the product assortment basket were found out for grocery sector. Table 5 shows the score for various elements of product assortment in the grocery sector.

Table 5: Score for Various Elements of Product Assortment

Elements	Nasik	Jalgaon	Dhule	Nandurbar
Good brands	985	791	790	742

Wide variety	915	900	801	739
Quality	897	925	689	794
Full stock	865	769	788	876
Availability of goods	789	698	833	923
Luxury goods	812	788	924	654
Unrelated products available	745	699	865	434

Influence of Geographical Difference on Expectation of Ambience in the Food & Grocery Sector

The results of the one-way ANOVA comparisons of Ambience scores of all the four areas for food and grocery sector indicated that a significant difference existed ($F(2,297) = 12.68, p < .001$). Scheffé post-hoc measure (since Equal Variances Assumed; Levene Statistic $(2,297)=1.948, p > .10$) signifies that all the areas statistically differ ($p > .10$) from each other.

Influence of Geographical Difference on Expectation of Price in the Food & Grocery Sector

The results of the one-way ANOVA comparisons of price scores of all the four geographic areas for food & grocery sector indicated that no significant difference in importance of proximity existed ($F(2,197) = 2.234, p > .10$). So we may conclude that the price of food and grocery is equally important irrespective of geographic areas.

Influence of Geographical Difference on Service in the Food & Grocery Sector

The results of the one-way ANOVA comparisons of Service scores of all the four areas for grocery sector indicated that a significant difference existed ($F(2,297) = 14.35, p < .001$). Tamhane's T2 post-hoc measure (since Equal variances Not Assumed; Levene Statistic $(2,297)=14.327, p < .001$) signifies that all the areas statistically differ ($p > .10$) from each other.

Hypothesis Conclusion :

On analysing the data it was found that there is no significant difference in Overall Retail Expectation (ORE) in the four catchment areas in case of food and grocery purchase. This suggests that the purchase pattern of food and grocery remains same across the geographies to a large extent.

Further data analysis revealed some more interesting facts regarding the effect of geography on the RPFs.

- Proximity: It is observed that the importance of proximity is the same in each catchment area for food & grocery. So it can be inferred that people irrespective of their area prefer food & grocery stores to be nearby.
- Product Assortment: It is observed that Product Assortment is important for food and grocery. But further analysis showed that the priority given to various elements, which make up the product assortment, varied over the geographies.
- Ambience: It is observed that this factor has been perceived differently by people of different geography for food & grocery
- Price: Price is equally important for all for food & grocery.
- Service: Perception and preference towards importance of service was also different across geographies.

From the above observations we see that, proximity and price are more important than other factors and in these two RPFs there is no variation across geographies as well. These indicate that retail formats for food & grocery can be standardised on these RPFs irrespective of geography. But other RPFs show marked differences. So retail formats

need to be customised in terms of service, product assortment and ambience as geography changes. It should be observed that socio-cultural and economic background changes with the geography. This has an effect on how people would like to shop. Now, food & grocery being a necessary item and falling under the category of convenience goods, people would not like to spend more time on food & grocery purchase as it is low involvement purchase. Moreover people are price sensitive also in case of food & grocery purchase. This remains the same across all the geographies. But then due to the difference in other demographic characteristics we can anticipate some changes in their purchase preferences. The analysis of data shows differences in their preferences for RPFs like service, ambience of the store and product assortment. The ambience of the store is preferred to have more of urban influence in Nasik, which is not the case in the Jalgaon. Also the difference in lifestyles of people with different geographical and demographic setup leads to a product assortment preference, which is different. With huge penetration of media and knowledge to even the most interiors of the country people today are much aware of the variety of brands and the new products available. So if new products or brands are to be introduced in a plethora of those already there in suburb and district towns, the education of customers is a necessity to convince them and motivate them to purchase the brand that the seller wants to sell.

Thus, product assortment is really an important parameter to be considered in case of retail format.

Consequently, the retailer has to follow a two tier strategy. If they wish to sell more than one product under one roof in more than one area then they need to standardise at first level to achieve the economies of scale and maintain the brand identity. But at the second level they have to allow some customisation as per the target market, products (merchandise) and location chosen

Retail Strategies in Digital Era:

Retailing India are still at an introductory phase, and in the process of understanding the benefits of IT in retail. "It is indeed the beginning. That said, the innovation and deployment that is taking place in India is confined to the organized sector, which is a small proportion of the overall retail industry. The way the Indian retail industry is shaping and developing presents an opportunity no less than a goldmine unearthed for vendors.

India is at the cusp of the first and second phase, with the modern training format having emerged centre stage. The growing preference of the affluent and upper middle classes for shopping at these types of retail stores, give the convinces they offer such as shopping ambience, variety and single point source for purchases have been driving factors behind this transformation.. From supermarkets such as big bazaar of food world, which are large self service stores selling a variety of products a discounted prices to malls and department stores such as D Mart, Navjeevan Super shop, etc the Indian consumer is fast catching up with his/her global counterpart.

Innovation based strategies in the Indian Retail Sector

1. ERP (Enterprise Resource Planning): Systems: An ERP System integrates the many departments in these companies so that they can work in tandem .Because of ERP the different functioning process of different departments are optimized and planning improves.
2. Sales force Automation (SFA)Software: This helps to capture the data at the retailers level for the companies.
3. Global Data Synchronization Tool: (GDS): This is an website based model which lets suppliers and retailers to interact without facing data interoperability problems
4. RFID(Radio Frequency Identification) :Under this a shopping cart with a scanner and a touch screen computer offers information about each product and suggest complementarities. The computer keeps a list of items in the cart with a running total, so that we know exactly how much we are spending, When finished shopping we have to a self checkout stand or to a cashier. Since the items are already total and bagged, the wait time is minimal.

This involves identifying customers by issuing them smart cards embedded with smart chips. These cards would be RFID enabled and would give information regarding the customer like his preferences, shopping behavior etc.

5. Wireless Devices (PDAs and POSs): The Personal Digital Assistants give real time access to product and customer information. Point of sales will go a step further in combining real time information with on the spot check our series.
6. E-Catalog based selling: Here a limited range of merchandise is available in-store, while the range of a hyper format is made available through self browse kiosks.
7. Mobile Point of Sale (POS): This would enable the purchase of goods while putting them in a shopping cart. The customer would be spared the hassle of standing in long queues.
8. Digital Signage: Static signboards have not proved beneficial in terms of helping a customer track a product. Digital signboards integrated with an automated tracking system can make this easier.
9. Intelligent database: A detailed database of the customer is made available online and helps the retailer understand a particular customer's buying characteristics.

Examples of Innovative strategies in the Retail Sector in India

1. Big Bazaar is launching a scheme whereby a consumer can enter into a Big Bazaar outlet and drop in an innovation in the various consumer sectors it is present in and if the idea seems feasible, the group will manufacture and market the innovation under the brand "India ka Idea".

Two such innovations have already found space on the shelves at Big Bazaar outlets in Ahmedabad, where the company has put samples of a refrigerator called Mitticool, a clay refrigerator that works without electricity and mitti cool non-stick pan - a non-stick tava made out of clay layering which would cost you only Rs 70-100 as against for the regular one which would not cost less than Rs 500. The Future Group has also signed an MoU with National Innovation Foundation, Department of Science and technology, Government of India, giving shape to an innovation lab called "Khoj lab" which will create and support innovations at grassroots and help those innovations becoming marketable

2. Reliance retail, followed cost effective innovative and appealing packaging for Home categories, including Houseware, eg metal, glass and plastic cooking and storage items, Home Needs like CFL bulb, home furnishing items like curtain, bedsheet, towels, pillow covers, apron, etc, and consumer durable and electronic products accessories.

3. **Zerostock Retail Pvt Ltd**, a new garment retailer from Hyderabad, has come out with an innovative idea for retailing men's wear — there's no readymade apparel available at the store. A typical store offers sample wear for trial and a display of designs and fabric.

All a customer has to do is walk into any of the stores, figure out the size which will fit them with the trial shirts on display and then select the design and the material of the shirt. Once the transaction is done, the shirt will be dispatched to the customer within a matter of 24 hours to 48 hours from their centralized inventory at no additional cost.

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