Abstract

On

A Study of Shopper Buying Behaviour in terms of ‘Selection of Retail Outlets’ and the ‘Impact of Visual Merchandising’

Submitted by

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1. Introduction

Retailing consists of all business activities that involve in selling goods and services to the final customer for personal and household use without any intention to resale. Retailing has evolved globally into a high-tech business. Global Retail companies like Wal-Mart have already topped fortune 500 companies in turnover. At the same time, customers are gradually getting more quality conscious and preferring shopping in a better environment. As the preferences of customers are changing, new business opportunities are also coming up in retailing. This also gives rise to new areas of study in retailing e.g. Shopper buying behavior so that retailers can modify their shopper targeting strategy.

It is beyond doubt that Retailing in India is one of the most attractive sectors of this decade. While the retailing industry itself has been present through history in our country, it is only the recent past that has witnessed so much dynamism and growth. It's the latest bandwagon that has witnessed hoards of players leaping onto it. While international retail store chains have caught the fancy of many travelers abroad, the action was missing from the Indian business scene, at least till last 5 to 7 years. But now because of availability of more number of retail formats and malls, customers have got abundance of choice in relation to selection of a retail store and purchase of merchandise.

Despite the current changes, there is a lack of studies that have focused on the nature of shopping behavior exhibited in the Indian environment. Most research in this area is still proprietary in nature and hence is outside the public domain. In such a scenario, there remains a need for studying the shopper behaviour. Given the rapid rate at which new retail formats have been introduced in the Indian market in recent times, many with limited success, it is imperative for Indian businesses to understand changing shopping behaviour among consumers, especially, with regard to their preferred points of purchase. With growth in disposable incomes and improving infrastructure, consumers have a wide choice of stores where they can choose to shop. It is therefore, necessary for retailers to understand shoppers’ motivations and to attract customers residing beyond the catchment areas around their stores.
Assuring quality product or investment in brand building activities is not just enough to acquire new customers or retain existing customers. As customers are bombarded with more and more options, they are confused on what to buy. This leads to customers being less brand loyal and more variety seekers. This often results in customers switching from one brand to the other, or to a substitute product. In this case, product availability and visual merchandising play important role. Moreover, visual merchandising is helpful in inducing impulse purchase of unplanned merchandise in customers also. Though visual merchandising, a critical decision area in retail, the importance of same has not yet been felt in India. Most modern formats of retailing arrange their merchandising without any scientific study or use of a planogram. Similarly, stores come up on the basis of availability of real estate and price proximity. But hardly any study has been done to understand the implications of retail location and visual merchandising.

So the research aims at studying the shopper decision process in selection of a retail outlet and the impact of visual merchandising on select category of products. Retailers can use the research in designing their merchandising and market targeting strategy.

The research first tries to understand the different attributes that influence shopper buying behaviour. The understanding of the attributes is developed from existing literature and the same verified by exploratory survey with shoppers in Pune. Once the attributes were finalised, data from shoppers was collected on those attributes on an importance scale. The data was processed through SPSS using factor analysis to create factors that affect shopper buying behaviour and subsequently factor scores were computed. Factor scores were used in cluster analysis to create shopper clusters or shopper segments to understand their demographics and buying behaviour.

**Aims and Objectives:**

1. Explore consumer decision process in retail by understanding the different triggers for shopper buying behavior

2. Identify the various factors influencing customer behaviour and create an understanding of retailers’ approach towards consumer behaviour
3. Understand the different factors (after clubbing different triggers into factors) and their relative importance in shopper buying behaviour.

4. Impact of visual merchandising on select merchandise

5. Understand shopper clusters in terms of their buying behaviour

2. Review of Literature

The literature review focuses on the triggers of shopping identified by various researchers across the globe, with specific emphasis on merchandising as an attribute and use of factor analysis as a quantitative tool to create constructs affecting shopper behavior. Moreover, it explores the different quantitative methods followed by different researchers to reach at quantifiable factors under different conditions of study. The focus of the literature review is to understand factors influencing shopper behavior and the scales used by different researchers across the globe to address shopper buying behavior. This also identifies the gap in the present research and derives hypotheses to address those areas.


The research on shopper behavior goes back to 1969 when Dodge and Summer found out that Store choice has been found dependent on socio-economic background of consumers, their personality and past purchase experience. Later Kotler (1973), Cort and Dominguez (1977), Mattson (1982), Meyer and Eagle (1982), Malhotra (1983), Lumpkin et al. (1985), Zeithaml (1985), Fotheringham (1988), Sparks (1995), Davies (1995) contributed a lot towards the research on shopper buying behavior. But most of
these researches were qualitative. McGoldrick and Betts (1995) conducted a research named ‘Consumer behavior and the retail sales’ in UK and used quantitative analysis (factor analysis) to bring out eight factors that influence shopper behavior in UK. However till 2003, there was not much research done on Indian shopper behavior. Sinha and Banerjee (2004) worked on “Store Choice Behavior in an evolving Market”. This analysis is based on seven constructs and 43 variables. The seven constructs are proximity, merchandise, ambience, service, patronized and others (two constructs). One of the most recent Indian researches on shopper behavior is by Goswami and Mishra (2008) who studied traditional kirana stores visa-a-vis organized Supermarkets for grocery shopping and came out with factors related to grocery store patronage and identified dimensions of customers’ needs and desire which are relevant for grocery store choice. In this study 44 attributes were considered in the questionnaire that was brought down to 11 factors by factor analysis. A very recent research on shopper behavior is by Swoboda, Haelsig, Klein and Morschett(2009) who used a 15 attribute model, converting the attributes into 5 factors in their research “Moderating role of involvement in building a retail brand”.

From the existing literature, it is quite evident that lot of work has been done on shopper buying behavior globally, but except Sinha and Banerjee (2004) and Goswami and Mishra (2008) there is hardly any relevant research being published on shopper buying behavior in Indian context. Research done by Sinha and Banerjee (2004) on “Store Choice Behavior in an evolving Market” gives deeper insight into Indian shopper behavior. The analysis is based on seven constructs and 43 variables. This study addresses the question of retail outlet selection, but it does a generic study of all modern formats of retailing. So the seven factors justify the shopper behavior in outlet selection, but don’t specify the behavior for any specific outlet. The study by Goswami and Mishra (2008) on traditional kirana stores visa-a-vis organized Supermarkets for grocery shopping has identified factors related to grocery store patronage and identified dimensions of customers’ needs and desire which are relevant for grocery store choice. In this study 44 attributes were considered that led to 11 factors. This research though based on grocery store choice, the main objective is to differentiate Shopping in a kirana store vs. in a supermarket.
The existing researches in India and abroad have identified many dimensions of Shopper behavior in addressing the issues like retail branding, store location, differentiating kirana store and organized retailing etc. But none of these researches address the question of ‘shopper behavior in a supermarket’ adequately. Either they talk of shopper behavior in general (not specific to supermarket) or shopper behavior to specific stimuli differentiating super markets from kirana stores. Contrary to above published research findings, the proposed research is in between (neither too broad based, nor too specific) that tries to address the triggers affecting shopper behavior in a super market, and studies in specific shopper behavior in response to the triggers.

**2.2 Formation of Hypothesis:**

The reviews of literature gave deeper insights into the attributes affecting shopper behavior, attributes and scales used by researchers and identify the gaps. Moreover this helped develop hypotheses on the basis of understanding of shopper behavior in the retail environment in India. The following hypotheses were proposed on the basis of literature review:

**H1:** Shoppers go through a complex evaluation process before selecting a retail outlet for purchase of merchandise.

**H2:** Shopper decision process is highly influenced by visual merchandising and Point of Purchase Display.

**H3:** Shoppers are different in their buying behavior in selection of an outlet.

**3. Methodology**

The literature review (both Indian and western) helped in creation of hypotheses for the study. As the hypotheses were on shopper behavior, it necessitated to find out the attributes that influence shopper buying behavior. On the basis of exploratory survey twenty three attributes were identified and the same were discussed with subject experts before finalization. Questionnaire was developed on identified attributes, and the data
was collected for pilot survey. SPSS was used to analyze the data (from pilot survey); the tools used were Factor analysis and Cluster analysis to identify the factors and, then to create shopper clusters respectively. The findings were presented and discussed with subject experts. The pilot survey could clearly identify factors and also created distinct clusters. On the basis of the pilot survey, minor modification was made to the questionnaire; subsequently data was collected from 400 shoppers for analysis. The data was subjected to factor analysis, to create constructs or factors that represent the twenty three identified attributes. Subsequently Factor scores were created for individual respondent from factor analysis that was consequently used for Cluster analysis to create shopper clusters among the respondents. In addition to that, other pertinent numerical and qualitative analysis was performed. The findings from the research were compared with the hypotheses to draw relevant conclusions.

3.1 Exploratory Survey:

The main objective of exploratory survey was to understand different attributes that influence shopper buying behavior in a supermarket. The attributes were first derived from the literature survey (Sinha and Banerjee, 2004).The same were cross checked in an Exploratory survey with 63 shoppers that reduced the original 43 attributes(Sinha and Banerjee, 2004) to 23 key attributes for food and grocery segment. These attributes are:

1. Discounts offered at the outlet
2. Variety and assortment
3. Location of the store
4. Service level
5. Availability of parking facility
6. Store ambience
7. Availability of desired SKU
8. Home delivery facility
9. Status
10. Cleanliness/Hygiene
11. Brand choice
12. Freshness of the merchandise  
13. Merchandise display  
14. Credit card acceptability  
15. Behavior of salespeople  
16. Adequate ventilation  
17. Proper lighting  
18. Price  
19. Time to shop  
20. Ease of shopping  
21. Checkout  
22. Signages  
23. Loyalty programs  

3.2 Primary Research:  

The primary research was conducted on actual shoppers across outlets (supermarkets) in Pune. The primary research was conducted over 54 shoppers on a pilot basis to validate the questionnaire and the methodology, followed by which the actual primary research was conducted with a valid sample size of 352 (out of total 400) where the unit of analysis is the Shopper: the actual buyer who comes to the retail outlet to shop. Convenience sampling was preferred over probability sampling in this case as the objective of the research is to create shopper clusters on the basis of their behavior. So creation of shopper clusters doesn’t suffer from the disadvantages of convenience sampling.  

3.3 Determination of sample size:  

For Factor analysis, studies have revealed that adequate sample size is partly determined by the nature of the data (Fabrigar et al., 1999; MacCallum, Widaman, Zhang, & Hong, 1999). In general, the stronger the data, the smaller the sample can be for an accurate analysis. “Strong data” in factor analysis means uniformly high communalities without cross loadings, plus several variables loading strongly on each factor. The best method of determining the sample size for Factor Analysis is subject to item ratio (Costello,
Osborne 2005). As per Costello and Osborne “In a majority of the studies (62.9%) researchers performed analyses with subject to item ratios (ratio of respondents and attributes under study) of 10:1 or less”. In the present study, data is collected from 400 customers out of which 352 are only considered for the final analysis. Rests 42 were rejected because of inconsistency. At a subject size of 352 for 23 items under investigation, the subject to item ratio stands at 15: 1 which is well above average among all researches done using factor analysis.

3.4 Questionnaire development:

The questionnaire was developed on the basis of the 23 key attributes identified during the exploratory survey. For each attribute, there was one question in the questionnaire and shoppers were asked to choose between one to five for every question (one being of least importance and five being extremely important to them in choosing a retail outlet). In addition to the above, the questionnaire contained information regarding the demographics (age, income, occupation) and behavior (frequency of purchase, monthly expenditure) of shoppers. It also contained question on features that attract a shopper to an outlet, the features that appeal to customers inside the store, what makes a shopper to brand switch, selection of merchandise in an outlet, type of merchandise arrangement preferred by a shopper, shopper view on store loyalty and brand loyalty, features that can put a store on negative light, visual merchandising and commitment towards a brand etc.

An individual shopper being the sampling unit and the retail outlet being the sampling frame, the 1st task in data collection was to list down the retail outlets from where the data to be collected. The study involved a field survey conducted across different stores in the city of Pune, in Maharashtra. The respondents were approached at the shop after they had finished shopping and were leaving the store. It was felt that shop intercept (exit interviews) would capture the mindset of the shopper more effectively compared to an interview away from the shop that might bring only “visualized perception” and not the real experience. The respondents were administered a structured questionnaire. The responses were recorded using a set of 23 statements measured on importance scale in addition to other relevant information. The selection of retail outlets were done to ensure coverage of most formats of supermarket in Pune.
3.5 Scope and limitation:

- The study pertaining to retail consumer behaviour is restricted to Staple Merchandise only.
- Retail format covered in this study are restricted to supermarkets only.
- The primary data collection will be limited to retail outlets in Pune only.

4. Analysis

The analysis of the data revolves around two types a statistical analysis i.e. Factor Analysis and Cluster Analysis. Factor analysis tries identifying the underlining constructs that influence the responses on a number of measured variables. Factor analysis has been used to group different items or attributes into common factors that influence shopper buying behaviour. The data collected from respondents on the 23 key identified attributes (on a scale of one to five) was converted to ‘Factors’ or ‘Constructs’ using Factor analysis. So attributes or items that are close to each other in terms of respondents’ opinion tend to group together into a common factor. Furthermore, ‘Factor Scores’ were created for each respondent from factor analysis. Factor scores represent the cumulative response of a respondent for all the attributes that group into a factor. Factor scores were used to create ‘Shopper Clusters’ using cluster analysis. Shopper clusters represent groups of respondent that are similar within the cluster and the respondents are different across clusters in terms their response to the underlying factors or constructs. The various demographic and behavioural data collected from the respondents have been used to define clusters characteristics. The outcomes of Factor analysis and Cluster analysis helped to test the proposed Hypotheses and draw relevant conclusions.

5. Results and Discussions:

5.1 Factor Analysis

The data collected from 352 respondents was subjected to factor Analysis using SPSS. The initial challenge was to determine the number of factors. “Kaiser Criterion” and “Scree test” were used to understand the underlining constructs and determine the number of factors. The principal component analysis resulted in five factors explaining
83% of the total variation. Factors having eigenvalue more than one are considered for analysis. The outcome of the Principal Component Analysis can be summarized as follows:

- Factor-1 has an eigenvalues of 6.586 explaining 28.6% of variance
- Factor-2 has an eigenvalues of 4.373 explaining 19% of variance
- Factor-3 has an eigenvalues of 4.103 explaining 17.8% of variance
- Factor-4 has an eigenvalues of 2.473 explaining 10.75% of variance
- Factor-5 has an eigenvalues of 1.615 explaining 7% of variance

The 23 attributed in the questionnaire grouped into 5 factors. The rotated component matrix below shows the factor loadings (correlation between the factors and the attributes). In other words, the factor loadings describe the strength of relationship between the factors and the attributes grouped under that factor. Any factor loading more than 0.5 is supposed to be a high correlation, and considered for grouping purpose. Moreover, the attribute having highest correlation with the factor is grouped under that factor. For an example, the attribute ‘discounts’ has a correlation of 0.707 with the factor number three. This attribute has highest correlation with factor number three and the correlation is more than 0.5. So, this is a valid inclusion and ‘discounts’ belong to the third factor. Likewise, the grouping of attributes was done under various factors.

<table>
<thead>
<tr>
<th>Table: Rotated Component Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component/ Factor</td>
</tr>
<tr>
<td>Discounts</td>
</tr>
<tr>
<td>Varassort</td>
</tr>
<tr>
<td>Location</td>
</tr>
<tr>
<td>Service</td>
</tr>
<tr>
<td>Parking</td>
</tr>
<tr>
<td>Ambience</td>
</tr>
</tbody>
</table>
Availability | .132 | -.009 | .000 | .014 | .889
Homedelivery | -.251 | .087 | .262 | .854 | -.021
Status | -.086 | .974 | -.043 | .032 | -.020
Cleanliness | .955 | -.073 | -.028 | -.157 | .019
Brandchoice | -.053 | .975 | -.036 | .040 | -.014
Freshness | .045 | .037 | .009 | -.071 | .890
Display | .952 | -.062 | -.030 | -.146 | .037
Creditcard | -.058 | .884 | .009 | -.025 | -.009
Salespeople | .037 | .028 | .927 | .195 | -.044
Ventilation | -.009 | -.145 | .631 | -.101 | .051
Lighting | .945 | -.044 | -.034 | -.147 | .029
Price | -.113 | .007 | .585 | .150 | -.011
Time to shop | -.076 | .977 | -.034 | .029 | -.013
Ease of shopping | .928 | -.074 | -.021 | -.146 | .041
Checkout | -.307 | .024 | .275 | .837 | -.034
Signages | .962 | -.073 | -.043 | -.106 | .066
Loyaltyprograms | -.084 | .812 | -.065 | .097 | .081

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

These factors or constructs describe all the attributes that have grouped into those constructs. The importance of the constructs or factors is based on the percentage variance explained by them.

1Factor 1: Merchandising (28.635)

1. Variety and assortment (0.921)
2. Ambience (0.944)

1 The values in bracket against factors explain the total variance explained by the factor, the values in bracket against the attributes explain the factor loadings of the respective attributes.
3. Cleanliness (0.955)
4. Display (0.952)
5. Lighting (0.945)
6. Ease of shopping (0.928)
7. Signages (0.962)

Factor 2: Status/ Shopper Image (19.013)

1. Status symbol (0.974)
2. Brand choice availability (0.975)
3. Credit card (0.884)
4. Time to shop (0.977)
5. Loyalty Programme (0.812)

Factor 3: Convenience/Location (17.84)

1. Discount offered (0.707)
2. Convenient Location (0.934)
3. Parking space availability (0.922)
4. Friendly sales people (0.927)
5. Proper ventilation (0.631)
6. Price (0.585)

Factor 4: Service (10.75)

1. Services offered (0.834)
2. Home delivery (0.854)
3. Speedy check out (0.837)

Factor 5: Availability (7.002)

1. Availability (0.889)
2. Freshness (0.890)

As per the outcomes of the factor analysis, Factor 1 (Merchandising), consisting of seven attributes, comes out as the most critical factor explaining 28.6% of the total variation.
The factor ‘Merchandising’ consists of attributes like Variety and assortment, Ambience, Cleanliness, Display, Lighting, Ease of shopping and Signages. The second factor extracted in the Factor analysis can be named as Status or Shopper Image. The various attributes that converged with this factor are Status, Brand Choice, Credit card acceptance, Time to Shop and provision of Loyalty Programmes. This factor explains 19% of the total variance by grouping 5 different attributes. The third factor extracted in the Factor analysis can be named as Convenience/Location. The various attributes that converged with this factor are Discounts offered by the retailer, Location of the Supermarket, Parking, number of Sales People, Ventilation and Price. This factor explains 17.8% of the total variance by grouping 6 different attributes. As all these attributes are linked to the convenience of the shopper and hence can be named as “Convenience/Location’. Price is the only attribute that doesn’t seem suitable to be a part of this construct. If we analyze the factor loadings, it becomes apparent that Price has a very small factor loading (0.584), though significant, compared to all other attributes. The fourth factor extracted in the Factor analysis can be named as ‘Service’. The various attributes that converged with this factor are quick and efficient service, Home Delivery and Check out time. This factor explains 10.75% of the total variance by grouping 3 different attributes. The fifth factor extracted in the Factor analysis can be named as ‘Availability’. The various attributes that converged with this factor are Availability and Freshness of products. This factor explains 7% of the total variance by grouping 2 different attributes. This also indicates that the 1st three factors collectively are responsible for 65% of the total variation. Moreover all significant factors together (all five) explain 83% of the variation. This indicated that 83% of the Shopper behavior can be explained by these five factors where merchandising is the most critical followed by Status and Location.

**5.2 Hypothesis testing using Factor Analysis**

Factor analysis examines how underlying constructs influence the responses on a number of measured variables. Here the measured variables are the 23 attributes on which data was collected from respondents. The 1st two hypothesis of the research are:

1. Shoppers go through a complex evaluation process before selecting a retail outlet for purchase of merchandise.
2. Shopper decision process is highly influenced by visual merchandising and Point of Purchase Display

The output of the factor analysis indicated five underlying Constructs (referred as Factors) as Merchandising, Status, Convenience, Service and Availability. This indicates that there are 5 basic constructs that consumers evaluate while selecting an outlet for purchase of staple merchandise signifying the acceptance of the 1st Hypothesis. The hypothesized factor “Visual Merchandising” came out as one of the predicted factors explaining 28% of the total variance and grouping 6 different attributes justifying the acceptance of 2nd Hypothesis.

Though the factor analysis justifies the Hypotheses, before accepting the Hypotheses the reliability of the factors can be verified by Cronbach’s alpha. The value of Cronbach’s Alpha indicates the total variance explained by the grouped attributes in a factor compared to the total variance. The Value of Cronbach’ Aplha more than 0.7 is considered as strong enough to justify the association among the attributes converged to a factor. The table below indicates the SPSS Output indicating the values of Cronbach’s Alpha for the five extracted factors justifying the reliability and statistical significance.

**Table: Reliability test Summary**

<table>
<thead>
<tr>
<th>Factor/Construct Name</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandising</td>
<td>0.985</td>
</tr>
<tr>
<td>Status</td>
<td>0.959</td>
</tr>
<tr>
<td>Convenience</td>
<td>0.883</td>
</tr>
<tr>
<td>Service</td>
<td>0.937</td>
</tr>
<tr>
<td>Availability</td>
<td>0.753</td>
</tr>
</tbody>
</table>

Cronbach’s Alpha indicates very high level of reliability (more than 0.85) for the 1st four constructs (Merchandising, Status, Convenience, Service) and relatively week but significant reliability for the 5th construct (availability).
Moreover, the extracted five factors explain more than 83% of the Variance cumulatively.

Total variance explained and the Reliability test support the five constructs emphasizing that shoppers evaluate a retail outlet based on five constructs while making purchase decision. This explains the acceptance of 1st Hypothesis that “Shoppers go through a complex evaluation process before selecting a retail outlet for purchase of merchandise”. Out of the five constructs or factors extracted in factor Analysis, Merchandising is one of the most critical explaining 28% of Variance and having a Cronbach’s Alpha of 0.985 supports the acceptance of the 2nd hypothesis that “Shopper decision process is highly influenced by visual merchandising and Point of Purchase Display”.

5.3 Cluster Analysis:

Cluster analysis is a collection of statistical methods, which identifies groups of samples that behave similarly or show similar characteristics (Nethra Sambamoorthi, 2003). So if the cluster analysis segregates the respondents into clear clusters or groups, it can be concluded that shoppers are not uniform in their behavior, rather there exists clear groups that are similar within while differ across groups in their shopping behaviour.

In this research, to create clusters, factor scores have been used instead of Individual attributes. Factor scores represent a shopper’s response to all attributes captured in a factor. In this research shopper clusters have been created on the basis of factor scores derived from the five identified factors (from factor analysis). Cluster analysis was run in SPSS using Hierarchical clustering Technique. The dendogram plot (cluster structure) in Hierarchical clustering indicated presence of five clusters in the data. To confirm the same, cluster analysis was repeated using K Mean Clustering (non-hierarchical). The table below is the SPSS output for K Mean clustering indicating the Dominant factors in different cluster centers.
Table: Final Cluster Centers

<table>
<thead>
<tr>
<th>REGR factor score</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandising</td>
<td>.82718</td>
<td>.44558</td>
<td>-1.02444</td>
<td>-.62002</td>
<td>.20061</td>
</tr>
<tr>
<td>Status</td>
<td>-.56660</td>
<td>-.20776</td>
<td>-.32901</td>
<td>-.15176</td>
<td>1.66809</td>
</tr>
<tr>
<td>Convenience</td>
<td>-.50576</td>
<td>.42045</td>
<td>-.40748</td>
<td>1.95718</td>
<td>-.46843</td>
</tr>
<tr>
<td>Service</td>
<td>.49030</td>
<td>-.81406</td>
<td>-.24658</td>
<td>1.07720</td>
<td>.28937</td>
</tr>
<tr>
<td>Availability</td>
<td>.32411</td>
<td>-.60724</td>
<td>.39603</td>
<td>-.21783</td>
<td>-.02686</td>
</tr>
</tbody>
</table>

The cluster analysis resulted in five clusters or five shopper segments. The table above (Final Cluster Centers) indicates the dominance of different factors in different clusters. The 1st cluster is dominated by the factor ‘Merchandising’ (with a value of 0.82718); and the factor ‘Availability’ (with a value of 0.32411) has least importance in cluster-1. The importance of the factors for cluster-1 goes down in the following order of the factors-Merchandising, Status, Convenience, Service and Availability. The following table indicates the relative importance of different factors on different clusters.

Table: Relative importance of the Factors on different clusters:

<table>
<thead>
<tr>
<th>Different factors in the decreasing order of their importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster-1</td>
</tr>
<tr>
<td>Cluster-2</td>
</tr>
<tr>
<td>Cluster-3</td>
</tr>
<tr>
<td>Cluster-4</td>
</tr>
<tr>
<td>Cluster-5</td>
</tr>
</tbody>
</table>

The respondents are distributed across the clusters. As per the SPSS output, the 1st cluster has 79 respondents, 2nd cluster has 87, 3rd cluster has 92, 4th cluster has 35 and 5th cluster has 59 respondents.
5.4 Hypothesis testing using Cluster Analysis

Cluster Analysis has been used to test the third hypothesis i.e. “Shoppers are different in their buying behavior in selection of an outlet”.

Cluster Analysis clearly defines 5 clusters or shopper segments. The clusters are different among them but similar within each cluster in terms of their buying behavior. The buying behavior of the shoppers has been studied based on the factors extracted in factor Analysis. Different clusters are centered as per the importance given to the factor by the shoppers in the respective clusters. Though the cluster analysis justifies the Hypotheses, accepting the Hypotheses will depend upon the statistical significance of the outcome of the cluster Analysis. The validity of the clusters can be tested for statistical significance using Anova table below.

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>REGR factor score 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>183.708</td>
<td>4</td>
<td>45.927</td>
<td>95.263</td>
<td>0.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>167.292</td>
<td>347</td>
<td>0.482</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>351</td>
<td>351</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REGR factor score 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>204.051</td>
<td>4</td>
<td>51.013</td>
<td>120.459</td>
<td>0.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>146.949</td>
<td>347</td>
<td>0.423</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>351</td>
<td>351</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REGR factor score 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>197.879</td>
<td>4</td>
<td>49.47</td>
<td>112.107</td>
<td>0.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>153.121</td>
<td>347</td>
<td>0.441</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>351</td>
<td>351</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REGR factor score 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>127.793</td>
<td>4</td>
<td>31.948</td>
<td>49.667</td>
<td>0.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>223.207</td>
<td>347</td>
<td>0.643</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>351</td>
<td>351</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REGR factor score 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>56.512</td>
<td>4</td>
<td>14.128</td>
<td>16.647</td>
<td>0.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>294.488</td>
<td>347</td>
<td>0.849</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>351</td>
<td>351</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The statistical significance has been tested for all the five factors individually. The Anova table indicates that for all the five factors clusters are different from each other at 5% level of significance. So, the Anova table confirms that the clusters are statistically significant from each other and hence, it can be concluded that there exist 5 different shopper clusters or segments that are different in terms of their buying behavior.

6. Managerial Implications

The research findings can be used by organized retailers for target marketing strategy. Retailers especially super market owners can reorient their strategy as per the cluster targeted. The cluster characteristics can be summarized as below:

Table: Cluster Characteristics

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Important Factor</th>
<th>Percentage of the sample</th>
<th>Age group majority</th>
<th>Income</th>
<th>Shopping Frequency</th>
<th>Monthly expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 1</td>
<td>Merchandising</td>
<td>22%</td>
<td>18-34</td>
<td>15,000 to 35,000</td>
<td>Twice or more than twice a week</td>
<td>2001 to 3000</td>
</tr>
<tr>
<td>Cluster 2</td>
<td>Service</td>
<td>25%</td>
<td>25-44</td>
<td>10,000 to 25,000</td>
<td>Once a week</td>
<td>2001-5000</td>
</tr>
<tr>
<td>Cluster 3</td>
<td>Merchandising</td>
<td>26%</td>
<td>18-44</td>
<td>35,000 to 60,000</td>
<td>twice a week</td>
<td>3001-5000</td>
</tr>
<tr>
<td>Cluster 4</td>
<td>Convenience</td>
<td>10%</td>
<td>35-60</td>
<td>25,000 to 45,000</td>
<td>Once a week</td>
<td>3001-5000</td>
</tr>
<tr>
<td>Cluster 5</td>
<td>Status</td>
<td>17%</td>
<td>25-60</td>
<td>45,000 to 100,000</td>
<td>2-3 times a month</td>
<td>3001 to 10,000</td>
</tr>
</tbody>
</table>

Apart from factor analysis and cluster analysis, other relevant analysis was done using the data collected. Majority of shoppers are of the opinion that lighting and cleanliness,
product display, well stocked store and display attract a shopper to enter the outlet. Retailers can’t afford to compromise on these attributes. Shopper preference in terms of display of merchandise was a part of the questionnaire. A big majority of the shoppers (78%) are of the opinion that they prefer products displayed product-wise/category-wise rather than brand wise. But it also reflects that there are 22% customers who prefer to see the products displayed brand wise. These 22% may be the customers who are more brand loyal and would like to stick to their brand choice in multiple product segments. In such a research on shopper behavior, it is necessary to understand shoppers who are loyal to the store compared to the ones loyal to brand. In this case only 31% of the shoppers say that they will look for the product in a different store if it is not available in the existing store. However, 69% of them don’t mind switching the brand and picking up the next preferred brand. So, store loyalty is quite strong compared to brand loyalty in low involvement products like staple merchandise in supermarkets. As a vast majority of the shoppers are of the opinion that they switch brands in case of non availability, it is imperative to understand what makes them switch the brand. Shoppers were asked to choose what makes them opt for a different brand. The outcomes suggest that non availability of the choice brand, promotional schemes and good display are the reasons that may induce brand switch among shoppers. Shoppers were asked what keeps a store in negative light. The response of the shoppers of the features that puts the store in negative light can be bad layout having less space between rows that creates inconvenience in shopping, improper lighting and absence of directional messages. So retailers in addition to develop segment specific target market strategy should be careful in deciding the various offerings that attract shoppers to the outlet so as to increase the footfall to induce purchase.

7. Conclusion

The analysis of the shopper response indicates five factors that influence shopper buying behavior. These factors can be named as Merchandising, Status/Shopper Image, Location/Convenience, Service and Availability. These five factors or constructs measure the influence of all the 23 identified attributes or variables. These five factors are statistically significant and explain more than 83% of the total variance. The five
constructs or factors justify the acceptance of the 1st Hypothesis. The constructs explain that shoppers look at five specific factors while evaluating an outlet and making their shopping decision. The Factor Merchandising consists of attributes like Variety and assortment, Ambience, Cleanliness, Display, Lighting, Ease of shopping and Signages. This factor explained more than 28% of variance and is the most critical among the five factors justifying the acceptance of 2nd hypothesis. As the factor analysis explained the basic constructs in shopper buying behavior, Cluster analysis explained that shoppers are divided among themselves in terms their behavior around those five factors. The shoppers got divided into five clusters as per the importance they attach to different factors. The anova table justified the presence of five distinct clusters and hence it divides the shoppers into five segments. These segments or shopper clusters behave in unique ways; the shoppers within a cluster are similar in their behavior while shoppers in different clusters are different from each other. So apart from justifying the acceptance of the third Hypotheses i.e. Shoppers are different in their buying behavior in selection of an outlet, the results bring out that retailers can no longer assume that all shoppers are the same. Rather different and unique retailing strategy should be used to appease different clusters of shoppers.

So based on the above results and discussions it can be concluded that, “Shoppers go through a complex evaluation process before selecting a retail outlet”. The evaluation process is influenced by five factors namely Merchandising, Status/Shopper Image, Convenience/Location, Service and Availability. Out of these five factors, Merchandising is the most important criterion grouping seven attributes. Hence retailers must keep this in mind while designing the layout and merchandise presentation inside the outlet. When shopper behaviour was analysed using factor scores, the SPSS output indicated presence of five distinct clusters and hence can be concluded that “Shoppers are different in their buying behavior in selection of an outlet”. Retailers must understand the nature and behavior of these clusters or shopper segments and design market targeting strategy.

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