

Segmenting Consumers in Food and Grocery Retail

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Abstract

This study was conducted for identification of the factors in consumer behaviour in retail buying, to identify the elements of pricing that influenced consumers, and to identify important non-pricing factors with respect to buying of groceries and consumer goods like staples (atta, rice, cooking oil, sugar, and so forth), personal care and toiletries (oil, shampoo, soaps), and fruits & vegetables. These items constitute a major part of the monthly grocery requirements of consumers, which is a part of food & grocery retail. The paper tried to ascertain the dimensions on which consumers can be segmented on the pricing factors. A survey of 450 households in Delhi & Faridabad found three clusters which have different characteristics. The study makes suggestions to retailers on the basis of the findings of the study.

Keywords: retail, pricing strategies, consumer behaviour in retail, consumer segmentation in retail, food & grocery retail

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Although pricing strategies find space in marketing literature, but setting prices in the retail sector is a different issue altogether. The listed price is available to the retailer for the products, but the selling price is generally different from this price. Simple mark-up pricing is a thing of the past. Heavy discounts, everyday low pricing, psychological pricing, product bundling (hence group pricing), introductory prices, and so forth are assuming ever increasing importance. The present study attempts to identify consumer behavior in the retail sector, the pricing strategies that they are influenced by, the importance of non pricing factors, and then segments the consumers.

Review of Literature

Makhani (1979) conducted a study on Super Bazaars and collected information related to frequency of visit, time of month when the visit was made, type of product categories purchased, and so forth, and these were used to reflect on the buying habits of Super Bazaar consumers. Gupta (1988) found that more than 84% of the sales increases due to promotion came from brand switching. Ang, Leong, and Tey (1997) found that compared to a plausible price reduction, an implausible claim produced higher claim discounting, higher perceived price reduction, higher

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perceived offer value, and higher shopping intention. Kim, Srinivasan, and Wilcox (1999) observed that shopping pattern variables had a substantially greater predictive validity in determining a household's price sensitivity than typically much more difficult to procure household level demographic data. Sinha, Banerjee, and Uniyal (2002) found that for groceries, fruits, and vegetables, shoppers visited stores based more on proximity and patronization as compared to paan/cigarette stores. There seems to be an indication of inherent loyalty to the stores in this category. Sinha (2003) found that respondents showed an inclination towards seeking bargain and had an inclination towards low price offers. Anderson and Simester (2003) conducted experiments to investigate \$9 ending effects in three large-scale studies conducted in two different catalogues. The study found that \$9 price endings could increase demand. Sinha and Banerjee (2004) tried to identify the drivers of store choice in various product categories. On an overall basis, the researchers examined and found that no distinct clear store choice parameters could be suggested. However, with respect to groceries, the study found that proximity and patronization of the store were important for store choice. Moschis, Curasi, and Bellenger (2004) suggested how to most effectively appeal to older consumers. Proximity, special deals, presence of familiar brands, fast check out registers were the important reasons identified for store patronage.

Roy (2005) found out the positioning of various retail outlets in the minds of young customers. The study asserted the importance of pricing as an important part of image of a retail outlet. Burlakanti and Srinivas (2013) analyzed the perceptual changes in the retail sector with reference to organized & unorganized retailers. Using factor analysis, they found the most influential factors of consumer buying behavior pattern. Arora and Ganguly (2007) emphasized upon the importance of price, promotion, and price-promotion on the sales. Deb and Sinha (2007) tried to develop a model of service quality. It contained many variables out of which price was one, and two indicators were used for price. Srivastava (2008) found that malls in 2006 were more developed in the North and Western parts of India. Food, groceries, and apparel purchase by customers contributed for 52% of the sales. Amin (2009) observed that the number of non-workers in the household and a proxy for time cost of shopping had a large effect on competition. The broad policy implications of the findings are that competition policies that are currently focused exclusively on firm-behavior should pay more attention to consumer behavior and consumers' attributes that shape consumer behavior. Chandan and Kokatnur (2010) found that out of the four promotional tools, that is, price discount, samples, free gifts, and buy one get one free, to study the influence of demographic variables on sales promotion and to identify the popular consumer promotional tools, price discounts significantly influenced consumer buying behaviour.

Chandra and Chandra (2010) found that price conscious dimension was high in consumers. They checked and compared the prices before purchasing products. The authors found that monthly income had a significant impact on price consciousness. Chang and Luan (2010) found 18 important attributes in building a hypermarket retailer's store image in China. Though Chinese consumers are perceived to be price sensitive, the results showed that Beijing consumers were more concerned with services than with the prices. It may be because both retailers chosen for the study focused on the low-price appeal and thus, the respondents might have already thought that the prices were satisfactory; it may also suggest that retailers, with the mentality of selling cheap products in China, especially in first-tier cities, should be aware that Chinese consumers no longer only look for low prices. Singhi and Kalwale (2010) found that price differentials between national brands and the private labels were correlated to store loyalty. It was also found that private labels' promotion and store loyalty were related. Das (2011) found that there was no impact of demographic parameters on sales promotion. The author also concluded that store location did not play a major role in purchase decision making of convenience goods when promotional offers were concerned. Muzondo and Mutandwa (2011) found that pricing was important in determining consumers' choice of store in a hyper inflationary environment.

Singh and Sahay (2012) examined the promotional schemes and observed that non-pricing factors like parking space were considered to be important by the respondents. Gupta (2012) found that demographic factors like age, occupation, qualification, and income had a significant role in analyzing the respondents' decision-making power.

The Symphony IRI Group (2012) worked with Legolas Media, which developed an innovative online premium advertising marketplace through which advertisers can purchase upfront audience inventory across premium publishers. It was found that millennial (defined as adults aged 18-34 years) shoppers were a bit more likely than the average shoppers to make store decisions based upon which store is reputed to have the lowest everyday prices. In a study, Neilson (2013) found that shopping trips were the most frequent for fruits and vegetables (3.2 times per week). Prashar (2013) found that customers valued availability and variety of products at a store, store ambience, service and facilities, and value for money offered at a store.

Research Objectives

The objectives of the research are:

- ✦ To identify the factors in retail pricing and to segment consumers into groups on the basis of pricing factors.
- ✦ To do consumer profiling on the basis of demographics, buying behavior patterns, and other data for description of clusters.
- ✦ To arrive at suitable implications for retailers.

Research Methodology

The research design of the study is both exploratory and descriptive in nature as the study aims at achieving insights into consumer behaviour with respect to the pricing strategies in the retail sector. The main buyer of monthly household groceries was identified in the study as the sampling unit. The present study is based on the information obtained through a survey process from three areas in Delhi and NCR, that is, DDA Flats in Dilshad Garden, Delhi ; Staff Quarters in IGNOU Campus, Maidan Garhi, Delhi & NPTI Campus in Faridabad ; and Sectors 16, 17, and 18 residential areas in Faridabad, Haryana during January 2012 to July 2013. These areas were chosen after careful consideration as respondents belonging to different income groups reside in these areas. DDA flats in Dilshad Garden have LIG, MIG, & HIG variants ; at IGNOU & NPTI staff quarters, 1 to 5 levels are available, corresponding to different income groups ; and in Faridabad also, small and large plots are available. A combination of strata and quota was used where 50 households in each area (as shown in the Table 1) were interviewed). The income groups correspond roughly to the brackets used by NCAER's Market Information Survey of Households.

Data was collected by conducting a survey using interviewer-administered structured questionnaires during Sundays from January 2012 to April 2013. In store observation of pricing strategies in Old Faridabad market was done during preliminary research to identify the prevalent pricing strategies. We interviewed consumers coming out of the stores and had other casual interactions also to get an idea about their preferences and what they considered as important in a retail store. The interviews were non-structured and casual in nature. This was done

Table 1. Consumers' Sample

Locality	No. Of Strata	No. Of Households in each strata
Sectors in Faridabad	3	50
DDA Flats in Dilshad Garden, Delhi	3	50
Residential Area in IGNOU & Others	3	50
Total	9	450

during preliminary research. The points emerging from the preliminary study were discussed with experts and their suggestions were considered for the final research design. Secondary data from reports, journal papers, and so forth, and relevant articles from the newspapers were collected. Price advertisements of retailers published in the print media were also collected. These were used extensively during data collection to help elicit responses from the participants.

✦ **Pre-Testing:** Having designed the questionnaire, this was pre-tested by academicians to establish the content validity. Based on the feedback received, some alterations regarding the clarity and consistency of the questions, and the questionnaire layout were made to improve the overall format of the questionnaire for the survey.

✦ **Pilot-Testing :** A pilot study was conducted by interviewing 60 consumers before conducting a full-fledged survey. The respondents provided comments on the clarity of the questions in the questionnaires, and suggested some new questions that could be added. In conjunction with the responses received, certain modifications were undertaken, including rewording, addition of some questions in order to make the questionnaire easy to understand.

Analysis and Results

First, descriptive statistics were used to identify items to which mostly respondents replied in negative. Items with mean less than 1.5 were dropped, which are psychological pricing, use of coupons, frequency of shopping at sales, volume purchased is more during shopping at sales for staples, volume purchased is more during shopping at sales for personal care & toiletries, volume purchased is more during shopping at sales for fruits & vegetables, volume of purchase is more of staples during low price day, volume of purchase is more of personal care products & toiletries during low price day, volume of purchase is more of fruits & vegetables during low price day, and bargain at organized stores. There was also no loss of reliability, so these items were dropped from the analysis. The reliability of the remaining 34 items was found to be high at .920.

Exploratory factor analysis was used to identify the important factors in the study. The number of cases should be at least five times the number of variables for running factor analysis, which was being met (Singh & Sahay, 2012). Factor analysis was done on these 34 items. Three items had cross loadings, that is, prices given in the ads remembered for staples, prices given in ads remembered for personal care & toiletries, and prices given in ads remembered for fruits & vegetables. These were removed for further analysis (Aagja, Mammen, & Saraswat, 2011). Now, again, exploratory factor analysis was done on the remaining 31 variables. The Table 2 shows the results of KMO & Bartlett's test. KMO is .814 (values between 0.8 and 0.9 are considered meritorious (Hutcheson & Sofroniou, 1999)). The chi-square is also significant at .000 for Bartlett's Test of Sphericity, so factor analysis could be conducted.

The exploratory factor analysis with final 31 items resulted in extraction of nine factors. The criteria adopted for deciding the number of factors is as given by Kaiser and Rice (1974), that is, the common factors with eigen value greater than 1 should be reserved. These nine factors accounted for close to 83% of the total explained variance. This factor structure was subjected to confirmatory factor analysis.

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.814
Bartlett's Test of Sphericity	Approx. Chi-Square	14304.370
	df	465
	Sig.	.000

(1) Confirmatory Factor Analysis : IBM SPSS 21 software with AMOS was used to conduct confirmatory factor analysis (See Figure 1). Chi-square is significant with chi square = 1870.879, *CFI* is .897 for this factor structure, which is equivalent to 0.9, so the model fits the data well (Herdman, 2007 ; Jansen, 2008). The *RMSEA* is .091, which came down to .61 when the income group was introduced as a grouping variable (Chen, Curran, Bollen,

Table 3. Rotated Component Matrix

Items	Component								
	1	2	3	4	5	6	7	8	9
Look at price of staple.	.050	.099	.131	-.001	.915	.093	.181	.003	.037
Look at price of personal care & toiletries.	.057	.114	.125	.018	.908	.102	.201	.011	-.004
Look at/ask about the price of fruits & vegetables.	-.077	-.001	.067	.015	.781	-.003	.229	-.058	-.046
Compare prices of staples.	.128	.107	.097	.045	.316	.175	.835	.051	.036
Compare prices of personal care & toiletries.	.125	.159	.060	.030	.291	.171	.836	.079	-.003
Compare prices of fruits & vegetables.	-.056	.090	.057	.061	.149	.198	.847	.022	.079
Visit other retailers to check prices of staples.	.154	.155	.114	.069	.108	.884	.142	.167	.125
Visit other retailers to check prices of personal care & toiletries.	.118	.183	.095	.091	.131	.860	.125	.200	.089
Visit other retailers to check prices of fruits & vegetables.	.018	.064	.053	.095	-.009	.788	.279	.034	.116
Check retailers' ads for staples.	.003	.229	.935	.057	.108	.086	.085	-.043	-.030
Check retailers' ads for personal care & toiletries.	.039	.247	.907	.083	.121	.083	.033	.028	-.044
Check retailers' ads for fruits & vegetables.	-.022	.204	.902	.084	.112	.070	.080	-.074	-.040
Visit stores that give ads.	.195	.805	.266	.166	.047	.175	.121	.046	.017
Buy staples from stores giving ads.	.114	.870	.185	.180	.084	.115	.102	.057	.083
Buy personal care & toiletries from stores giving ads.	.165	.882	.178	.130	.076	.105	.065	.047	.044
Buy fruits & vegetables from stores giving ads.	.116	.793	.154	.214	.049	.044	.093	.033	.077
Buy staples on low price day.	.264	.242	.062	.900	.010	.092	.045	.038	.026
Buy personal care & toiletries on low price day .	.283	.244	.071	.888	-.003	.096	.048	.033	.024
Buy fruits & vegetables on low price day .	.177	.185	.110	.903	.026	.085	.054	.040	.057
Buy staples in shopping fest.	.881	.108	.017	.084	.011	.108	.056	.096	.032
Buy personal care & toiletries in shopping fest.	.892	.082	.023	.053	.002	.164	.061	.059	.033
Buy fruits & vegetables in shopping fest.	.780	.023	-.055	.171	.000	.043	.069	.188	.137
Buy more volume of staples in shopping fest.	.901	.158	.027	.080	-.005	.039	.007	.061	.097
Buy more volume of personal care & toiletries in shopping fest.	.886	.114	.036	.056	-.007	.119	.036	.021	.049
Buy more volume of fruits & vegetables in shopping fest.	.789	.054	-.040	.206	.012	.000	.018	.146	.156
Buy low price product bundle.	.536	.170	.025	.175	.019	-.062	.001	.081	.422
Buy item with very low price.	.206	.065	-.069	.010	-.011	.178	.064	.133	.868
Buy other products with low prices.	.217	.069	-.046	.041	-.012	.140	.042	.116	.868
Bargain at kirana.	.194	.094	-.066	.039	-.015	.160	.051	.896	.147
Bargain effectively.	.188	.066	-.009	.079	-.022	.163	.067	.895	.142
Use Credit card for paying bill.	.461	.071	.055	.208	.060	-.141	-.042	-.292	.072

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Figure 1. Path Diagram Using CFA

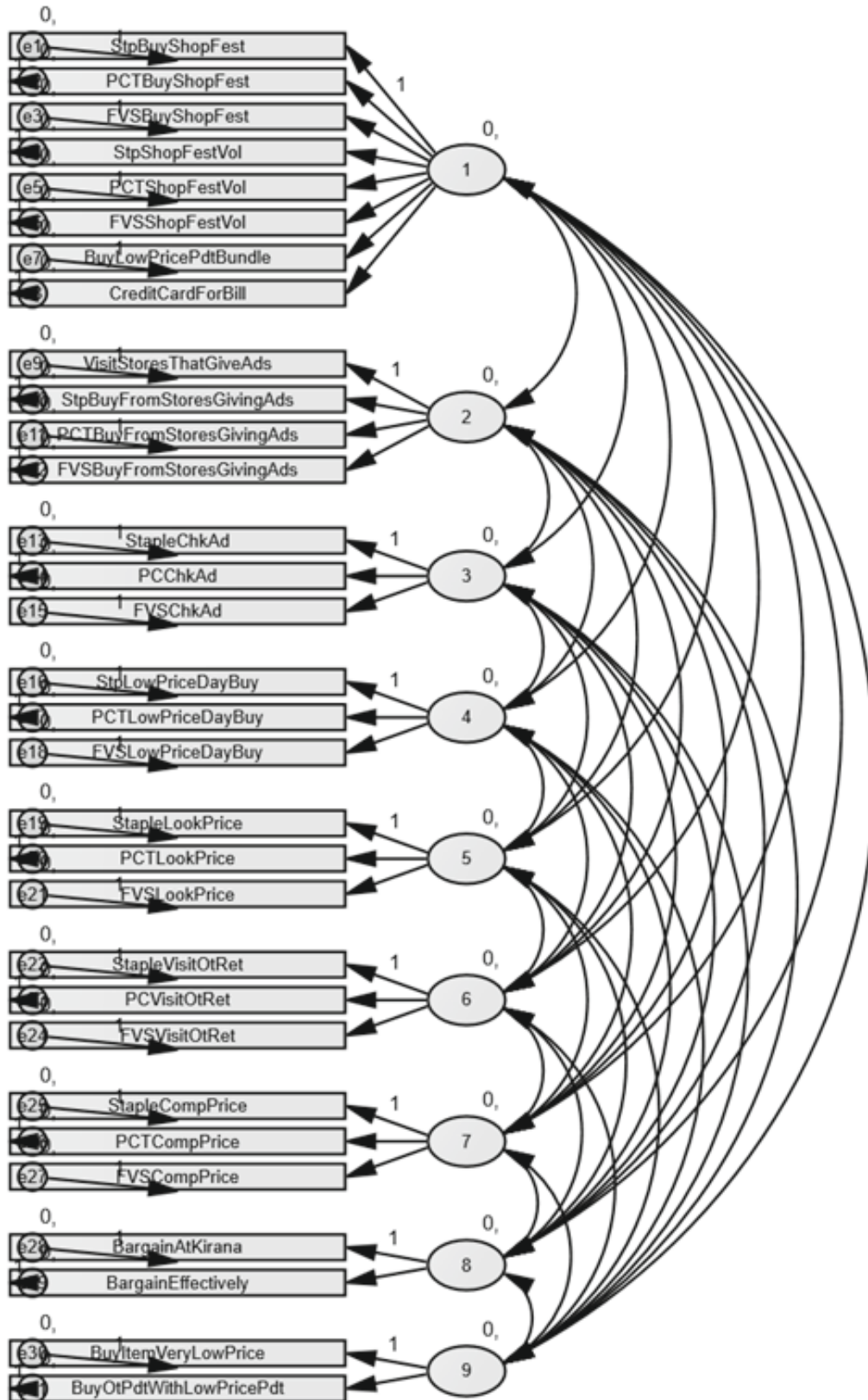


Table 4. Consolidated Factor Output

Factor No.	Factor Title	Variables Included (Average Score)	Factor Loading	Cronbach Alpha	Average Score/ Factor	Factor Ranking
F1	Shopping Festivals, Product Bundle, Credit Card	Buy Staples in Shopping Fest (2.18).	.881	.919	1.96	7
		Buy Personal Care & Toiletries in Shopping Fest (2.24).	.892			
		Buy Fruits & Vegetables in Shopping Fest (1.88).	.780			
		Buy More Volume of Staples in Shopping Fest (1.96).	.901			
		Buy More Volume of Personal Care & Toiletries in Shopping Fest (2.02).	.886			
		Buy More Volume of Fruits & Vegetables in Shopping Fest (1.68).	.789			
		Buy Low Price Product Bundle (1.84).	.536			
F2	Buy from Stores Giving Price Ads	Use Credit Card for Paying Bill (1.82).	.461	.928	2.035	5
		Visit Stores that Give Ads (2.24).	.805			
		Buy Staples from Stores Giving Ads (1.99).	.870			
		Buy Personal Care & Toiletries from Stores Giving Ads (2.09).	.882			
F3	Check Price Ads	Buy Fruits & Vegetables from Stores Giving Ads (1.82).	.793	.957	3.067	3
		Check Retailers Ads for Staples (3.08).	.935			
		Check Retailers Ads for Personal Care & Toiletries (3.16).	.907			
F4	Buys on Low Price Day	Check retailers Ads for Fruits & Vegetables (2.96).	.902	.969	1.533	9
		Buy Staples on Low Price Day (1.58).	.900			
		Buy Personal Care & Toiletries on Low Price Day (1.58).	.888			
F5	Visit Other Retailers	Buy Fruits & Vegetables on Low Price Day (1.50).	.903	.893	2.470	4
		Visit other Retailers to Check Prices of Staples (2.39).	.884			
		Visit Other Retailers to Check Prices of Personal Care & Toiletries (2.35).	.860			
F6	Look at Price	Visit Other Retailers to Check Prices of Fruits & Vegetables (2.67).	.788	.893	3.807	1
		Look at prices of Staples (3.73).	.915			
		Look at Prices of Personal Care & Toiletries (3.76).	.908			
F7	Compare Prices	Look at Prices of Fruits & Vegetables (3.93).	.781	.900	3.210	2
		Compare Prices of Staples (3.10).	.835			
		Compare Prices of Personal Care & Toiletries (3.12).	.836			
F8	Loss Leader	Compare Prices of Fruits & Vegetables (3.41).	.847	.864	1.965	6
		Buy Items with Very Low Prices (1.91).	.868			
		Buy Other Items with Very Low Price Product (2.02)	.868			
F9	Bargaining	Bargain At Kirana (2.02).	.896	.922	1.940	8
		Bargain Effectively (1.86).	.895			

Kirby, & Paxton, 2008 ; Hooper, Coughlan, & Mullen, 2008). The *RMSEA* greater than 1 suggests a poor fit and the model may not be accepted (Brown, 2006). Hence, the factor structure is accepted after taking into consideration the given fit indices.

(2) The Factor Structure : The rotated component matrix derived from the factor analysis using principal component analysis and varimax rotation was used to group the variables into factors. The Table 3 shows the rotated component matrix using varimax rotation, which resulted in identification of nine factors. Items which were loading significantly were combined to get the factors. Each factor composed of variables that loaded .40 or higher on that factor (Malhotra, 2006). The Figure 1 shows the path diagram using CFA.

(3) Factor Output : The consolidated factor output after conducting the confirmatory factor analysis is depicted in the Table 4.

(4) Validity & Reliability of the Factor Output : Validity and reliability of the factor output was checked statistically. The value of Cronbach's alpha is greater than 0.8 for all the factors, indicating reliability of the output (Table 4). The confirmatory factor analysis also reported relevant items to provide a good fit of factor structures as discussed earlier. These factors arrived at after a varimax rotation explained about 83% of the variance, which is satisfactory as discussed earlier.

(5) Clustering of the Respondents : Now, the cases need to be clustered according to the factors. The variable within the factor which had the highest factor loading (which is nearing .9) and comparatively had a higher mean was used as the lead variable from that factor for cluster analysis (Malhotra, 2006 ; Sambandam, 2009).

The nine lead variables were used for cluster analysis, the method used being Ward's method which is considered to be a very efficient method (Burns & Burns, 2008). We carry out a hierarchical cluster analysis using Ward's method by applying squared Euclidean distance as the distance or similarity measure. In our analysis, a three cluster solution was found to be useful as the agglomeration schedule in Table of Agglomeration Schedule, the value in the coefficient's column suddenly jumps from 4358 to 4884 between stages 446 (three clusters) and 447 (two clusters) (Malhotra, 2006 ; Roy, 2005). The Table 5 shows the number of cases in the three clusters. We can see that cluster A has 119 cases, Cluster B has 112 cases, & Cluster C has 217 cases.

The Table 6 shows the clusters' scores on pricing factors. Clusters B & C are higher on pricing elements like checking prices, comparing prices, visiting other retailers, and checking price ads. Cluster C scores the highest in

Table 5. No. of Cases in Each Cluster

Name of Cluster	No. of Cases
Cluster A	119
Cluster B	112
Cluster C	217
Valid Cases	448
Missing Cases	2

Table 6. Clusters' Scores on Pricing Factors

Pricing Factors	Cluster A	Cluster B	Cluster C
Look at Price	2.76	4.62	3.79
Compare Prices	2.21	4.29	3.59
Visit Other Retailers	1.30	2.46	2.95
Check Ads	2.54	3.71	3.06
Buy from Stores Giving Price Ads	1.45	2.23	2.36
Buy on Low Price Day	1.18	1.45	1.87
Shopping Festivals, Product Bundle, Credit Card	1.52	1.40	3.06
Loss Leader	1.56	1.70	2.47
Bargaining	1.24	1.40	2.77
Total Cases	119	112	217

Table 7. Correlation Ward's Method & Average Linkage Within Group Method

		Ward Method	Average Linkage (Within Group)
Ward Method	Pearson Correlation	1	.821**
	Sig. (2-tailed)		.000
	N	448	448
Average Linkage (Within Group)	Pearson Correlation	.821**	1
	Sig. (2-tailed)	.000	
	N	448	449

** . Correlation is significant at the 0.01 level (2-tailed)

pricing elements like buying on low price day, buying during shopping fest, buying a loss leader item having a very low price, and bargaining at kirana stores as compared to the other two clusters.

(6) Cluster Validity : The validity of the clusters can be checked by using different methods of clustering. Malhotra (2006) and Elliot (1985) also suggested using different methods of clustering and comparing the results. So, we use another method of clustering, which is average linkage within group method. We compare the results of the two methods, that is, Ward's method and average linkage within group method in the Table 7. We observe from the Table 7 that there is a significant correlation between the two methods used as the p - value is less than .05.

(7) Profile of the Clusters : Information relating to consumer information, household information, consumer buying behaviour pattern, non pricing variables and other considerations were used to generate the profile of the clusters. Aagja et al. (2011) used cross tabulation of the segments identified by cluster analysis with demographic variables to identify the segment descriptors. Interpreting clusters is a creative process. An examination of the cluster profiles provides researchers with insights as to what the clusters mean (Stanley, 2001).

(8) Summary of Clusters' Description : The Table 8 gives the description of the clusters.

Discussion and Implications

The implications for the clusters are:

(1) Cluster A

(i) Cluster A has younger respondents, higher income group respondents; respondents preferred to stick to a brand, so retailers should use technology to reach this cluster. Ads showing assortments preferred by this cluster and asserting quality through traditional newspaper flyers and mobile technology should be used. According to IRI's (2014), companies and retailers should communicate benefits and capture millennials by leveraging their reliance on digital media. In the current research, we see that this cluster is also dominated by millennials, that is, those born around 1980, as the dominant age group in this cluster was between 31-40 years. The report also suggested that retailers should tailor assortment of offerings at the banner level to address the unique needs of shoppers in each particular store geography. This is also found in our study through two things. First, variety scores lowest in this cluster as compared to the other two clusters. To quote the respondents : "I have my fixed brands, I buy those only". Secondly, "Looking at price ads" (Table 6) is one of the factors in which the cluster has a relatively high score as compared to other pricing factors for the same cluster. This is also supported by a study

Table 8. Cluster Description

Cluster Name	Description
CLUSTER A	• Ranks lowest on almost all pricing elements, but looks at price ads. • Has most respondents in the lower age group (31-40 years). • Has least proportion of lower educated respondents. • Has mostly people in service. • Most respondents belong to the higher income group . • Least likely of all clusters to buy staples on a monthly basis. • Least likely to change brand if offered a price discount & scores the lowest as compared to other clusters on variety, preferring to stick to the brands they buy. • Most likely to buy higher priced items. • Most likely to have no fixed time of bulk buying, • Apart from location & display, parking facility is important here.
CLUSTER B	• Scores highest on pricing elements like checking & comparing prices and checking price ads. • Age group 41-50 years is more dominant. • Most likely of all clusters to have lower level educated buyers. • More likely to have housewife as the main buyer. • Most likely to belong to the middle income group. • Apart from location & display, parking facility is important here. • Most dominated by respondents in IGNOU Residential Area who have tough access to stores. • Most likely to buy on a monthly basis. • Most likely to buy monthly groceries from organized stores. • Most likely to buy bulk of monthly groceries during beginning of month. • Apart from location & display, parking facility is important here.
CLUSTER C	• Scores highest on majority of pricing elements like visiting other retailers to check prices, buying from stores giving price ads, buying on low price day, buying during shopping fest, buying a loss leader item having very low price, and bargaining at a Kiranastore. • Most likely to have a male buyer. • Most likely to have lower income group. • Most likely to have respondents from Dilshad Garden where buyers had easy access to organized & comparatively tough access to organized stores. • Least likely to buy monthly monthly groceries in organized stores. • Most likely to change brand if offered a price discount. • Apart from location & display, vriety is important here.

conducted by Mushkin, Garfield, Vitaro, Cullinane, Wrede, Otway, and Schacter (2012) who revealed that brands did matter more for top-earning millennials. In our study also, we find that in this cluster, the respondents with a higher income group and lower age group are more. This suggests that there is a need for manufacturers and retailers to build relationships with millennials that resonate and build loyalty. Retailers use technology to reach millennials in an authentic way. So, ads showing the assortment preferred by this target segment and asserting quality may bring this segment to the stores. These ads may be traditional newspaper flyers as well as can use mobile technology or the Internet.

(ii) When price advertising is used, retailers should ensure to stock up the product and maintain quality.

(iii) Higher-end products in the price line should be directed towards this cluster, which should be highlighted in the shelves.

(iv) This cluster is dominated by service class and scores least on almost all pricing factors. We observe that this cluster scores the least amongst all the three segments on almost all the pricing factors except one. This cluster scores lowest on price awareness with least scores of 2.76 and 2.21 on checking and comparing prices (Table 6). This is also supported by a study conducted by Murthi and Rao (2012). In the study, the authors tried to find out what factors distinguished the price awareness segment? They found a weak effect for the effect of female work status, that is, households with working mothers were likely to be less aware of the prices. So, for this segment, it becomes important to focus more on the non pricing factors.

(v) This cluster seems to operate in an autopilot mode, so the brands preferred by this cluster should be adequately stocked by retailers.

(2) Cluster B

(i) Mostly, respondents have tough access to stores and buy on a monthly basis, usually at the beginning of a month. So, price ads may be used during the beginning of a month when bulk buying is done.

(ii) Ferry services may be provided during these days.

(iii) This cluster is most likely to prefer organized retailers and belongs to the middle-income group. This was also found in a study conducted by Fitch (2012), where it was found that shoppers in emerging markets of China, India, and Brazil were clearly more enthusiastic in their shopping experiences than their counterparts in more mature markets. It seems that the burgeoning middle-classes are enjoying the opportunities that their increasing disposable income and expanding retail choices present to them. Perhaps, the novelty effect of all the new shopping options is driving this enthusiasm. These two aspects are found in our study too as this is the cluster dominated by the middle income group. Attractive displays outside stores and point of sales advertising like sell check may be used to attract this cluster's attention and influence their buying during the store visit itself.

(3) Cluster C

(i) This cluster scores high on majority of pricing elements, belongs mainly to the lower income group, and may change brands more easily than others. They should be attracted through price offers.

(ii) Retailers should find the threshold price at which consumers would be induced to buy more during shopping fests and not to bring down prices below the threshold prices as this cluster is likely to buy more during shopping festivals.

(iii) Out of the three clusters, this cluster is most likely to have a male buyer. According to the 2012 *Cone Communications Year of the Dad Trend Tracker* (Retail Wire 2012 which presents findings from an online survey conducted during May 15-21, 2012 by ORC International), half (52%) of the dads said they were primarily responsible for grocery purchasing decisions, so retailers' ads should speak to the whole family and not just to the women. They should be given incentives like mobile coupons and attractive offers during the middle of the month to induce them to buy during the middle of the month.

(4) Reliability : Reliability of the items was assessed by computing the coefficient alpha which measures the internal consistency of the items of the scale (Aagja et al., 2011 ; Neil 2006). The coefficient of alpha was .906. Values above .8 are considered good and generally good to be reliable (Hersen, 2004).

(5) Face Validity : The questionnaire was shown to the guides and other academicians before being finalized. The suggestions made by them were used to reframe questions and include more probing questions. The questionnaires were administered personally by us. Relevant material like newspaper ads and newspaper flyers were used to ensure that the respondents understood the questions well.

(6) Content Validity : Content validity is the primary and sine qua non form of validity (Rossiter, 2011). The variables were identified from the review of literature and a preliminary study. The preliminary study was carried out in the following manner through review of literature : secondary data collection, in store observation of pricing strategies in the retail sector, meetings with store personnel, and interviewing consumers. An extensive study of dissertation, theses, and research papers which were relevant for the current research study was done. The reading materials helped in identifying important factors for the current research study. Relevant articles from the newspapers were collected. Price advertisements of retailers published in the print media were also collected.

It was very evident from these ads that retailers in the organized sector are using price as an important tool to attract customers to their stores. Many advertisements appear in the newspapers quite frequently, which show the price offerings of the retailers. These strategies were included in the research. We visited a kirana and other stores in the unorganized retail sector of Old Faridabad Market in Faridabad. We interacted with the retailers. We also went to the organized retail stores in Faridabad and interacted with the store personnel to enquire about their pricing strategies. We interviewed consumers coming out of the stores and had other casual interactions also to get an idea about their preferences and what they considered as important in a retail store. The interviews were non-structured and casual in nature.

(7) Construct Validity : All the items of the measure loaded highly on the factors to which they were assigned (Table 4). This itself is a test of convergent validity (Deb & Sinha, 2007 ; Ravert, 2005). Validity and reliability of the factor output was checked statistically. Value of Cronbach's alpha was greater than .8 for all the factors, indicating reliability of output (4). The confirmatory factor analysis also reported relevant items to provide a good fit of factor structures as discussed earlier. Chi-square is significant with chi square value = 1870.879, *CFI* is .897 for this factor structure which is equivalent to .9, so the model fits the data well (Jansen, 2008 ; Herdman , 2007). The *RMSEA* is .091 which came down to .61 when the income group was introduced as a grouping variable (Chen et al, 2008 ; Hooper et al., 2008. A *RMSEA* greater than 1 suggests a poor fit, and the model may not be accepted (Brown, 2006). Hence, the factor structure was accepted after taking into consideration the given fit indices. The factor analysis generated nine factors. These factors were arrived after a varimax rotation and explained about 83% of variance. Hair et al. (2006) considered any solution with over 60% of the explained variance to be satisfactory from a social sciences perspective where information is often less precise. The factor loading is high for all the factors as shown in the consolidated factor output table (Table 4). Two different methods were used to validate the clusters as explained earlier.

Limitations of the Study and the Way Forward

The results from the study may not be indicative of a country wide scenario. The study does not cover online retail, which is fast entering the food & grocery sector. The study explores consumer behaviour and pricing elements in the period after major retailers came in the retail sector like Reliance Fresh in 2006, More in 2007, and Easyday in 2008. They brought changes in the retail scene and new pricing strategies were employed. The empirical findings indicate a relation between consumer behaviour and pricing factors. This is an exploratory cum descriptive study. The two streams of literature (i.e. consumer behaviour and pricing elements) in the post period of advent of organized retail in India, specifically for groceries, have not been linked at a theoretical level in previous studies. Future studies can link this literature in a more unified theoretical framework and can empirically test the

framework using experimental research design. Online food & grocery retail has emerged in the recent past. The pricing factors identified in the present study may be used in the online retail sector in future studies. Future studies may also cover areas in other parts of the country.

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