

**Store Choice Behaviour in Food and Grocery Retailing in India- An Empirical Analysis**

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**Abstract**

*Shopping for food and grocery products has witnessed a paradigm shift in Indian retail market with the changes in consumer buying behaviour driven by strong income growth, changing lifestyles and favourable demographic patterns. But the very fast changing trends in consumption patterns, food and eating habits of consumers have contributed immensely to the growth and development of 'Western' format typologies such as convenience stores, discount stores, super markets, and hyper markets. The present study is exploratory in nature to identify and examine the determinant attributes influencing consumer behaviour towards super market store format choice decisions in the fast growing food and grocery retailing in India. The population of the study is confined to the retail customers (7.5 crore) of Andhra Pradesh state and sampling sources are twin cities of Secunderabad and Hyderabad (58 Lakh population). The 'mall intercept' survey method is adopted to study the attitudes and opinions of retail customers through questionnaires. The descriptive statistical tools (like mean, standard deviation and*

*median) and inferential statistical tools like Factor Analysis, Chi-Square, ANOVA, Correlation, and Multiple regressions are used to test the formulated hypotheses and validate the model. The study has found significant association between shopper attributes and store format choice decisions. The findings revealed that merchandise, customer service, location and atmospheric related store attributes are affecting the store format choice behaviour. The study has discussed various academic and managerial implications for retail industry in general and food & grocery in particular.*

**Keywords:** Consumer behaviour, store choice, shopper characteristics, Location, Merchandise, Customer Service, Atmospherics and Food & Grocery Retailing

## Introduction

The macro-environmental forces profoundly affect the fortunes of food and grocery retail sector in India. The paradigm shift in consumers' socio-economic, demographic and psychographic proportions are driving what was once a traditional and small-scale retail outlets into an organised retail formats aimed at catering to the evolving needs and tastes of discerning consumers (Aryasri and Prasad, 2008). The total concept and idea of shopping has undergone an attention drawing change in terms of format and consumer buying behavior, ushering in a revolution in shopping in India. Shopping for food and grocery products has witnessed a paradigm shift in Indian retail market with the change in the consumer buying behaviour (Prasad and Reddy, 2007). With

the high growth being registered in the retail sector in the developed countries and the

developing countries such as India which is almost on the brink of a retail revolution, there is a high research interest in this area. In addition to the high growth in the organized retail in the recent times, the store choice has become an area of concern for a retailer (Sinha and Banerjee, 2004).

Standing on the threshold of a retail revolution, Indian food and grocery retailing has witnessed a rapid transformation in many areas of the business by setting scalable and profitable store formats across categories. Organised retailers in India are trying out a variety of formats, ranging from supermarkets, discount stores to hypermarkets. Gaining and sustaining a strategic competitive advantage in retailing requires knowledge of the store attributes that consumers value and use to discriminate between stores and why those attributes are important. Hence, there is a growing need to evaluate the true drivers of shopping

behaviour in the Indian context. Studies on shoppers in India have largely been limited to their time and money spending pattern, demographic profile, and preferences for a particular store format. The new expansions are adaptations of western formats based on store choice and patronage which have been widely studied across the world.

The emerging modern retail formats conforming to the changed shopper expectations and realignment of the choice set of stores providing new experiences and options to shop for the consumer (Sinha and Banerjee, 2004, p.482). Both retailers and shoppers are currently in an evaluation phase with no clear verdict as to what may drive the choice of store formats and patronage in the longer term. In view of the above, the study has identified potential research gaps in store choice behaviour in Indian food and grocery retailing. Therefore, the study assumed significance to explore and examine

the influence of shopper attributes and store attributes on store choice decisions.

### **Need for the Study**

Currently, there are different product category-centric local avenues available for shopping products in the food and grocery segment in India. Fresh farm and animal products' shopping is very different from the rest of the food and grocery shopping-unlike in more developed markets where the shopping destination for these two product segments is predominantly the supermarket (Sinha et al., 2005). With many food and grocery oriented retailers lining up to grab their share of the Indian retail market, the long-term viability of these ventures depends on the appropriate store formats. Looking at the Indian food and grocery segment, there are four major strategic formats are used by food and grocery oriented retailers: traditional kirana stores, convenience stores, supermarkets and hypermarkets.

Previous studies reported that the store selection have been done in markets where store formats were well stabilised, however, in Indian scenario, formats have been found to be influencing the choice of stores as well as orientation of the shoppers (Sinha&Uniyal, 2005). Also, retailers are experimenting with alternate formats with different success rates in designing and setting up of store formats to cater to the needs and wants of discerning customers. Moreover, many retailers both domestic and foreign are looking to set up different food and grocery store formats in the largest segment of the total retail sales in the country. Thus, there is a great need to understand consumer buying behaviour in the light of ever changing Indian consumers' socio-economic, demographic and psychographic dimensions. However, there is no holistic study has been reported in the Indian context probing that which parameters shoppers' consider important

when they decide which store format they want to shop in and from which parameters they derive maximum utility.

Although choice of a store format has been studied from several dimensions including the cost and effort as well as the non-monetary values, yet a few studies reported that the complete picture and combine the aspects of the tangibles as well as intangible values derived out of the shopping process. Moreover, there is a lack of comprehensive empirical study which explores and examines the influence of shopper and store attributes on store format choice and patronage behaviour in the context of Indian food and grocery retailing. Therefore, the study has been assumed significance in understanding and expanding the body of knowledge through exploratory probation into determinant attributes of store format choice and patronage behaviour in food and grocery retailing.

### Back ground of the study

Food and Grocery is by far the most promising area for the corporate majors to get into organised retail businesses. The Food and grocery is the second-largest segment of the retail trade constitutes 53 percent of total private consumption expenditure (USD 154 billion) and 70 percent of total retail sales (KSA Technopak Report, 2007). According to IMAGES India Retail Report-2009, out of the Rs.1,330, 000 crore India retail market, food & grocery retail is the single largest block estimated to be worth whopping Rs.7,92,000 crore (59.5 percent), which has grown from Rs 3,81,000 crore in 1999 to Rs 4,50,000 crore in 2004 to Rs. 7,43,900 crore in 2006, but 98.9 per cent of this market is dominated by the neighbourhood kirana stores and organised food and grocery retailing accounted for a meagre 1.1 percent (Rs. 9000 crore), which has been increased significantly from 0.8

percent (Rs. 5800 crore) in 2006 to 0.6 percent (Rs. 3,500 crore) in 2005 and 0.5 percent (Rs.2950 crore) in 2004. However, the modern Food & Grocery retail accounts for a meagre 11.5 percent of total organised retail market in 2007-08.

For the last two decades, retailing industry has gone through a metamorphosis so far as introduction and induction of different formats is concerned (Sinha and Kar, 2007). Many researchers and retail analysts describe the growth of retailing in India as evolution, especially when they discuss retail formats. But, there is a unique scenario prevailed in India as it is more of revolution than evolution (Vedamani, 2008). There is retail evolution happening with more and more formats being defined by the day, not only by the market place but by the method of retail mediation with customers, by physical store characteristics, by

merchandise characteristics, by convenience etc.

Unlike western countries where supermarkets are prominently visible, in our country this is lacking (Sinha and Kar, 2007, p. 11). These are large, low cost, low margin, high volume, self service operations designed to meet the needs for food, groceries, & other non-food items. The supermarkets offer relatively less assortments but focus on specific product categories. They do not play the game on price rather use convenience and affordability as their salient features. These were the formats at the forefront of the grocery revolution, and today, it controls more than 30 percent of the grocery market in many countries. These are located in or near residential high streets. These stores today contribute to 30 percent of all food & grocery organized retail sales. Super Markets can further be classified in to mini supermarkets typically 1,000 sqft to 2,000

sqft and large supermarkets ranging from of 3,500 sqft to 5,000 sq ft. with more than 30,000 SKU's and having a strong focus on food & grocery and personal sales (Vedamani, 2008, p.35)

The entry of supermarkets in the retail arena brought about tremendous changes in the psyche of the Indian consumers. The Indian consumers now have the option to shop at the supermarkets instead of shopping at the neighbourhood kirana stores. The supermarkets with appealing surroundings, hygienic ambience, and better product display along with the availability of a wide variety of brands helped a lot in drawing consumers towards the format. In India Food World, Food Bazaar, Nilgiris, and Adani are the leading supermarket operators. According to Euromonitor (2007) retail report, there are 36,000 supermarkets with total retail sales of Rs 69,330.1 million from

Rs. 10,100.0 million with 784 supermarket retail stores in 2001 presented in *table 1*.

### **Objectives of the Study**

The overall objective of this study is to gain a better understanding on factors influencing shopper behaviour towards store choice in food and grocery retailing. The specific objectives for this study are:

1. To study the growth and development of food and grocery retailing in general and supermarket formats in particular,
2. To examine the effect of shopper attributes on supermarket store format choice decisions,
3. To explore and examine the determinant store attributes on supermarket store format choice decisions and
4. To derive marketing implications from the information gathered

### **Review of Literature**

The behaviour of retail shoppers is a subject of study across the world (Sinha and Banerjee, 2004). Shopping is the act of identifying the store and purchasing the product. The behaviour of shoppers differs according to the place where they are shopping and their involvement level with the act of shopping (Berman and Evans, 2005). There is a growing need to evaluate the true drivers of shopping behaviour in the Indian context (Sinha and Banerjee, 2004, p.483). For many years, marketing researchers have considered issues related to consumers' store choice across various purchasing situations (Moore and Carpenter, 2006). From early studies that examine traditional retail format choice (Williams and Dadris, 1972) to recent inquiry into the non-traditional internet format choice (Keen et al, 2004), the marketing literature has identified several factors that are consumer-related and situational factors that impact store choice. The recent past study conducted by



Carpenter and Moore (2006) in U.S grocery retailing found that shopper characteristics and store attributes are significant predictors of their consumption behaviour and choice of store format. Similar work has been done on household demographic variables influencing store format choice behaviour (Kau and Ehrenberg, 1984; Leszczyc and Timmermans, 1997; Kim and Park, 1997; Bawa and Ghosh, 1999; Leszczyc, Sinha, and Timmermans, 2000). The following sections review the literature relating to shopper characteristics and store attributes and format choice behaviour in retailing.

### **Shopper Characteristics**

Previous store choice and patronage researchers consistently agreed upon the importance of shopper (individual) characteristics such as socio-economic, demographic, geographic and psychographic factors in understanding the shopper behaviour. Demographic factors such as age, gender, marital status, income, female

working status, education, occupation and family size wield enormous influence on choice of store format in grocery retailing (Zeithaml, 1985; Sampson and Tigert, 1992; Arnold, 1997; Sinha and Banerjee, 2004; Fox *et al.*, 2004; Carpenter and Moore, 2006). The recent past study conducted by Carpenter and Moore (2006) found that shopper characteristics are significant predictors of their consumption behaviour and choice of retail format. The studies on store choice have mostly dealt with individual choices and the studies have investigated the drivers of store choice taking individuals as the samples (mostly housewives). Little research exists, which analyses the shopping behaviour with a family or household as a unit. Researchers have found that, store choice and shopping trip timing decisions tend to differ for individuals and households as a result of personal differences, household composition, and activity patterns (Leszczyc and

Timmermans, 1997; Kim and Park, 1997). Similar work has been done on household demographic variables (Bawa and Ghosh, 1999; Leszczyc, Sinha, and Timmermans, 2000) and relating them to the shopping behaviour of the household, the trip timing (Kahn and Schmittlein, 1989) and the store choice (Kau and Ehrenberg, 1984).

Zeithaml (1985) conducted a field study to examine the effects of five demographic variables (gender, female working status, age, income, marital status) on supermarket shopping variables (e.g. shopping time, number of supermarkets visited weekly, amount of money spent). Stone (1995) compared the demographic profiles of supermarket shoppers and warehouse club shoppers, finding that warehouse club members were younger, more educated, and had higher incomes. Forsythe and Bailey (1996) found that age, marital status, occupational status, and shopping enjoyment affect the amount of

time spent shopping. Fox et al., (2004) examined the effect of demographics on format choice across three formats: grocery stores, mass merchandisers, and drug stores and the findings indicated that household size, income, and level of education influence consumers' format choices. Hence, the following hypothesis has been formed, H1a: Shoppers' demographic attributes have significant association with choice of supermarket store formats.

### **Store attributes**

Store attributes are considered the “means” by which a consumer is able to achieve a desired “end”, such as a favourable consequence or personal value satisfaction (Kerin et al., 1992). The following research gives merit to the effects of store attributes and characteristics on store choice and patronage decisions.

### ***Location related***

Accessibility is another factor that attracts shoppers to the stores. Good accessibility means ease of transportation that is coupled with a short travel time to the store. All things being equal, stores that are easily accessible are likely preferred by consumers (Eppli and Shilling, 1996). Ownbey et al., (1994) assert that a retail stores' location could determine its success or failure since the size of its "catchments" is related to its accessibility. Stores that are located near a bus interchange or mass rapid transit station are likely to enjoy more exposure and draw greater traffic volume than stores that are not easily accessible (Thang and Tan, 2002). Lindquist (1974) refers to accessibility as having a convenient location and this includes parking facilities. Hence, better accessibility implies fewer impediments and consequently less displeasure to consumers making a trip to the store. The choice of store is very much influenced by location (Fotheringham, 1988). Woodside and

Trappey (1992) reported that location of store influenced the customer satisfaction. Kim and Jin (2001) found that location was the most important attribute in influencing consumer behaviour and choosing a store. Hence, the following hypothesis has been formed, H2a: Location related attributes significantly influences store choice decisions.

### ***Merchandise related***

A chief attraction of a retail store centers on its merchandising (Thang and Tan, 2002). Several studies have shown that assortment is an important factor in store choice (Arnold et al, 1983). The components of merchandise are the quality, selection or assortment, styling and fashion of merchandise (Nevin and Houston, 1980). A strong merchandise mix provides consumers with a wider choice of products and services and enhances the ability of the stores to fulfill their needs and wants (Hanson, 1980). This reduces the possibility of their subsequent visits to other

competing stores to satisfy an unfulfilled need (Beatty et al, 1996). Grewal et al, (1999) has also identified product assortment is one of the most important store attribute of retail patronage. According to the large study of Danish grocery retailing industry by Hansen and Sloggard (2004) reports several important findings and product assortment was identified as the single most influential variable affecting the choice of retail format across three formats: discount stores, hypermarkets and conventional supermarkets. Hence, the following hypothesis has been formed, H3a: Merchandise related attributes significantly influences store choice decisions.

#### ***Customer service related***

Service quality is a contributor to consumer perception in all interactions between customer and staff, and these evaluations contribute towards the perceived image based on a number of store visits (Bruce et al, 2004, p.197). Research has demonstrated

that service quality is among the predominant attributes affecting store choice (Mulhern, 1997). Waiting for service in a retail environment is an experience that can lead to consumer dissatisfaction (Katz et al, 1991), which in turn can result in negative effects on store patronage behaviour (Hui et al, 1997). It is observed that customers terminate the purchase process because check-out lines are too long or sales assistance is inadequate (Grewal et al, 2003). Hence, the following hypothesis has been formed, H4a: Customer service has positive influence on store choice decisions.

#### ***Price-promotions related***

As Lichtenstein et al (1993) state, price is unquestionably one of the most important factors that affect store choice. Over the years a number of researchers have focused on examining different elements of price as a determinant of store choice (Bell and Lattin, 1998; Yavas, 2003; Fox et al, 2004). Price-related behaviours represent an important

area of focus within the stream of research on patronage behaviour (Dawar and Parker, 1994 and Moore and Carpenter, 2006). Retailers are constantly engaged in promotional efforts that include “incentives” such as sales and discounts to attract shoppers to their stores. Promotions help to create public awareness of the activities of the stores (Bagozzi et al, 1998) and increase

#### **Atmospherics/Ambience related**

Store atmospherics refer to the general surrounding as created through the use of retail design features including tangible elements such as floor, wall, and ceiling surfaces (i.e., materials, colors, textures); lighting; fixtures and mannequins; product trial areas; customer seating areas; point of purchase and window displays; as well as intangible elements such as music, temperature, and scent (Hyllergard et al. 2006). Previous studies also examined that effect of store environment on grocery store

the likelihood of patronage. They exposes consumers to the offerings of the store, prime them with knowledge of the availability of merchandise that could cater to their future needs and encourage their repeat visits (logue, 1986). Therefore, the following hypothesis has been formed, H5a: Price-promotions positively influence store choice decisions.

selection and produced evidence of a relationship between the two variables (Hansen and Deutscher, 1977). The shopping experience, as created by the store environment, has been found to play an important role in building store patronage (Sinha and Banerjee, 2004, p.485). Music has been shown to affect consumers' response to retail environments, typically in a positive manner (Baker et al, 1992). Hui et al (1997) note that “playing music in the (service) environment is like adding a favourable feature to a product, and the

outcome is a more positive evaluation of the environment. In sum, store atmosphere works on the pleasure and arousal domain of consumer perception and store with favourable atmosphere are likely to increase consumer preference. Hence, the following hypothesis has been formed, H6a: Store ambience significantly influences store format choice decisions.

### **Research Methodology**

The present study is an empirical enquiry into the importance of shopper attributes and store attributes on store choice decisions. The study is based on primary data as well as necessary secondary data to reinforce the model. The following sections explain the research design covering the procedures and methods adopted for sampling design, data collection process, development of survey instrument and measures of variables and method of analysis.

### **Research Design**

Research design is the master plan of a research study (Hair et al. 2003). It lays out the structure, procedures, and data analysis of the research (Leedy&Ormrod, 2005). Given the limited amount of information available on store choice behaviour in India, it was decided to design an exploratory study to identify major preferences and choices among Indian shoppers in food and grocery retailing. The present study is conducted in two phases. In the first phase, exploratory interviews with supermarket managers and consultations with marketing academicians helped to determine attributes that are considered the most important to supermarket store formats. The second phase was a field survey which is a non-experimental survey methodology to gather the data necessary to test the relationships between the constructs listed in the previous section of hypotheses formulation.

### **Sampling Design**

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure would adopt in selecting items for the sample (Kothari, 2004). Sample design may as well lay down the number of items to be included in the sample i.e., population of the study, sampling unit, sampling frame or sampling source, size of sample and sampling procedure.

#### Population of the study

The population frame would be the retail customers of supermarket store formats in the state of Andhra Pradesh in India.

#### Sampling frame

The sampling frame or source list, a subset of the defined target population, from which sample is realistically selected for research (Nargundkar, 2007). The sampling frame for the present research would be comprised of retail customers of supermarket store formats in the twin cities of Hyderabad and Secunderabad.

#### Sampling unit

This is the most important step in sampling design before selecting a sample. Sampling unit may be a geographical one such as a state, district, village, etc., or a construction unit such as house, flat, family, club or may be an individual (Nargundkar, 2007, p.91). The sample subjects for the present research are the food and grocery retail customers who are above 21 years old.

#### Sample size

This refers to the number of items to be selected from the universe to constitute a sample. Sample size has a direct bearing on how accurate the findings are relative to the true values in the population. Therefore, determining an appropriate sample size for this research is considered to be paramount importance. According to the previous marketing research studies, the minimum sample size required for this study is calculated by using the following formula (Nargundkar, 2007, p.92):

$$\text{Sample size } (n) = (Z s)^2 / e^2$$

Where: Z= The 'Z' value represents the Z score from the standard normal distribution for the confidence level desired by the researcher (no. of Std.deviation a point on a distribution is away from the mean) (e.g. a Z score of 1.96 for 95 per cent Confidence Level); s= The 's' represents the estimate of the population standard deviation for the variable. The unknown value of 's' can be measured from dividing the range (maximum and minimum values of the variables used in the study) by 6 and e = The tolerable error for estimating the variable in question. The lower the tolerance, the higher will be the sample size.

Assuming Z= 95 percent (1.96), e=  $\pm 6.0\%$ , and s=0.67

$$\text{Sample size (n)} = (1.96 \times 0.67)^2 / (0.06)^2 = 479.02$$

As a result, the minimum sample size is calculated to be 479 respondents.

### Data Collection Procedure

The primary data was collected through the field survey during the period June –Oct 2008. Surveys are an efficient way of gathering information from a large sample of consumers by asking questions and recording responses (Blackwell et al. 2001, p.22). The mall intercept survey is an inexpensive method of data collection where the interviewer intercepts shoppers in a shopping mall or in the vicinity of the store (Churchill, 1996). Data was collected at twenty different supermarket type store formats by administering a structured non-disguised questionnaire with the list of questions in a prearranged order by a well trained survey team consist of fourth semester MBA (Marketing) students. To ensure randomness, the survey team approached every third adult shopper leaving the retail store, asked whether he or she is interested to participate in the retail marketing survey and recorded all refusals. The survey opened with a single screening question designed to probe grocery



shopping behavior. Subjects were first asked to indicate how often they shop for food & grocery products for their household from supermarket store formats. Respondents who indicated that they “occasionally,” “often,” or

### **Survey Instrument & Measurement of Key variables**

The respondents were administered a structured non disguised questionnaire. The questionnaire begins with a brief introduction revealing the purpose and importance of the study in addition to the statements allaying fears regarding participation and confidentiality of their responses in the survey. The self-administered questionnaire was developed using scales from previous studies. The questionnaire used dichotomous, multiple choice, five-point Likert scale type statements, and open ended questions. The questionnaire has been divided into two parts: part-A consists of seven questions connected to respondents’ socio-economic, demographic, and geographic characteristics. The responses are measured using nominal and interval

“always” shop for groceries for their household continued with the survey, while those who answered “rarely” or “never” were allowed to exit the data collection process.

scales and part-B consists of twenty statements relating to six variables (location, merchandise, customer service, price-promotions, atmospherics and store choice behaviour).

All the measurement items were adapted from the existing scales to measure the constructs proposed in the model. Five-point scales were employed because previous research has suggested that a five-point scale is readily comprehensible to respondents and enable them to express their views. The importance of store attributes like location related drawn from Berman and Evans (1989) and Arnold et al (1983, 1996); merchandise related adopted from Yavas (2003) and Sinha et al. (2005); customer service related from Baker et al, (2002), Grewal et al (2003),

Carpenter and Moore (2006) and Sinha and Banerjee (2004); price-promotions related from Richardson et al (1994), Yavas (2003), Fox et al, (2004) and atmospherics related from Thang and Tan, (2002), Sinha and Banerjee (2004), Sinha et al, (2005), Hyllegard et al. (2006). Store choice behavior related items adopted from Fox et al (2004) and Sinha and Banerjee (2004).

#### Method of analysis

The data analysis and results based on 580 usable questionnaires duly filled up by the retail customers, who actively participated in marketing survey. Both descriptive statistical tools (percentiles, mean and standard deviations) and inferential statistical techniques such as Chi-square, correlations, regressions, and ANOVA were applied to test the hypotheses from research frame work. SPSS 16.0 was used for data analysis.

#### **Statistical Results and Discussions**

A total of one thousand retail customers were surveyed. Out of which, six hundred twenty

were returned. This is an approximately sixty two percent response rate. Out of this, five hundred and eighty questionnaires were usable and rest were rendered unusable due to incomplete data. All respondents were adult male and female food & grocery retail customers consisted of 324 female (55.8 percent) and 256 male (44.2 percent) with an average age of 32 years (range 20-62), modal age group 30-40 years and median age was 35 years. The majority of the respondents (69.3 percent) were married and rest 30.7 percent were un-married. The major chunk of the respondents (56.4 percent) had graduation as their educational qualification and least 20 percent had SSC as their minimum qualification and the rest had PG as their academic qualification. The aggregated mean monthly household income was Rs 18,000 with 48.3 percent respondents had paid employment as their occupation. A major chunk (97 percent) of the respondents lived within 4 km from different retail store formats

and about 55 percent had travelled up to 3 km for shopping food and grocery products. The results of respondent's demographic, socio-economic and geographic variables) were summarised in table 2.

The information on the respondents' behaviour towards supermarket stores revealed that that 26 percent have been with the retail outlets for less than one year, 38 percent have been with the retail outlets for two years and 36 percent have been with the retail outlets for more than two years. This shows that respondents have positive attitude towards supermarket store formats. Approximately 42 percent of the respondents visited the supermarkets twice in a given month, 38 percent visited at least once in a given month, 20 percent frequently visited. These results proved that respondents have a significant level of repurchase behavior towards supermarkets. Correlation was used to examine the strength and direction of relationship among all four variables

(Location-LOC, Merchandise-MER, Customer Service-CUS, Price-promotion-PROM and Atmospherics=-ATM) and outcome variable Store choice behaviour-SCB. The statistical significance of correlation is indicated with double asterisks marks for significance less than 0.01 and single asterisks marks for significance less than 0.05. The correlation among the constructs presented in **table 3**. The internal consistency of the instrument was tested through reliability analysis. Reliability estimates (Cronbach's Alpha) for the construct variables are, LOC (0.84), MER (0.80), CUS (0.75), PROM (0.72), ATM (0.82) and SCB (0.88) revealing a high degree of reliability. All reliability results are well-exceeded 0.70 lower limit of the acceptability (Hair et al, 1998).

#### *Inferential Statistics (Hypotheses testing)*

The association of shopper attributes and store format choice behaviour was examined using cross tabulations with chi-square statistic. The results with the help of chi-square test would

also reveal that the independence/dependence and goodness of fit among the variables. The following paragraphs discuss the results summarised in table 4.

The findings from chi-square statistic revealed that choice of supermarket format have significant association with respondents' age ( $\chi^2=131.143$ , df12,  $p<0.000$ ).

The findings from chi-square statistic revealed that choice of supermarket format have significant association with respondents' gender levels ( $\chi^2=3.52$ , df 4,  $p<0.05$ ).

The findings from chi-square statistic revealed that choice of supermarket format have significant association with respondents' marital status ( $\chi^2=18.348$ , df 4,  $p<0.005$ ).

The findings from chi-square statistic revealed that choice of supermarket format have significant association with respondents' education ( $\chi^2=21.564$ , df 8,  $p<0.05$ ).

The findings from chi-square statistic revealed that choice of supermarket format

have significant association with respondents' occupation ( $\chi^2=32.695$ , df 12,  $p<0.05$ ).

The findings from chi-square statistic revealed that choice of supermarket format have significant association with respondents' monthly household income ( $\chi^2=11.668$ , df 12,  $p<0.05$ ).

The findings from chi-square statistic revealed that choice of supermarket format have significant association with respondents' family size ( $\chi^2=6.199$ , df 8,  $p<0.05$ ).

The findings from chi-square statistic revealed that choice of supermarket format have significant association with respondents' distance travelled to store ( $\chi^2=29.186$ , df 16,  $p<0.05$ ).

Results: The hypothesis (H1a) was supported and implied that supermarket format choice decisions were dependent on consumer's socio-economic, demographic and geographic attributes.

### For testing Hypotheses H2a, H3a, H4a, H5a and H6a

The effect of store attributes such as location, merchandise, customer service, atmospherics and price-promotions on store choice behaviour were examined using multiple regressions (stepwise forward). The resulting regressing models for dependent variable were shown in table 5 and their significance including distinct predictors at varying ' $\alpha$ ' levels presented in table 6.

The five evolved regression models for choice of supermarket store formats shown in table 5 contributed significantly and predicted 25.4 percent variation by model-1 with Merchandise (MER); 28.3 percent by model-2 with Merchandise & Location (LOC); 30.4 percent variation by model-3 with MER, LOC & Customer service (CUS); 32.4 percent variation by model-4 with MER, LOC, CUS & Atmospherics (ATM); and 33.6 percent variation by model-5 with MER, LOC, CUS, ATM & Price-Promotion (PROM). The five

emerged regression models indicated that independent variables such as LOC, MER, CUS, ATM and PROM were related to dependent variable (choice of supermarket format) with their respective significant ANOVA values are:  $F(1,578)=196.998$ ,  $p=0.000$  for model-1;  $F(2,577)=114.021$ ,  $p=0.000$  for model-2;  $F(3,576)=83.810$ ,  $p=0.000$  for model-3;  $F(4,575)=69.612$ ,  $p=0.000$  for model-4 and  $F(5,574)=58.105$ ,  $p=0.000$  for model-5. The coefficient summary for five evolved regression models shown in table 6 revealed that MER ( $\beta=0.436$ ,  $t=14.036$ ,  $p=0.000$ ) for model-1; MER ( $\beta=0.361$ ,  $t=10.544$ ,  $p=0.000$ ) with LOC ( $\beta=0.186$ ,  $t=4.38$ ,  $p=0.000$ ) for model-2; MER ( $\beta=0.349$ ,  $t=10.293$ ,  $p=0.000$ ), LOC ( $\beta=0.168$ ,  $t=4.405$ ,  $p=0.000$ ) with CUS ( $\beta=0.162$ ,  $t=4.129$ ,  $p=0.000$ ) for model-3; MER ( $\beta=0.328$ ,  $t=9.723$ ,  $p=0.000$ ), LOC ( $\beta=0.132$ ,  $t=3.426$ ,  $p=0.001$ ), CUS ( $\beta=0.171$ ,  $t=4.413$ ,  $p=0.000$ ) and ATM ( $\beta=0.154$ ,  $t=4.176$ ,  $p=0.004$ ) for model-4; and MER ( $\beta=0.300$ ,

$t=8.635$ ,  $p=0.000$ ), LOC ( $\beta =0.115$ ,  $t=2.977$ ,  $p=0.003$ ), CUS ( $\beta =0.168$ ,  $t=4.363$ ,  $p=0.000$ ) and ATM ( $\beta =0.145$ ,  $t=3.969$ ,  $p=0.004$ ) with PROM ( $\beta =0.113$ ,  $t=3.179$ ,  $p=0.002$ ) were the significant predictors for choice of supermarket store format. Therefore, the hypotheses H1a, H2a, H3a, H4a, and H5a were proved valid. The following regression models were developed for supermarket store format choice decisions:

$$Y = 1.314 + 0.727X_1 \text{----- (1)}$$

$$Y = 0.0671 + 0.580X_1 + 0.363X_2 \text{----- (2)}$$

$$Y = 0.257 + 0.547X_1 + 0.305X_2 + 0.254X_3 \text{--- (3)}$$

$$Y = 0.287 + 0.547X_1 + 0.305X_2 + 0.238X_3 + 0.214X_4 \text{----- (4)}$$

$$Y = 0.378 + 0.482X_1 + 0.255X_2 + 0.245X_3 + 0.210X_4 + 0.142X_5 \text{----- (5)}$$

Whereas, Y= choice of supermarket store format;  $X_1$ =MER;  $X_2$ =LOC;  $X_3$ = CUS;  $X_4$ =ATM;  $X_5$ = PROM

The findings from the five evolved multiple regression models indicated that merchandise related attributes like wide variety of merchandise, quality of merchandise, value for merchandise, availability of national and various quality

store brands influence consumer behaviour for the choice of supermarket. The merchandise findings are concurrent with previous research results from Hansen and Solgaard (2004), Sinha and Banerjee (2004); Sinha et al (2005) and Carpenter & Moore (2006). The findings relating to location (accessibility, convenience) are concurrent with Kim and Jin (2001). The results from customer service (fast checkout lines, knowledgeable sales personal and value added services) are agreed with Baker et al (2002) and Grewal et al (2003). The findings from atmospherics (ambience, store cleanliness, display of merchandise, store design and layout) are also concurrent with Thang and Tan (2002) and Sinha and Banerjee (2004). The results from price-promotions (competitive prices, special sale offers, in-store promotions, redemption of discount coupons) are found concurrent with Urbany et al (2000), Yavas (2003) and Moore and Carpenter (2006).

**Implications of the Study**

The empirical analysis and findings of the present study has yielded important insights and implications for both academicians and retailers. The study has contributed to the marketing literature by providing comprehensive information about the importance of shopper attributes and store attributes influencing consumer behaviour in the context of organised food and grocery retailing which is in an evolution stage. The findings reveal the significance of consumer demographic dimensions in segmenting and targeting food and grocery retail customers. This research has also provided both researchers and marketers with an opportunity to study the store choice and patronage behaviour of retail consumers in modern retailing in India. An understanding of patterns of retail shopper behaviour would help marketers in developing an effective marketing strategy that meets the needs and wants of the target customers. With the heightened level of competition in today's

food and grocery retailing market, an increasing number of stores are currently facing difficulties in operating profitability. These research findings would enable marketers to adjust market communications and store formats to accommodate existing shoppers and to attract different segment of customers.

**Limitations and Directions for Future Research**

Although the objectives of this study were fully met, a few limitations were identified in the course of this study.

1. This study is limited to food and grocery supermarket store formats in twin cities of Hyderabad & Secunderabad only. This limitation is an opportunity for future researchers to extend the study to whole Andhrapradesh or India. Moreover, the future study may be replicated to other food and grocery store formats like upgraded kirana stores, discount stores, convenience

- stores and hypermarket stores altogether or individually.
2. The study has considered shopper attributes relating to demographic and geographic. It is suggested that future research may consider consumer psychographic dimensions like values, lifestyle factors and shopping orientations which give clear picture of consumer behaviour towards store format choice decisions.
  3. Previous research findings indicated the significance of shopper characteristics in understanding the consumer behaviour (Prasad and Reddy (2007). The present study has not taken them into account. This limitation may be used as an opportunity for future research in this direction to segment and target the customers.
  4. The study is confined to store attributes such as location, merchandise, customer service, atmospherics and price-promotions only. It is suggested that future research may explore and consider more determinant store attributes than those used.
  5. Although the sample size 580 is acceptable yet this poses as a problem in generalising the findings to whole retail customers of A.P or India. Future researchers may increase the sample size by considering multiple cities for the study.
  6. The study has not used the statistical tools like Conjoint for finding the absolute utility of each store attribute and Structural Equation Model (SEM) to validate the model.
  7. Present study is cross sectional one but longitudinal study is the apt one



to understand the behavioural patterns of retail customers in a particular area. Future researchers may work in this direction.

8. Similar type studies may be conducted in other retail areas like consumer durables, apparels and speciality.

### **Conclusions & Suggestions**

This empirical study investigated the importance of store attributes influencing consumer behaviour towards choice of food and grocery supermarket store formats. Some important path breaking revelations are made by using the responses provided by 580 retail customers in twin cities of Hyderabad and Secunderabad in Andhrapradesh. The study has found that customer's age, gender, marital status, education, occupation, monthly household income, family size and distance travelled to store proved to be the significant variables associated with supermarket store format choice behaviour. Merchandise attributes are

the most significant factors followed by location, customer service, atmospherics and price-promotions in predicting the consumer store choice behaviour in supermarket food and grocery retailing. The study offers the following suggestions for the growth and development of food and grocery supermarket stores: 1) the retailers are needed to put emphasis on availability of quality product assortment in grocery section and keeping fresh fruits & vegetables rather than couple of days old 2) retailers may take note of customers' value for merchandise and value for money concept especially in recessionary period. 3) retailers need to give due value to locational issues like convenience and accessibility which always give competitive advantage 4) it is also suggested that offering personalised services and credit facilities would attract more foot falls to the store 5) keeping well trained and availability of knowledgeable store personnel are critical in

understanding and sensing the needs of motley group of customers 6) Since the findings from store ambience and atmospherics are also proved significant, retailers need to improve the store design & layout for comfortable shopping and visual

merchandising techniques to appeal more for impulse purchasing 7) lastly price related promotional offers must be more cost-effective and genuine. Retailers need to make clear the hidden risks involved in such seasonal and untimely offers.

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## Appendix

Table1. Supermarket retail stores: Sales value, outlets and selling space from 2001-2007

	2001	2002	2003	2004	2005	2006	2007
Sales value in Rs million	10,100.0	14,000.0	18,500.0	22,108.0	28,298.0	39,617.2	69,330.1
Total outlets	784.0	980.0	1200.0	1368.0	1683.0	2380.0	3600.0
Selling space (000 sq.m)	106.0	150.0	200.0	249.0	332.0	448.2	657.5

Source: Euromonitor Report on Indian Retail, 2007

Table2. Respondents' demographic, socio-economic and geographic characteristics

Variable	Description	Frequency	Percent	Mean	S.D
Gender	Male	256	44.2	-	-
	Female	324	55.8		
Age	20-30 years	169	29.1	34	8.96
	30-40	212	36.6		
	40-50	144	24.8		
	50 & above	55	9.5		
Marital Status	Married	402	69.3	-	-
	Un-married	178	30.7		
Education	SSC/Diploma	119	20.5	-	-
	Degree	327	56.4		
	PG & above	134	23.1		
Occupation	House wife	173	29.8	-	-
	Employment	280	48.3		
	Business	81	14.0		
	Others (Student/Retired)	46	7.9		
Monthly Household Income	Rs 5000-10000	138	23.7	Rs 18000	Rs 7200
	Rs 10000-15000	151	26.2		
	Rs 15000-20000	185	31.8		
	Rs 20000 & above	106	18.3		
Distance Travelled to Store	1-2 Km	205	35.3	2.9	0.757
	2-3 Km	180	31.0		
	3-4 Km	180	31.0		
	4-5 Km	72	12.3		
	>5 Km	43	7.4		

Source: Primary Data



Table3. Descriptive Statistics and Correlations of store attributes and store choice behaviour

Variable	Mean	Std. deviation	1	2	3	4	5	6
1. LOC	4.03	.54	1.000					
2. MER	4.18	.52	.265**	1.000				
3. CUS	3.97	.55	.258**	.182*	1.000			
4. ATM	3.86	.54	.287**	.196*	.190**	1.000		
5. PROM	3.45	.53	.454**	.269**	.304**	.302**	1.000	
6. SCB	4.22	.55	.392**	.504**	.315**	.296**	.258**	1.000

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

\* Correlation is significant at the 0.05 level (2-tailed).

Table 4. Summary of Chi-Square statistic results between respondents' demographic and supermarket store format choice

Respondent Attributes	Supermarket store format choice ( <i>Chi-square</i> ( $\chi^2_{.05}$ ))			
	Cal. value	Tab. Value	df	Sig. (P-value)
Age	131.14	21.02	12	0.000
Gender	53.07	9.48	4	0.000
Marital Status	18.34	9.48	4	0.001
Education	21.56	5.50	8	0.006
Occupation	32.69	21.02	12	0.001
MHI	26.01	21.02	12	0.000
Family Size	6.19	5.50	8	0.048
DTS	29.18	26.29	16	0.023

Source: Primary data

**Table5. Regression model summaries for effect of store attributes on store choice behaviour**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	ANOVA values			
					Df1	Df2	F-Value	Sig.
1	.504 <sup>a</sup>	.254	.253	.930	1	578	196.998	.000
2	.532 <sup>b</sup>	.283	.281	.912	2	577	114.021	.000
3	.551 <sup>c</sup>	.304	.300	.900	3	576	83.810	.000
4	.570 <sup>d</sup>	.324	.320	.887	4	575	69.012	.000
5	.580 <sup>e</sup>	.336	.330	.880	5	574	58.105	.002

a Predictors: (Constant), Merchandise

b Predictors: (Constant), Merchandise, Location

c Predictors: (Constant), Merchandise, Location, Customer Service

d Predictors: (Constant), Merchandise, Location, Customer Service, Atmospherics

e Predictors: (Constant), Merchandise, Location, Customer Service, Atmospherics, Price-promotions

f. Dependent Variable: Store choice Behaviour

**Table 6. Predictor effects and beta estimates for store attributes on store choice behaviour**

Model	Variables	Unstandardised Coefficients		Standardized Coefficients	t-value	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.558	.095	-----	27.007	.000
	Merchandise	.436	.031	.504	14.036	.000**
2	(Constant)	2.229	.115	-----	19.345	.000
	Merchandise	.361	.034	.417	10.544	.000**
	Location	.186	.038	.191	4.838	.000**
3	(Constant)	1.867	.143	-----	13.014	.000
	Merchandise	.349	.034	.403	10.293	.000**
	Location	.168	.038	.173	4.405	.000**
	Customer Service	.162	.039	.146	4.129	.000**
4	(Constant)	1.597	.156	-----	10.263	.000
	Merchandise	.328	.034	.380	9.723	.000**
	Location	.132	.039	.136	3.426	.001*
	Customer Service	.171	.039	.154	4.413	.000**
	Atmospherics	.154	.037	.152	4.176	.000**
5	(Constant)	1.439	.162	-----	8.879	.000
	Merchandise	.300	.035	.346	8.635	.000**
	Location	.115	.039	.119	2.977	.003*
	Customer Service	.168	.038	.151	4.363	.000**
	Atmospherics	.145	.037	.143	3.961	.000**
	Price-Promotions	.113	.036	.118	3.179	.002*

a Dependent Variable: Store choice behaviour; \* $\alpha < 0.01$ , \*\*  $\alpha < 0.001$ ; Source: Primary dat