

# Grocery Shopping Pattern of Indian Retail Customers: Traditional Stores Vs. Supermarkets

Hemalatha Jeyachandran, Aravindh Kumaran, L., Takhellambam Rocky Devi, D. Asokk, Arun Prasad

**Abstract:** Understanding retail shopper behaviour is very significant as it directly influences the sales revenue of small and large retail businesses as well as the economy as a whole. Retail shopper behaviour is highly complex and dynamic in nature and hence draws attention from multiple angles. The present study is a step towards understanding the retail shopping pattern of customers with respect to traditional stores and supermarkets. The study has described the shopping pattern of retail customers based on their shopping frequency to retail stores, store choice for conducting fill in and major trips, time spent during every visit to the store and the money spent during each visit. In addition, the role of consumer demographics in influencing the frequency of visit to traditional store and supermarket is also analyzed and presented.

**Keywords:** Shopping pattern, food and grocery retail, shopper behaviour, consumer demographics, shopping frequency.

## I. INTRODUCTION

Understanding retail shopper behaviour is very significant as it directly influences the sales revenue of small and large retail businesses as well as the economy as a whole. Retail shopper behaviour is highly complex and dynamic in nature and hence needs to be investigated from multiple angles. Retail businesses today are finding it very difficult to draw customers and retain them as loyal customers due to changing retail environment and increased competition. The growth and development of newer formats of retailing has given a never before shopping experience for Indian customers. The growth in the retail sector is due to improved standard of living, changing lifestyle of people, growing middle-class population, secondary income from working women, increased penetration of organized retailers, etc. Retail customers have exposure to various formats of retail stores to satisfy their shopping needs. Customers often are found to visit multiple store formats taking advantage of factors like product variety, price, location, promotions, customer service and other facilities.

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Of all the other retail segments, food and grocery alone is projected to generate 66 percent of the total retail revenue in India by 2020. Indian food and grocery sector is witnessing cut throat competition from traditional stores and supermarkets. Traditional stores account for more than 70 percent of total grocery revenue in India (Jones et al., 2005) and still occupy predominant place in the Indian retail industry (Halepete, et al., 2008).

However, supermarkets are found to give a tough competition to traditional retailers in major cities and towns. Hence, researchers and retailers are keen to understand the shopping pattern of retail customers in order to retain customers and sustain in their business. The present study is a step towards understanding the retail shopping pattern of customers with respect to traditional stores and supermarkets. The study has described the shopping pattern of retail customers based on the frequency of visit to retail stores, stores preferred for conducting fill in and major trips, time spent during every visit to the store and the money spent during each visit. In addition, the role of consumer demographics like gender, marital status, age, level of education, occupation, monthly income and family size in influencing the frequency of visit to a traditional retail store and supermarket is also presented.

## II. LITERATURE REVIEW

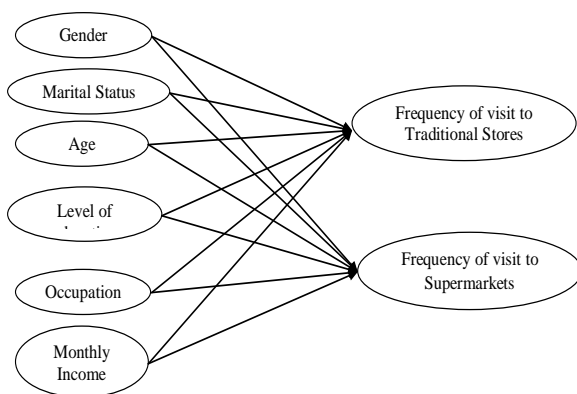
Shopping frequency is the degree of store-switching opportunities for the shopper to take advantage of the promotional activities of different store formats (East et al. 1997). Shopping frequency has been employed to understand the store choice of behaviour of retail customers in many studies (Jin and Kim, 2003; Pan and Zinkhan, 2006; Huddleston et al., 2009; Jayasankara Prasad and Aryasri, 2011). Shopper's demographic characteristics were found to influence frequency of shopping across retail formats. Shopper's age, level of education and income were found to influence frequent shopping from a departmental store. Frequent shoppers of department stores were found to be younger and educated along with higher household income compared to non-frequent shoppers (Crask and Reynolds, 1978). On the contrary, Burt and Gabbott (1995) reported that elderly shoppers frequently visited department stores to satisfy their shopping needs. Similar finding was reported by Soriano and Nair (2002) confirming frequent shopping habits of elderly customers from department stores. Fox et al. (2004) identified that shoppers who frequently visited mass merchandisers were also found to frequently visit other retail formats like supermarkets, drug stores, etc, which indicated that shoppers do not replace shopping trips across retail store formats. Carpenter and Moore (2006)

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highlighted the role of consumer demographics and attributes of retail stores on store choice and classified shoppers as frequent and occasional based on their frequency of visit to retail stores. Consumer demographics were found to play a significant role in determining the shopping frequency of retail shoppers across four product categories such as apparel, health and beauty, home furnishings and electronics (Carpenter, 2008). The behaviour of shoppers differed across product categories based on their demographic profile. Carpenter and Baliya (2010) profiled shoppers of electronics goods based on their demographic profile and frequency of visit to retail stores like department stores, specialty stores, discount stores, category killers, internet-only retailers and catalog stores. The research evidences highlight variety of roles played by consumer demographics in determining the frequency of shopping.

## A. Research Framework

Based on the research evidences, a research model has been proposed highlighting the role of consumer demographics on the frequency of visit to supermarkets and traditional stores for buying food and grocery items.



## III. RESEARCH METHODOLOGY

The present study forms part of a major study conducted to understand the factors underlying the choice of traditional grocery stores and supermarkets for purchasing grocery items. Data for the study was collected from retail customers who had visited both traditional stores and supermarkets to buy food and grocery items. Structured questionnaire was used to collect data from 900 respondents in Chennai, India. Descriptive analysis like frequency, mean and standard deviation were conducted to understand the shopping pattern of Indian retail customers. Inferential statistical techniques like independent sample 't' test and one-way ANOVA were employed to understand the influence of consumer demographics on the frequency of visit to traditional stores and supermarkets.

## IV. SHOPPING PATTERN OF INDIAN RETAIL CUSTOMERS

### A. Frequency of Visit to Traditional Store and Supermarket

Percentage analysis of the respondents' shopping frequency to traditional stores and supermarkets to buy food and grocery item has highlighted differences in their shopping pattern (table 1). A major portion of the respondents visited traditional retail stores twice or thrice a week (36 percent). Respondents' visit to traditional retail stores every day or once in a week is 22 percent and 23 percent, respectively. A major chunk of the respondents (48 percent) indicated that they visited supermarkets to buy grocery items once in a month. Respondents' visit to supermarkets once in a fortnight or once in two weeks hovered around 24 percent and 21 percent, respectively. Respondents, who visited supermarket almost every day or twice or thrice a week is comparatively very low (1 and 6 percent, respectively).

**Table-I: Frequency of visit to Traditional Store and Supermarket**

Shopping Frequency	Traditional store (%)	Supermarket (%)
Once in a month	10	47.9
Once in two weeks	9.2	23.8
Once in a week	22.8	21.1
Once in two or three days	36.2	6.3
Once in a day	21.8	0.9

### B. Store preference for Fill-in and Major Trips

Descriptive analysis has been carried out to examine respondents' store preference for fill-in trips and major trips. The mean and standard deviation (SD) for the same has highlighted differences in their shopping pattern (table 2). Based on the mean scores and standard deviation, it is understood that while conducting a fill-in trip, majority of the respondents prefer traditional retail store (3.76) compared to supermarkets (2.65). On the other hand, respondents indicated that while conducting a major shopping trip for buying food and grocery items, they prefer supermarkets (3.30) compared to traditional retail stores (2.97).

**Table-II: Store Preference for Fill-in and Major Trips**

Variable	Mean	SD
Traditional retail store preference for fill-in trips	3.76	1.136
Supermarket preference for major trips	3.3	1.508
Traditional retail store preference for major trips	2.97	1.491
Supermarket preference for fill-in trips	2.65	1.28

### C. Time Spent during each visit to a Store

Percentage analysis has been carried out to understand the time spent by the customers in a retail store during each visit (table III). The findings showed that a majority of the respondents (51) percent spend almost less than 30 minutes during each visit. Around thirty seven (37) percent of the respondents spend 31 to 60 minutes while, nine (9) percent of respondents spend one hour to one and a half hour in a retail store. Only the last three (3) percent replied that they spend more than 90 minutes.



**Table-III: Time spent**

Time Spent	Percent
Less than 30 minutes	51.2
31 – 60 minutes	37.4
61 – 90 minutes	8.6
More than 90 minutes	2.8

**D. Money spent for buying food and grocery items**

Percentage analysis has been carried out to understand the spending pattern of respondents for monthly food and grocery items every month (table IV). From the results, it is observed that (28) percent of the respondents spent ₹ 3,000 to ₹ 4,000 every month on food and grocery items. Twenty one (21) percent either spent ₹ 2,000 to 3,000 or more than ₹ 5,000. Sixteen (16) percent of the respondents spent ₹ 4,000 to ₹ 5,000.

**Table-IV: Money Spent for buying Food and Grocery items**

Money Spent	Percent
< Rs. 1,000	4.3
₹ 1,000 - 2,000	8.9
₹ 2,000 - 3,000	21.4
₹ 3,000 - 4,000	27.9
₹ 4,000 - 5,000	16.3
> ₹ 5,000	21.2

**V. CONSUMER DEMOGRAPHICS AND FREQUENCY OF VISIT TO RETAIL STORES**

Independent sample ‘t’ test was conducted on the demographic variables, gender and marital status. One way Analysis of Variance (ANOVA) was conducted on the demographic variables with more than two categories like age group, level of education, occupation, monthly income and family size. The results and findings of the analyses are presented below.

**A. Impact of gender on frequency of visit to retail stores**

Independent sample ‘t’ test on gender indicated no significant difference with respect to male and female respondents in their frequency of visit to traditional store (t=-1.921, sig = 0.055). However, results for supermarket indicated a significant difference with regard to male and female respondents in their frequency of visit to buy food and grocery items (t= 3.337, sig = 0.001) (table V). The mean value indicates that compared to female customers (1.80), male customers visited supermarkets frequently more frequently (2.04).

**Table-V: Impact of gender on frequency of visit to retail stores**

	Gender	Mean	S.D.	t value	p value
Frequency of visit to traditional store	Male	3.61	1.145	1.921	0.055
	Female	3.45	1.248		
Frequency of visit to Supermarket	Male	2.04	1.078	3.337	0.001**
	Female	1.80	0.951		

\*\* indicates significant at 1% level

**B. Impact of marital status on frequency of visit to retail stores**

Independence sample ‘t’ test performed on marital status of respondents on their frequency of visit to traditional stores indicated no significant difference with respect to married and unmarried customers (t=-0.760, sig = 0.447). However, significant difference is observed in their frequency of visit to supermarkets for buying food and grocery items (t= 3.416, sig = 0.001) (table VI). The mean value indicates that compared to married respondents (1.83), unmarried respondents frequently visited supermarkets for buying food and grocery items (2.14).

**Table-VI: Impact of marital status on frequency of visit to retail stores**

	Marital status	Mean	S.D.	t value	p value
Frequency of visit to traditional store	Married	3.52	1.198	0.760	0.447
	Unmarried	3.44	1.289		
Frequency of visit to Supermarket	Married	1.83	0.959	3.416	0.001**
	Unmarried	2.14	1.183		

\*\* indicates significant at 1% level

**C. Impact of age on frequency of visit to retail stores**

In order to test the impact of age on frequency of visit to retail stores, one way ANOVA was employed. The results highlighted a significant difference among age groups of respondents towards frequency of visit to supermarkets (p < 0.01). Based on the mean score, it is understood that, customers in the age group of 21 to 30 years (2.08) prefer to shop in a supermarket followed by those in the age group of less than 21 years (2.00) and 51 to 60 years (1.94). The frequency of visit by customers in the age group of 41 to 50 years is found to be the least (1.71). However, no significant difference between different categories of age groups was observed towards frequency of visit to traditional store (table VII).

Table-VII: Impact of age on frequency of visit to retail stores

	Age group in years						F value	P value
	< 21 yrs	21-30 yrs	31-40 yrs	41-50 yrs	51-60 yrs	> 60 yrs		
Frequency of visit to traditional store	3.61 (1.378)	3.40 (1.299)	3.51 (1.120)	3.56 (1.155)	3.64 (1.356)	3.72 (1.275)	0.876	.496
Frequency of visit to Supermarket	2.00 (1.237)	2.08 (1.119)	1.82 (0.936)	1.71 (0.938)	1.94 (0.948)	1.80 (0.707)	3.919	.002**

Note1: The value within bracket refers to standard deviation

Note 2: \*\* denotes significant at 1% level.

**D. Impact of level of education on frequency of visit to retail stores**

One way ANOVA conducted on level of education and frequency of visit to retail stores, highlighted a significant difference between different levels of education with respect to their frequency of visit to traditional grocery store. Based on the mean score, it can be inferred that diploma holders

(4.00) frequently visited traditional stores followed by customers who completed their school education (3.94) and higher secondary (3.80) (table VIII). However, significant difference between different levels of education is not observed for frequency of visit to supermarkets ( $p > 0.05$ ).

Table-VIII: Impact of level of education on frequency of visit to retail stores

	Level of education						F value	P value
	Up to school education	Higher Secondary	Diploma	Under graduate	Post Graduate	Others		
Frequency of visit to traditional store	3.94 (1.162)	3.80 (1.272)	4.00 (1.163)	3.51 (1.158)	3.33 (1.215)	2.95 (1.213)	8.007	0.000**
Frequency of visit to Supermarket	1.66 (0.879)	1.82 (0.961)	1.83 (0.985)	1.90 (1.036)	1.98 (1.039)	1.74 (0.785)	1.825	0.105

Note1: The value within bracket refers to standard deviation

Note 2: \*\* denotes significant at 1% level.

**E. Impact of occupation on frequency of visit to retail stores**

One way ANOVA conducted to test the impact of occupation on frequency of visit to retail stores highlighted significant difference between the customers with varied occupation with respect to their frequency of visit to

traditional store as well as supermarket. Based on the mean score, it can be inferred that retired customers (3.94) frequently visited traditional stores while salaried customers (3.35) were found to less frequently visit traditional store. Students (2.07) were found to frequently visit supermarkets while retired persons (1.71) were found to visit supermarkets less frequently (table 9).

Table-IX: Impact of occupation on frequency of visit to retail stores

	Occupation					F value	P value
	Housewife	Salaried	Business	Retired	Student		
Frequency of visit to traditional store	3.76 (1.169)	3.35 (1.246)	3.64 (0.905)	3.94 (0.827)	3.36 (1.393)	6.382	0.000**
Frequency of visit to Supermarket	1.73 (0.924)	1.96 (1.047)	1.98 (0.956)	1.71 (0.686)	2.07 (1.207)	2.776	0.026*

Note1: The value within bracket refers to standard deviation

Note 2: \*\* denotes significant at 1% level; \* denotes significant at 5% level

**F. Impact of monthly household income on frequency of visit to retail stores**

One way ANOVA conducted to test the impact of monthly household income on frequency of visit to retail stores highlighted significant differences with respect to frequency of visit to supermarket. Based on the mean score, it is

understood that an increase in the monthly household income increases the frequency of visit to supermarket. However, significant difference is not observed towards frequency of visit to traditional stores ( $p > 0.01$ ) (table X).

Table-X: Impact of monthly household income on frequency of visit to retail stores

	Monthly Household Income					F value	P value
	Rs. 10,000 - Rs. 20,000	Rs. 21,000 - Rs. 30,000	Rs. 31,000 – Rs. 40,000	Rs. 41,000 - Rs. 50,000	Rs. 50,000 and above		
Frequency of visit to traditional store	3.68 (1.359)	3.62 (1.115)	3.39 (1.308)	3.51 (1.249)	3.42 (1.109)	1.831	0.121
Frequency of visit to Supermarket	1.56 (0.899)	1.83 (0.943)	1.80 (0.989)	1.96 (0.983)	2.09 (1.069)	7.174	0.000**

Note1: The value within bracket refers to standard deviation

Note 2: \*\* denotes significant at 1% level.

**G. Impact of family size on frequency of visit to retail stores**

One way ANOVA conducted to test the impact of family size on the frequency of visit to retail stores highlighted significant differences among different family sizes with respect to frequency of visit to traditional store (p < 0.05) and supermarkets (p < 0.01). Based on the mean score, it is understood that majority of the family with more than six members frequently visited traditional stores for buying food and grocery items. Families with a size of 4 to 6 members frequently visited supermarkets to buy food and grocery items (table 11).

Table-XI: Impact of family size on frequency of visit to retail stores

	Family Size			F value	P value
	1 - 3	4 - 6	More than 6		
Frequency of visit to traditional store	3.26 (1.174)	3.34 (1.105)	4.01 (1.121)	3.389	0.022*
Frequency of visit to Supermarket	3.24 (1.266)	3.37 (1.120)	2.59 (1.112)	4.452	0.009**

Note1: The value within bracket refers to standard deviation

Note 2: \*\* denotes significant at 1% level; \* denotes significant at 5% level.

**VI. CONCLUSION**

The present study highlighted many important findings with respect to the shopping pattern of Indian retail customers. An analysis of the respondents’ frequency of visit to a traditional retail store and supermarket to buy food and grocery item has highlighted differences in their shopping pattern. A considerable portion of the respondents visited traditional retail stores twice or thrice a week. A major chunk of the respondents indicated that they visited supermarkets to buy food and grocery items once in a month. The study has also highlighted the store preference of retail customers while conducting a fill in trip and a major trip. Most of the customers preferred traditional stores for conducting a fill-in trip, while supermarket is the choice for conducting a major trip. Customers were also not likely to spend more time during every visit to a retail store. They would like to spend very less time for buying food and grocery items.

Descriptive analysis conducted on the demographic variables, gender and marital status highlighted that with

regard to frequency of visit to supermarkets, significant difference was observed between male and female as well as married and unmarried customers. The other demographic variables age group, level of education, occupation and monthly household income were also analyzed with respect to frequency of visit to retail stores. The findings of the study had shown a significant difference between different categories of age groups with respect to frequency of visit to a supermarket. However, for traditional grocery store, significant difference between different categories of age groups was not evidenced. Less educated customers’ were found to frequently visit traditional store compared to educated customers based on the analysis. Significant difference between the customers with varied occupation is observed with respect to their frequency of visit to traditional store as well as supermarket. It is observed that retired customers frequently visited traditional stores while salaried customers were found to less frequently visit traditional store. Students were found to frequently visit supermarkets while retired persons were found to visit supermarkets less frequently. It is also observed that an increase in the monthly household income increases the frequency of visit to supermarket. Frequency of visit to a traditional store is also found to increase with an increase in the family size. The study describes the shopping pattern of customers which is very useful for retailers to understand their customers and come out with strategies accordingly. The study has also tried to understand the influence of consumer demographics on frequency of shopping across traditional stores and supermarkets. This may help the retailers to understand the behaviour of shoppers with different demographic profile. The same study can be carried out in other parts of the country with diverse demographic profile. The study can also be extended addressing all other factors like store attributes, shopping situation, shopping occasion, life style factors, shopping motives, etc. for a wider scope and better understanding.

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