Relationship between Consumers' Purchase Volume and Purchase Behaviour: A Study on Grocery Buying in Kolkata

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Abstract

With intense competition and a highly volatile economic environment, business organizations are currently standing at crossroads of their journey where only the fittest and the fastest will be able to survive. Retail industry in India currently is one of the most profitable in terms of the revenues that it earns and the significant growth that it portrays.

The size of the domestic market, particularly the burgeoning middle class of over 350 million people, is providing the desired growth impetus to the retail industry. Young consumer market with over 65% of the population under the age of 35 years is relatively well educated and economically active in fuelling the growth of the Indian retail sector. The emergence of varied formats based on specific needs of the Indian Consumer is a critical element in the growth of this sector in India. The food and grocery format is the highest contributor to the retail sector with the maximum contribution coming from traditional retailing, while penetration of modern retail is highest in the clothing and fashion segment, at 23% of the growth. From the traditional neighborhood stores, gradually, super markets, hyper markets, department stores and specialty stores have emerged. The Indian consumer is spoilt for choice and continues to be grossly pampered by retailers across all formats.

In this context a consumer's choice of format and shopping situation for purchasing products becomes an important factor for these retailers. Moreover, a consumer's basket size also influences his choice of store format. The purpose of this paper is to assess the association between shopping trip pattern and a consumer's basket size. Besides, several factors have also been identified which influence a customers' choice for selecting a specific store format. The data thus collected was analyzed using t – test at 5% level of significance and factor analysis was done to identify the most sought after factors that determine consumers' choice of format for purchasing grocery items.

Keywords: Store format, Shopping trip pattern, Consumer's basket size, Factor Analysis

Introduction

Food and Grocery retail has emerged as the most lucrative area for the corporate majors to get into organized retail businesses. It is this segment that is also the second largest segment of the retail trade constituting about 53% of the total private consumption and 60% of the total retail sales (India Retail Report, 2009). Till date, most of the food

and grocery products reach consumers through traditional sabzi mandis which are unorganized (Bajaj et al., 2005). Along with the rapid growth in the industry, there has been a change in the total retail scenario, characterized by increasing competition and emergence of 'Western' format typologies like convenience store, specialty stores, discount stores, supermarkets and hypermarkets (Prasad and Aryasri, 2009). As such, in recent times, the store format choice of customers has become an area of concern for mainly the retailers as also the customers. In fact, both the retailers and the customers are in a phase of evolution with no clear verdict as to what may drive the choice of store format and patronage in the long run.

Most of the previous research studies in retail have focused mostly on store image and importance of store attributes in understanding the concept of store choice and patronage behavior (Woodside and Trappey, 1992; Sinha and Banerjee, 2004, Sinha and Uniyal, 2005; Carpenter and Moore, 2006) but very few on the impact of situational factors (Woodside and Trappey, 1992; Medina and Ward, 1999; Outi, 2001; Sinha and Banerjee, 2004, Sinha and Uniyal, 2005; Carpenter and Moore, 2006) It has also been recognized that grocery shopping behaviour is different from mall shopping behaviour and thus food retailers should consider situational factors differently from retailers of other products (Zhuang et al., 2006).

Past research suggests that situational factors such as perceived risk (Mitchell and Harris, 2005), task definition (Kenhove, 1999), physical surroundings (Baker et al., 2002; Hyllegard et al., 2006), temporal aspects (Nicholls et al., 1997) and social surroundings (Beardon et al., 1989) have a demonstrable and systematic effect on consumer store format choice behaviour, and can change consumer decisions once they are inside the store (Roslow et al., 2000). Studies on shopper behaviour in India have largely been limited to their time and money spending pattern, demographic profile, and preferences for a particular format (Sinha, 2003). Few empirical studies have been conducted to understand the store format choice behaviour in the context of fast growing Indian retailing in general and food and grocery retailing in particular. Moreover, earlier studies suggested that Indian retail consumers have cross shopping behaviour in nature for various reasons (Sinha and Banerjee, 2004).

Retail Buying Behaviour:

Consumer behavior essentially refers to how and why people make purchase decisions they normally do. Marketers strive to understand this behavior so that they can better formulate appropriate marketing stimuli that will result in increased sales and brand loyalty. The science of evaluating and influencing consumer behavior is foremost in determining which marketing efforts will be used and when.

A consumer's motivation to purchase is generally determined by a specific need (what they want) and intensity of that need (how much they want). In other words, marketers try to identify the needs of consumers so that they may enhance the intensity of such a need to the extent that the product becomes compelling enough to be bought by the customers. Customers adjust to their purchase behaviour based on their individual needs and several interpersonal factors. On some occasions, consumer choice might appear to be random, although each purchase decision that is made has some rational motive behind it. Purchase decisions generally depend upon both internal and external factors. Internal factors, such as emotions, feelings, social situations etc, and external factors like store location, ambience, credit facility, etc. might influence buying decisions. Moreover, purchased decisions also depend upon an individual's social status, personality traits and certain specific characteristics that are not found in any identified group.

In the Indian context, Prasad and Aryasri (2011) found that demographic factors have a significant influence on grocery store format choice. Sanjeev Varshney 2006 study found that small town Indian shoppers out shop for pleasure and to seek variety. Mulky and Nargundkar (2003) identified that convenience and merchandise assortment were the most important factors influencing grocery store choice behaviour. Sinha and Banerjee (2004) found that store convenience and customer service positively influence consumer store choices, while entertainment, parking facilities and ambience had a negative influence on store choice. Roy's (2005) study on factors governing consumers choice of supermarkets identified that add-on benefits, general services, convenience and variety, influenced store choice.

Literature Review:

Modern retailing has shown substantial growth in India over the last one decade. Several factors have been identified to have influenced this growth. Organized retailers aim at making substantial profits and in turn savings through efficacy and then pass this benefit on to the producers and end users.

Fernandes et al, 2000 opined that modernisation in retail formats is likely to happen quicker in categories like Dry groceries, electronics, Men's apparel, Books and Music. Some reshaping and adaptation my also happen in Fresh groceries, Women's apparel, fast food, and personal care products. Sen (2000) confirms that Indian consumer has different reasons for preferring different store formats, either modern or traditional; in the study undertaken in Indian context. He confirms that in the case of hypermarkets, the main motives for preferences, in decreasing order are low prices, the possibility of buying everything in the same place and the general appearance of

the store.

Nathan, 2001 observed that the traditional formats like hawkers, grocers and paan shops co exist with modern formats like supermarkets, and non store retailing channels such as multi level marketing and teleshopping. Example of modern formats include department stores like Akbarallys , supermarkets like Food World, franchise stores like Van Heusen and Lee, discount stores like Subhiksha, shop-in-shops, factory outlets and service retailers. Anand and Rajashekhar, 2001 observed that formats are not easily scalable across the country. Several companies have found that it is not easy to expand beyond some regions and cities as evident from the examples of Margin Free Market and Foodworld, which are active only in a few states or cities. Affordable real estate prices and availability of sufficient number of economically well off households in the catchment area are critical requirements that will determine new store viability and thus the possibility of further expansion.

Ramaswamy and Namakumari, 2002 stressed that in recent years, there has been a slow spread of retail chains in some formats like supermarkets, department stores, malls and discount stores. Factors facilitating the spread of chains are the availability of quality products at lower prices, improved shopping standards, convenient shopping and display, and blending of shopping with entertainment, and the entry of industrial houses like Goenkas, Rahejas, Piramals and Tatas into retailing.

Sinha and Banerjee, 2004 observed that the major drivers for choosing a grocery store in India seem to be nearness to place of residence and the comfort level that the respondents has in dealing with the store owner (measured in terms of personal relationship with the shopkeeper).

Sinha, Mathew and Kansal, 2005 observed that food and grocery shopping includes shopping for grains, pulses, fresh fruits and vegetables, packaged food, personal products and some household goods.

Sinha (2005) carried out a study on format choice of food and grocery retailer for one product and one customer segment with a sample of respondents on five existing store formats namely kirana, upgraded kirana, supermarkets, hypermarkets and wholesalers. They suggested that the type of product influence the buying patterns of customers and commented that it would be interesting to capture the utilities of each store format, given that shopping has been found to be influenced by local culture, and suggested that it would be a good study to determine the format choice behavior of many customers.

Thus it is evident from the literature that although studies have been conducted on store format choice, it has not been given much recognition in terms of the volume that is purchased and definitely the customers' basket size or volume of shopping, particularly with reference to food and grocery retailing.

Objectives:

Consumers' choice of format is determined to a great extent by location of the store, approximate distance of the store and by all means, the relationship that the customers have developed with the sellers. This paper therefore aims at identifying:

1. Whether a relationship exists between store format choice and consumers' buying decisions in terms of the purchase pattern and purchase volume.

2. The primary factors that consumers generally consider while making a purchase decision and their effect on retailers.

Methodology:

In analyzing a customer's buying pattern, primary data was collected from 250 respondents of which about 40 respondents' information were rejected and analysis was finally done based on the responses of 210 individuals who have given their preferences regarding the purchase patterns and volume of grocery items bought from both organized as well as unorganized sectors. All the collected data was analyzed using MS Excel. In order to identify the relationship between store format choice and individuals' buying pattern and volume, t statistics was used. The questionnaire consisted of questions relating to an individual's demographic profile and his or her preference for shopping in different store formats. Five point Likert Scale was used to identify the various factors that influenced grocery shopping behavior of customers.

Data Analysis:

The final sample consists of 92 males and 118 females selected randomly, with an average age of 32 years (21 – 60) and average monthly household income lying between Rs. 15,000 and Rs. 20,000, buying their grocery items mainly from departmental stores. The respondents were mainly adult citizens with graduation as the minimum level of education. The other social and economic demographic factors reveal that most of the respondents are willing to travel a distance of either 1 to 2km or 2 to 3 kilometers for procuring grocery items, using mostly either a four wheeler or a two wheeler.

Table 1: Respondents' Demographic Profile

Variable	Description	Frequency	Percentage
Gender	Male	92	44
	Female	118	56
Age	21 - 30	67	32
	31 - 40	86	41
	41 - 50	41	20
	51 and above	16	7
Marital Status	Married	176	84
	Unmarried	34	16
Education	HS/ Diploma	38	18
	Degree	121	58
	PG & above	51	24
Occupation	Home Maker	58	28
	Service	102	49
	Business	29	13
	Self Employed	21	10
Monthly Household Income	10,000 - 15,000	28	14
	15,001 - 20,000	74	35
	20,001 - 25,000	61	29
	25,001 & above	47	22
Family Size	1 to 3	59	28
	4 to 6	82	39
	6 & above	69	33
Distance travelled	1 to 2 km	65	31
	2 to 3 km	66	31
	3 to 4 km	47	22
	4 to 5 km	20	10
	> 5 km	12	6
Mode of Transport	2 wheeler	60	29
	4 wheeler	72	34
	Public Transport	31	15
	On foot	47	22

Source: Primary Data

Respondents Shopping Behaviour:

Most of the respondents (almost 62%) revealed that they had always shopped for food and grocery products from various retail formats for their household consumption. In fact, the respondents have shown cross format purchase behavior in buying food and grocery products.

Table 2: Shopping Behaviour

Shopping Behaviour	Frequency	Percentage
Always	129	62
Frequently	56	27
Occasionally	25	11

Source: Primary Data

Respondents' Store Format Choice:

Majority of the respondents exhibited cross shopping behaviour in nature for purchase of food and grocery products at different retail formats for various reasons. When respondents had to choose their prime retail store format, 30 percent of respondents have preferred departmental store formats for purchase of food and grocery products. About 26 percent respondents have preferred kirana store formats followed by hypermarkets (23 percent) and convenience store formats (20 percent).

Table 3: Store Format Choice

Choice of Format	Frequency	Percentage
Kirana	54	26
Convenience	44	20
Departmental Store	62	30
Hypermarket	50	23

Source: Primary Data

Assessing Influence of Purchase pattern on Store Format Choice:

The research revealed that most of the respondents who purchase food and grocery items once in a fortnight or once in a month, do so from either hypermarkets or departmental stores, the major reason being taking advantage of the offers and discounts provided by organized retailers. On the other hand, most of the respondents have preferred either convenience store or kirana stores for purchasing items on a daily basis taking advantage of the credit facilities provided by the local unorganized stores on account of a relationship that develops over a period of time with such customers.

Table 4: Purchase Pattern

Purchase Pattern	Once in a week	Twice in a week	Once in a fortnight	Once in a month	Total
Hypermarket	9	4	21	10	**44**
Dept. Store	16	9	26	12	**64**
Conv. Store	23	5	15	5	**46**
Kirana	28	6	13	8	**56**
Total	**76**	**24**	**75**	**35**	**210**

Source: Primary Data

Assessing Influence of Purchase volume on Store Format Choice:

About 31% of the respondents have been found to spend between Rs. 4.001and Rs. 5,000 for purchasing food and grocery per month. Those who spend less than Rs. 3000 per month have been found to purchase grocery products mainly from the local kirana stores. This implies that those consumers who have the capacity to spend more normally purchase from organized retail outlets whereas those who have a lower budget, purchase such products mostly from the unorganized sector.

Table 5: Purchase Volume

Purchase Volume	<3, 000	3,001 - 4, 000	4, 001 - 5000	5, 001 and above	Total
Hypermarket	12	16	24	13	**65**
Dept. Store	13	19	17	8	**57**
Conv. Store	7	11	16	11	**45**
Kirana	20	11	7	5	**43**
Total	**52**	**57**	**64**	**37**	**210**

Source: Primary Data

Assessing the relationship between purchase volume and purchase pattern:

In analyzing the data thus collected a regression equation can be tested where, y = a +bx. In this case, Y is the dependant variable, which is the Purchase pattern, i.e. how frequently consumers purchase grocery items from various store formats. The independent variable in this case is the purchase volume or the consumers' basket size i.e. how much a consumer is willing to spend per visit in purchasing grocery items. According to statistical analysis, it is essential to note the values of P and t-stat which, as has been found from the research are as follows:

Table 4: Regression Statistics for Purchase Volume and Purchase Pattern

Regression Statistics	
Multiple R	0.836076796
R Square	0.969813149
Adjusted R Square	0.684719724
t Stat	3.584463466
P value	0.020639232

The p value in this case is 0.02 which is less than 0.05 and t stat value is 3.584, which is more than 2, implying that the independent variable is significant in the regression equation (according to statistical rule). Further, the value of adjusted R square (0.68) as found in this case shows existence of a strong relationship between the two variables, i.e. purchase pattern and purchase volume. As per statistical rule if the value of adjusted R square is more than 0.6, then the relationship is significant.

Factors relating to choice of format:

Rapid increase in the number of supermarkets, departmental stores and hypermarkets in the country marks the phenomenal growth of retailing in India. In fact, slowly yet steadily more and more customers are shifting their preference for shopping towards organized retail. A customer's choice for a particular store depends to a great extent on shopping orientation and of course a satisfying experience. A customer's attitude towards the store may result from his/her evaluation of the perceived importance of store attributes, moulded and remoulded by direct experiences with the store's overall offerings.

Since the second objective of this paper is to identify the various factors that affect a consumer's choice of store format while purchasing grocery items, an attempt has been made to record consumers' responses in selection criteria for store format, which are as follows:

Table 5: Factors influencing cross format grocery purchase:

Variables	Factor Loading	Factor
Location of Store	0.685	
Distance from home	0.651	Proximity
Willingness to travel	0.622	

Availability of wide assortment	0.604	Product Assortment
Depth and Width of merchandise	0.633	
Variety of products	0.663	
Regular advertisements	0.861	Communication
Promotional schemes	0.806	
Discounts and offers	0.832	
Parking facility	0.701	Service
Home delivery	0.699	
Helpful Staff	0.703	
Credit facility	0.625	Fair Price
Everyday low price	0.663	
Price matches quality	0.654	
Competitive pricing	0.633	
Visual merchandising	0.701	Ambience
Warm and positive environment	0.682	
Display	0.693	

Source: Primary Data

From the above table it is evident that consumers' attitude towards grocery purchase across different formats depend upon various factors which can be identified as: Proximity, Product Assortment, Communication, Services, Fair Price and Ambience.
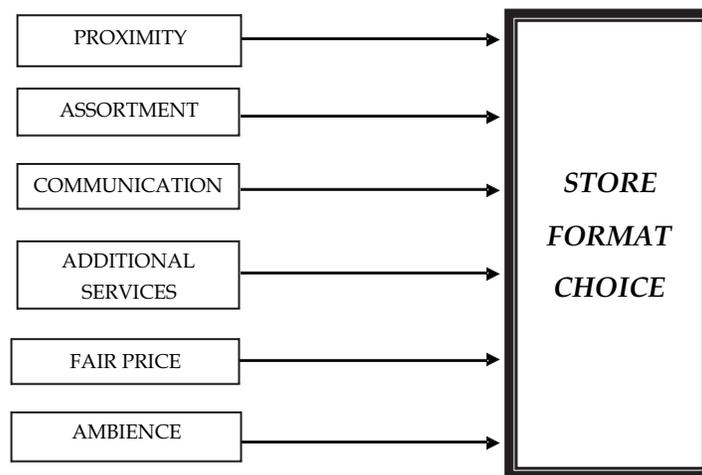

Fig 1: Factors leading to Store Format choice for Grocery Purchase

The above identified factors to a great extent influence not only purchase pattern but also purchase volume across various formats. A retailer's primary motive therefore, in this context, should be to give due consideration to the customers' expectations and design their strategies in such a manner that they become capable of achieving customer delight and hence develop a long term relationship.

Conclusion and Future Scope:

Turbulent economic conditions have led to a re-evaluation of channel strategies by many of the world's leading retailers. Capital expenditure budgets have been squeezed, resulting in a slowdown across virtually all channels. For this reason, it is more important than ever for retailers, manufacturers and suppliers to be sure that they are investing in winning products and formats, and in the regions where success is most probable. The present study was undertaken to identify the relationship between consumers' purchase pattern and purchase volume across different retail formats, where only four varieties were considered. Further, several factors have also been identified by means of the study which have an influence on an individual's purchase decision. With an increase in the disposable income of the general consumers, grocery retailers can look forward to gaining quite some benefit.

Moreover, it is time now for foreign retailers to invest in the country with the positive move in the FDI policy undertaken by the government. Expansion plans in local retail are advancing more rapidly than in the past to take advantage of the rise of middle-class consumers and the expansion of consumer credit. Since this paper has concentrated only on a few limited aspects of retailing, further research might include advent of online grocery retail, consideration of factors like momentary moods or conditions of buying like anxiety, excitement, etc., possession of cash in hand, purpose of purchase and other such social, economic and emotional factors, for predicting store format choice. All these may be considered for further research in this specific area.

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