A study on impact of demographics on buying behavior of food and grocery consumers in Punjab

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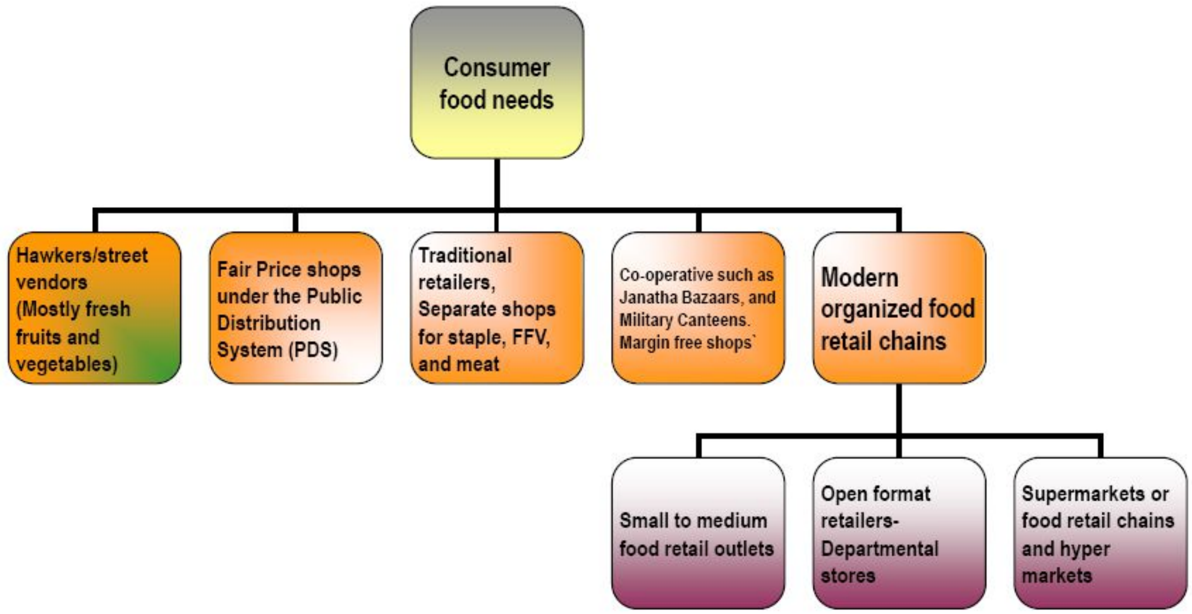
Keywords
Food & Grocery Organised. Retail, Demographics, Preferences

Abstract
Food purchase behavior of consumers in the state of Punjab has significantly changed due to an increase in the per capita disposable income, higher penetration of media, urbanisation, education and health awareness, movement of households towards higher income groups, changes in lifestyle and family structure. Consumer buying behavior for food and grocery products has always been influenced by socio demographic factors like age, gender, income etc The present study attempts the influence of consumer demographic characteristics on attitudes and preference of food and grocery shopping.

Introduction
'Food and grocery' is the second-largest segment of the retail industry and is the least organized. According to a recent report by Ernst & Young, 'food and grocery' accounts for almost 54% (USD 152 billion) of the total Indian annual retail business[1]. However, food retail continues to be dominated by small local stores in the unorganized sector.

Fuelled by the large disposable incomes, the food sector is now witnessing a remarkable change in consumption patterns, especially in case of food. Food retailing is undergoing a transformation from selling of food items in grocery shops & mandis, haats and bazzars to selling of processed food and grocery in supermarkets where consumers inspect and select the products in a comfortable ambience and still pay a fair price for the product and the merchandise. Sometimes it happens that one pays less than the price one would pay at the nearest food store. Shopping for groceries is no longer a strenuous and uncomfortable affair. Instead, it has become a pleasant experience. Figure 1 shows the formats for food retailing in India.



Food retailing is now an industry in itself. According to one of the recent reports on Food Retailing Scenario in India by Technopak, food & beverages is the major segment, worth Rs 8,97,000 crore. This is contrary to the belief that fashion is the largest segment of organized retail in India. India's food retail industry has been the main focus of MNCs looking to grow with the economy. The industry has been rated as the fifth most attractive emerging market for retail by the International Council of Shopping Centers (ICSC). Currently, the food retail sector is valued at US $70 billion and the valuation is expected to rise to US $150 billion by 2025.

Food and Grocery (F&G) Retail in India

Unlike in the past, the debate today is no longer whether food and grocery retail in India would grow but rather how fast can it grow and what challenges need to be overcome. The Indian consumers do visit about eight to ten outlets to purchase various food products, which make up the daily consumption basket. These outlets include neighborhood kirana stores, bakeries, fruit and vegetable outlets, dairy booths and chakkies (small flour mills), which offer very time-consuming and unproductive way of shopping for food. With changing lifestyle there is growing scarcity of time, and convenience in food shopping is emerging as an important driver for the growth of one-stop retail formats that can offer consumer 'value for time' in addition to 'value for money'.

Modern state of the food retailing is not a demand led but the supply led one. Major spending on food and increasing out of home food consumption represent a significant opportunity for food retailers and food service companies. The organised food retailers deploy a number of formats ranging from gigantic hypermarkets at one end of the spectrum to the no-frills discount stores at the other end. They are distinguished by size, number of items carried, strategic pricing and customer segments targeted among others.

In India about 90% of food purchases are made within a distance of 1.5 km from the customer's home. This means that an organised retailer would need to have a 'neighbourhood store' close to customers in order to capture the share of wallet that is spent on food. These stores would cater to the consumer's daily and weekly needs. The outlets closest to a neighbourhood store in India are 'Safal' outlets operated by Mother Dairy in Delhi, Margin Free in Kerala and Subhiksha. **Another popular format in Food retailing is supermarkets.** This format caters to the consumers' need for choice and variety. These needs translate into 'more width' and 'more depth' in each category. These stores cater to the consumers in a catchment area with a radius of 3 to 4 km and therefore need to be destination stores. A supermarket can cater to the consumers' weekly, monthly and occasional needs. Examples of supermarkets already in India are Reliance fresh, Food World, Trinetra and Nilgiri's[2].**Hypermarket is another popular format.** Hypermarkets are essentially destination stores catering to the consumers' bulk shopping needs in both food and non-food categories. The key added values for the customer are 'choice' and 'value for money' because products are sold at a discounted price. The hypermarkets model of food retailing is new to India. Spencers (RPG), Big Bazaar (Pantaloons), Star India Bazaar are some examples. **Cash & Carry (C & C) Stores** sell their products to their members only. The typical area of a C & C store is 70,000 to 100,000 sq. ft. and both food and non-food products are stocked. The members are typically retailers and institutions. The key added value is a wide range of products under one roof, available at wholesale prices. So far, only four (three foreign and one domestic) companies operate in this space: Metro (German), Shoprite (South African), and SPAR (Dutch) are the foreign players while Wal-Mart has recently set up a joint venture with Bharti retail with the first cash and carry store in Amritsar under the brand name of “Best Price” .Table 1 summarizes the various companies operating in different retail formats.

FORMAT	KEY COMPANIES	SIZE	TARGET POPULATION	PRICING	ITEMS CARRIED
Hypermarket	RPG’s Giant, Pantaloons, Big bazaar, Vishal,Amartex	25,000-50,000 sq ft	Middle income group	Lower than MRP	Most categories
Supermarkets	Reliance fresh, More stores,	3000-5000 ft	Everyone	MRP	Processed foods and

[2] Kearney 2005

	Easy day, Food world, Food bazaar				groceries
Discount stores	Subhiksha, Margin free,Apna Bazaar	Varies but less than 3,000 sq ft	Middle income group	Everyday lowest price	Processed foods and groceries
Convenience stores	6-Ten, Spencers	Varies	Everyone	MRP	Varies – but specialized in each store

Table1: Organised Retail formats in food segment
Source: Survey

Key Challenges in Food Retailing

Demand Side

- Penchant for fresh/home-made and value consciousness

The Indian consumer, unlike his western counterpart, has a penchant for freshly cooked food over packaged food. This is a result of dietary patterns, poor electricity supply, low penetration of refrigerators and a family structure where one of the primary roles of the housewife is feeding the family. The Indian consumer is extremely value conscious. A TSMG study indicates that packaged food players need to drive down prices by almost 35-40% to be comparable on cost with home made food.

- Diversity of tastes and preferences

Multiple cultures, languages and religions have a huge bearing on the tastes and preferences of the Indian consumer. This will pose a challenge for players aspiring to develop a pan Indian presence.

- Willingness to travel

Given the current density of retail outlets in India, retailers will have to motivate the consumer to trade convenience with price, range and ambience.

Supply Side

- Sourcing base and efficiency

The fragmented agri supply base coupled with an inadequate legal framework make it difficult for retailers and food processors to procure quality produce at competitive costs directly from farmers. The small size of the food processing industry further limits the supply options.

- Real estate availability and cost

Rentals account for 7-7.5% of the total costs for organized retail in India against global benchmarks of less than 3%. Real estate availability and costs will continue to remain a challenge in the retail industry with factors like adequate parking, ambience and proximity being the key drivers of footfalls.

- Manpower availability

As organized retail expands, there is expected to be a dearth of skilled manpower. The lack of institutions and courses for different aspects of retail management will have an impact on the overall supply of quality manpower.

Review of literature

Ali, Kapoor,and Moorthy(2009),conduced a study to to develop a marketing strategy for a modern food/grocery market based on consumer preferences and behaviour. A total of 101 households having sufficient purchasing power were personally surveyed with a structured questionnaire. These households are spread across the well-developed Gomtinagar area of Lucknow city. Simple statistical analysis such as descriptive statistical analysis, frequency distribution, cross tabulation, analysis of variance, and factor analysis to assess the consumers' preferences for food and grocery products and market attributes were carried out. The results shows that the preferences of the consumers clearly indicate their priority for cleanliness/freshness of food products followed by price, quality, variety, packaging, and non-seasonal availability. The consumers' preference of marketplace largely depends on the convenience in purchasing at the marketplace along with the availability of additional services, attraction for children, basic amenities and affordability. Results suggest that most of the food and grocery items are purchased in loose form from the nearby outlets. Fruits and vegetables are mostly purchased daily or twice a week due to their perishable nature, whereas grocery items are less frequently purchased.

Hemalatha, Sivakumar, Jayakumar, (2009) suggested that different groups of consumers believe that different store attributes are important. Therefore, store attributes appears to be a promising market segmentation criterion. In this sense, their work focused on store attributes as a possible criterion to segment the shoppers. They started by analysing the importance of consumer segmentation to the retailers. After reviewing the literature of market segmentation, a segmentation analysis of clothing and apparel shoppers in India was performed. First, a hierarchical cluster analysis was carried out, and then k-means cluster analysis identified three meaningfully differentiated customer groups. Further, a classification tree analysis was performed to identify the store attributes that differentiated the clustered groups. Finally, three clusters of Indian shoppers, namely, economic shoppers, convenient shoppers and elegant shoppers were identified. Main conclusions and its implications for retailing management were pointed out.

Erdem, Oumlil, Tuncalp, (1999) proposed that retailing business is greatly affected by the patronage behavioral orientations of shoppers. Understanding these orientations can assist retailers in developing appropriate marketing strategies toward meeting the needs and wants of consumers. One important factor explaining consumer behavioral

orientations is their values. Another important factor affecting consumer behavioral orientations is the store image, an image shaped by store attributes. They examined the linkage between consumer values and the importance of some salient store attributes.
Omar and Abisoye (2008) examined the role price as a determining factor in consumer patronage of grocery retail stores in the United Kingdom. A cross-section of grocery consumers (n = 250) constituted the sample for the study. Grocery stores were grouped and stores were selected for the study on the basis of the variety of grocery stores offers the consumers. A mail survey was used to investigate price perceptions and store choice across three different retail formats. Respondents were grouped into high and low groups for each of the price cue factors. The groups were compared using analysis of variance (ANOVA) for each price construct at each level of the dependent variable for store choice. Findings suggested that price cues affect consumer store choice. Price awareness positively impact patronage of retail stores that implement low cost strategies, while status sensitivity and price/quality plan tend to positively impact patronage of retail stores that implement higher price strategies. As the UK grocery market becomes saturated consumers tend to take advantage of price competition. This is particularly important when communicating store pricing policy to the target consumers

Mittal (2009) compared the consumer evaluation of store attributes for grocery and apparel retail segment.. The retail format- which represents the right mix of various store dimensions- will eventually depend upon the interplay between various store attributes. This study used a research instrument developed by the author in an earlier study for the comparative analysis. A very significant pointer from this research is that while there is some commonality of attributes between retail sectors, the precise importance and mix was, arguably, determined more by the motivation of the customer behind each specific shopping excursion. The grocery and apparel store attributes dimensions that have emerged from this study prove that the factors are different in terms of their composition and importance.

Alhemoud, (,(2008), studied the product selection processes from Kuwaiti nationals based on their shopping habits in the Co-Operative Supermarkets (A government owned grocery stores. The literature on consumer behavior and store choice presented in the study suggests that consumers make decisions to patronize a particular store on the basis of a set of attributes that they view as important. This study attempts to explore the determinant attributes that influence the patronage decisions of supermarket consumers in Kuwait. Based on a descriptive analysis of data collected via an accidental sampling procedure, fourteen store attributes were identified. These attributes were factor analyzed, generating four image dimensions intuitively labeled merchandise, personnel, accessibility and promotion. A stepwise regression showed that merchandise image was the most salient in determining the frequency of supermarket shopping. None of the demographic characteristics of consumers did seem to have an impact on the perceived importance of the promotion image. Most of the

differences among the categories of the consumers' demographic characteristics were found in the accessibility image, providing possible explanation for why the rank of the importance of accessibility elements varies considerably from one study to another.
Goswami & Mishra (2009) studied Indian consumers move from kirana stores to organized retailers when shopping for groceries. The study was carried out across four Indian cities- two major and two smaller cities with around 100 respondents from each city. Stratified systematic sampling design with a sample size of 409 was used for the study. Multivariate statistical techniques were used to analyze the data collected with the help of a structured questionnaire. it was found that Customer patronage to grocery stores positively related to location, helpful, trustworthy salespeople, home shopping, cleanliness, offers, quality and negatively related to travel convenience. Kiranas do well on location but poorly on cleanliness, offers, quality, and helpful trustworthy salespeople. The converse is true for organized retailers.

Carpenter and Moore, (2006) provided a general understanding of grocery consumers' retail format choice in the US marketplace. A random sample of US grocery consumers (N=454) was surveyed using a self-administered questionnaire. Descriptive and inferential statistical techniques (regression, ANOVA) were used to evaluate the data. Identifies demographic groups who frequent specific formats (specialty grocers, traditional supermarkets, supercenters, warehouse clubs, internet grocers) and examines store attributes (e.g. price competitiveness, product selection, and atmosphere) as drivers of format choice.

Objective of study:

(a) To analyze the buying behavior of consumers with respect to food and grocery products.
(b) To explore how respondents actually differ in terms of their demographic characteristics across the preference of shopping food and grocery.
(c) To find out the shopping patterns and spread of the monthly basket across different formats.

Research methodology

The methodology adopted for the study is as follows:

Research Design

The research design chosen for conducting the study was Descriptive Cross Sectional. A cross-sectional study is the simplest variety of descriptive study that can be conducted on representative samples of a population.

Source of data

Primary data was collected using questionnaire method of data collection.

Sample selection

The target population of the study included customers who prefer to shop at organised retail stores in Punjab. A sampling frame from which a random sample could be drawn was unavailable. However, an accidental sampling method was chosen to serve the purpose of data collection. This method seemed acceptable and appropriate taken into account the exploratory nature of the study and the lack of a sampling frame. 50 organized retail stores were selected in five selected cities for data collection. A total of 101 consumers were interviewed personally to know their buying patterns for food and grocery items. The product categories under the study included fruits, vegetables and grocery products such as processed and unprocessed rice, wheat flour, pulses, edible oil and spices. These cities were selected since the respondents in this locality are considered to be progressive; health, hygiene and quality conscious and have sufficient purchasing power to go for organized retail shopping.

Data Collection Technique:

Data was collected by doing survey at 50 retail stores in five selected cities viz. Ludhiana, Patiala, Amritsar, Jalandhar, and Mohali.

Data Collection Tool

The survey questionnaire was structured with two parts. The first part included questions related to consumers' purchase behaviour in terms of frequency of purchase, monthly expenditure, place of purchase, distance travelled to purchase the items and packaged versus loose purchasing.

The second part of the questionnaire included socio-demographic information of the respondents such as age, gender, family size, education level and household income.

Data analysis

The collected data were digitized in an SPSS spreadsheet and a simple statistical analysis to assess the buying behaviour which included descriptive statistical analysis, cross-tabulation and frequency distribution was carried out. Analysis of variance (ANOVA) was used to assess whether socio-demographic factors play a significant role in food purchase decisions. To assess the mean rank difference and the importance of product and market attributes, the Friedman test was conducted. Factor analysis was conducted to identify the underlying dimensions among a set of food product and market attributes. The Principal Component Analysis was done using Varimax rotation criterion. The Kaiser criterion was used to retain factors with eigen values only greater than one.

Results and Discussion

Demographic profile of respondents

Out of the 101 respondents surveyed, 70 per cent were male. Age composition of the sampled respondents indicate that the surveyed group is matured enough to respond on various food consumption issues. Out of the total surveyed consumers, more than 65 per cent of the respondents were between 20 to 40 years of age. Educational profile of the respondents shows that most of them have graduate level or higher qualifications. Only 10 per cent of the respondents are from the intermediate (higher secondary) level and below. Sample households falling between the monthly income group of Rs 10,000-15,000 dominated, with a 40.6 per cent share. Table 1 lists the demographic profile of respondents.

Demographics	**Response(%)**
Gender	
Male	70.3
Female	29.7
Family size	
<=2 adults	45.6
3 adults	28.7
>3 adults 25.8	25.8
<= 2 children	73.3
3 children	21.8
>3 children	5.0
Age of respondent	
<=20 years	3.0
21-30 years	21.8
31-40 years	44.6
41-60 years	26.8
Educational background	
Intermediate and below 9.9	9.9
Graduate	37.6
Post graduate	38.6
Doctoral and professional	13.9
Monthly income (%)	

<Rs 10,000	34.6
Rs 10,000-Rs 15,000	40.6
>Rs 15,000	24.8

Impact of demographics on buying behavior

The survey results show that vegetables are the most frequently purchased products with a mean value of 1.59 and a mode value of 1 which indicates that most of the consumers shop for vegetables on a daily basis. Similarly, fruits are generally purchased twice a week with a mean value of 2.29 and a mode value of 2. On the other hand, grocery products, which are less perishable, are less frequently purchased. The analysis reveals that most of the respondents buy grocery products on a monthly or fortnightly basis. Table 2 details the buying behavior of respondents.

Table 2: Buying behavior of respondents

Buying decision	Products	N	Mean	Mode	Standard deviation	Friedman test
Frequency of purchase	Grocery	94	4.02	5	1.31	Chi-square=114:78
	Fruits	98	2.29	2	1.04	Significance= 0.000
	Vegetables	100	1.59	1	0.84	Degree of freedom=2
Monthly expenditure	Grocery	91	3.18	3	1.07	Chi-square=76:74
	Fruits	94	2.18	2	0.79	Significance= 0.000
	Vegetables	96	2.08	2	0.71	Degree of freedom=2
Preferred market distance	Grocery	93	2.35	2	0.97	Chi-square=36:53
	Fruits	95	1.79	1	1.07	Significance= 0.000
	Vegetables	96	2.07	1	1.28	Degree of freedom=2
Preference on food packaging	Grocery	92	1.52	1	0.72	Chi-square=36:53
	Fruits	96	1.28	1	0.54	Significance= 0.000
	Vegetables	97	1.24	1	0.45	Degree of freedom=2

Note: Frequency of purchase: Daily – 1, twice a week – 2, Weekly – 3, Twice a month – 4, Monthly – 5
Monthly expenditure: Rs 100 – 1, Rs 100-500 – 2, Rs 500-1000 – 3, Rs 1000-2000 – 4, . Rs 2000 – 5
Preferred marketplace: Roadside shops – 1, nearby vendor/shop – 2, Supermarket – 3, Wholesale market – 4

Preferred market distance: , 1 km – 1, One to 3 km – 2, 3 to 5 km –3, 5-10 km – 4, . 10 km – 5;
Preference on food packaging: In loose form – 1, Vendor packaged – 2, Branded (packaged) – 3

Table 2 indicates that most of the consumers prefer nearby marketplaces to meet their food consumption requirements. Grocery food items are generally purchased from nearby grocery shops situated in the residential localities, whereas fruits and vegetables are purchased from roadside shops. With rapid changes in the preferences of the consumer towards convenient purchasing, the supermarket culture is coming up very fast. These supermarkets offer conveniently packaged food items with choose and pick facilities. About 10 per cent of the respondents prefer supermarkets for grocery food purchasing. Food purchasing is distance sensitive and most of the respondents desire for availability of food products within one kilometre radius.

A comparative study of consumer responses on the five aspects of food purchase behaviour with the demographic profile of the respondents was done by analyzing the variance (ANOVA) to assess if there are any significant differences in the individual responses for grocery, fruits and vegetables (Results indicate that out of the five aspects, the responses of males and females differ significantly on the frequency of purchase and preferred market distance for grocery items and monthly expenditure and preference on packaging for vegetables. Males generally prefer to purchase grocery once a month; while some of the female respondents prefer a weekly purchase.On the other hand, male respondents may travel more distance for purchasing grocery while females prefer a neighbourhood marketplace. Table 3 gives the details of analysis of variance between buying behavior and demographic characteristics.

Table 3: AVONA between buying behavior and demographic characteristics

Buying behavior	**Products**	**Gender**	**Age**	**Education**	**Income**
Frequency of purchase	Grocery	6.742	0.692	1.13	0.318
	Fruits	0.11	1.897	0.506	3.824
	Vegetables	0.67	2.598	0.961	5.731
Monthly expenditure	Grocery	0.561	1.043	0.453	1.153
	Fruits	0.247	0.625	0.7	3.003
	Vegetables	4.161	0.613	2.872	4.283
Preferred market distance	Grocery	1.492	0.849	0.732	0.39
	Fruits	0.717	1.096	1.445	1.335
	Vegetables	1.25	0.941	1.28	0.781

Preference on food packaging	Grocery	7.909	2.057	2.869	1.085
	Fruits	0.214	3.655	1.253	1.412
	Vegetables	1.063	0.981	0.968	1.358
Frequency of purchase	Grocery	0.2	0.752	0.625	1.634
	Fruits	0.479	0.608	0.747	3.882
	Vegetables	5.591	0.875	1.103	1.938

In case of monthly expenditure, males spend more on vegetables as compared to female respondents; while in case of packaging, females are more inclined towards purchasing vendor packaged vegetables. Consumers belonging to the young and middle age groups of less than 40 years prefer frequent purchase of vegetables as compared to consumers belonging to the older age groups. Likewise, consumers of the young and middle age groups may travel more to purchase grocery and fruits as compared to those belonging to the older age groups. Consumers of the higher income groups purchase fruits and vegetables frequently and also spend more on these items. These findings clearly indicate that H2 is only partially true and the income level of a consumer is an important factor which affects most of the food purchase decisions.

Conclusion

Food consumption patterns in India are rapidly changing from cereal-based food products to high-value food products and slowly from fresh, unprocessed, unbranded food products to processed, packaged and branded products. A strong economic growth has brought with it a new set of consumers with sufficient disposable income, who are more conscious of the latest trends in health and hygiene, particularly in the fast growing cities. To reap the benefits of the changing buying behaviour of the consumers and their capability for buying quality food and grocery items, modern organized retail formats are growing at a phenomenal pace throughout the country.

This has induced big national and multi-national corporations to invest into organized retailing.

In the emerging Indian retail environment, this study provides insights on consumers' preferences of food and grocery products in terms of product and market characteristics with the help of primary survey data. Findings of the study clearly indicate that vegetables and fruits are most frequently purchased from nearby markets as compared to grocery products.

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