Consumer Behaviour for Food Products in India

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CONSUMER BEHAVIOUR FOR FOOD PRODUCTS IN INDIA

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1. Background of the Study

The food markets in India and the rest of the world are getting increasingly more and more complex and competitive. Some of the important reasons for such changes are like increasing pace of globalisation, entry of large international and domestic firms in the food sector, intra-regional movement of consumers, larger proportion of working female population etc. There is increasing number and varieties of food products in the country and the above socio-economic changes have resulted in increased interest in the food sector among the business practitioners and researchers.

India is the world's 2nd largest producer of food next to China. With India's food production likely to increase significantly during the next decade, there is an opportunity for large investments in food and food processing technologies, skills and equipment, especially in areas of canning, dairy and food processing, specialty processing, packaging, frozen food/refrigeration and thermo processing. Fruits and vegetables, fisheries, milk and milk products, meat and poultry, packaged/convenience foods, alcoholic beverages and soft drinks and grains are important sub-sectors of the food processing industry. Health food and health food supplements are other rapidly rising segments of this industry.

There has been in increasing growth in food processing sector and India has set a target of 20 per cent growth by 2015. It comprises agriculture, horticulture, animal husbandries, and plantation. The opportunity for growth is huge when we compare the fact that merely 1.3 per cent of food is processed in India, whereas, about 80 per cent of food is processed in the developed world. Changing lifestyles, increased spending powers, disposable incomes and changing consumer tastes are expected to change the face of the food retail market in India. In dairy sector, according to an estimate (Nair, 2007), the current size of the Indian dairy sector is US$ 62.67 billion and it has been growing at a rate of around 5 per cent each year.

Carbonated drinks, fruit juice and juice-based drinks, energy and sports drinks, malted beverages, probiotic drinks and bottled water are also showing huge growth in India. Within this sector, the fruit drinks segment, the juice and juice drink category is among the fastest growing segments. While carbonated soft drinks are growing at 6-8 per cent, fruit drinks as a category is growing at around 18-20 per cent each year. The market for wine is also growing at over 25 per cent each year. Most global wine majors have already set up shops in India.

According to research and analyst firm Frost & Sullivan, the good growth in the Indian economy, coupled with a strong desire among the Indian consumers to maintain a healthy lifestyle and the growing awareness of functional ingredients such as herbs, minerals, vitamins, omega fatty acids and probiotics are giving thrust to the demand of functional foods and beverages market. Functional foods are likely to witness an expanding consumer base due to their specific health benefits.

India also has a very large number of fast food restaurants and coffee joints, and there has been regular addition in their numbers over the time. Investments in the food industry have also grown in the country as both global and domestic players have identified the potential for growth in this sector due to its size, growth, penetration levels and levels of organization. The Government has declared food processing a priority sector and has undertaken several measures to promote modernization of food processing units by creating infrastructure, facilitating research and development and human resource development in this sector. The Government is developing 30 mega food parks which are likely to cover the entire food processing cycle 'from the farm gate to the retail outlet'.

Problem Statement

With the opening of the Indian economy in food sector, large numbers of international players have entered into this sector and there has been increasing competition for domestic companies. Now a larger number of product choices are available before consumers to choose from. It is imperative to know how all these have changed the food purchase decisions for consumers. What is their perception about all these changes? What are the major factors that affect their purchasing decisions for major categories of food products in India?

There has been a long debate in India and abroad regarding food quality and safety issues. How important are these issues for Indian consumers in their buying decisions? What is their perception about quality of domestic and international food products?

There are also increasing number of people moving from one region to another in search of their livelihood in the changed economic scenario. For example, there are a large number of people in metro cities such as Delhi, Kolkata and Mumbai, who have come from the states of U.P., Bihar and Orissa. What happens to their consumption habit? Are there some significant changes in their food habits and buying decisions in the changed socio-economic environment or do they maintain their original food habits?

Objectives

Hence, the broad *objective* of the proposed study is to explore the consumer behaviour for food products in India. There has not been any study, which has covered these issues (as discussed above), especially in Indian context, in recent period. Essentially, the study would attempt to answer the following specific *research questions*:

- What are the factors affecting purchase decisions for major categories of food products in India?
- What is the perception of quality about various categories of food products?
- Whether there is change in the food consumption habits and purchase decisions for people after their movement to different regions? If yes, what are the factors responsible for these changes?

Methodology

Based on literature survey and focused group discussions a list of relevant variables was prepared. A questionnaire was prepared to capture the relevant variables, which was initially pre-tested at Lucknow. After its finalization; primary data was collected from 326 respondents in Uttar Pradesh and National Capital Region (Delhi and its suburbs). The demographic profile of respondents in terms of age category, education level, source and level of household income per month, number of adults and children in the family and respondents' current state of stay is presented in Table 1.

Table 1: Demographic Characteristics of Respondents

	Year of movement from native place			Total
Demographic characteristics	**Not moved**	**During the last 5 yrs**	**During the last 5-10 yrs**	
Total number of respondents	177	69	80	326
Age category				
<25 yrs	50	33	7	90
26-35 yrs	60	31	56	147
36-45 yrs	47	4	14	65
46-55 yrs	18	1	3	22
>55 yrs	2	0	0	2
Educational level				
Below metric	3	6	6	15
Metric	21	24	11	56
Intermediate	44	18	18	80
Graduate	62	14	26	102
Post Graduate	47	7	19	73
Source of household income				
Family business	47	4	10	61
Pvt. Job	49	37	47	133
Govt. Job	67	10	10	87
Agriculture & allied activities	2	0	0	2
Other	12	18	13	43
Household income per month				
< Rs.10 k	32	40	29	101
Rs 10-20 k	69	22	30	121
Rs. 20-30 k	53	6	16	75
Rs. 30 - 40 k	13	0	2	15
Rs. 40-50 k	5	1	2	8
> Rs. 50 k	4	0	1	5
Number of adult members in household				
Single	1	10	1	12
2-3	67	51	52	170
3-5	76	6	26	108
>5	33	2	1	36
Number of children in the household				
Single	36	23	20	79
2-3	94	23	46	163
3-5	14	0	1	15

For identifying the impact of change in place of stay on food buying/consumption habits, people who did not change their native place or city during the last 10 years have been considered as people belonging to 'not moved' category. About 54 percent of respondents belonged to this category. Snowball method of sampling was used to pick respondents who moved from their native/original places. About 21 percent respondents moved out of their native places during the last 5 years and about 25 percent respondents had moved out of their native places during the last 5-10 years.

Results and Analysis

Factors affecting food purchase decision

The relative importance of various food purchasing criteria was estimated for four different food categories, food and vegetables; milk and milk products; food grains and pulses; and processed foods on 1-5 scale, which is presented in Table 2.

Based on grand mean score for all the four categories of food products, the five most important parameters that respondents rated very highly for food purchasing decisions are: cleanliness, free from pesticides, freshness, good for health, and clean place of sale. Value for money, overall quality, taste, variety of products availability at same place, seasonality, flavour, good display of products, nearby availability and good ambience are some other parameters, which were rated highly by respondents. Parameters like promotional offer and products produced in other country were not considered as very important by respondents.

Looking at the relative importance of different parameters separately for different product groups, interesting pattern emerges. Freshness, cleanliness and good for health are the three most important parameters for relatively more perishable products like fruit-vegetable and milk product. It seems that safety from health perspective is the prime concern while buying these products. For processed food items, apart from cleanliness and freshness, free from pesticides and clean place of sale are the most important criteria. But, for food grains-pulses, which generally people buy in large quantity, only two parameters cleanliness (4.34) and free from pesticides (4.31) have mean rating higher than 4. Value for money (3.67) is the third important criteria for food grains-pulses. Unlike for more perishable products, health and freshness are not the major parameters for food grain-pulses purchasing decisions.

Table 2: Relative Importance of Food Purchasing Decision Criteria

	Fruit and vegetable		Milk and milk products		Food grains and pulses		Processed food		Grand Mean
	Mean	Mode	Mean	Mode	Mean	Mode	Mean	Mode	
Cleanliness	4.56	5	4.48	5	4.34	4	4.55	5	4.48
Free from pesticides	4.24	5	4.37	5	4.31	5	4.30	5	4.31
Freshness	4.68	5	4.53	5	3.37	4	4.39	5	4.24
Good for health	4.40	4	4.50	5	3.50	4	4.10	5	4.13
Clean place of sale	4.02	4	4.45	5	3.61	4	4.30	5	4.10
Value for money	3.76	4	3.81	4	3.67	4	3.80	4	3.76
Overall quality	3.69	4	3.91	4	3.34	4	3.68	4	3.66
Taste	3.22	3	4.06	4	2.49	1	4.01	4	3.45
Variety of products availability at same place	3.29	4	3.65	4	3.09	4	3.53	4	3.39
Seasonality	4.17	4	3.23	3	2.58	2	3.17	3	3.29
Flavour	3.03	4	3.82	4	2.44	2	3.76	4	3.26
Good display of products	2.94	4	3.46	4	2.90	2	3.57	4	3.22
Nearby availability	2.96	4	3.39	4	3.02	4	3.21	4	3.15
Good ambience	3.02	3	3.31	4	2.75	3	3.36	4	3.11
Locally produced	2.92	2	3.19	3	2.59	2	2.94	3	2.91
Colour	2.91	3	3.00	3	2.54	3	2.97	2	2.86
Advertising	2.39	2	2.91	4	2.07	2	3.02	3	2.60
Personally known by shopkeeper	2.30	2	2.81	2	2.37	2	2.68	2	2.54
Shape	2.98	4	2.25	2	2.15	1	2.44	2	2.46
Promotional offer	2.24	2	2.26	2	2.30	1	2.55	2	2.34
Produced in other country	1.95	2	1.97	1	1.90	1	2.15	2	1.99

Note: 1 indicates "not at all important" and 5 indicates as "extremely important"

Factor analysis was performed using all the 21 parameters important for buying decisions, which is presented in Table 3. About 60 percent of total variance in the data set was explained by the six-factor solution. The result is presented in Table 3. Store quality (good display of products, good ambience, clean place of sale and variety of products availability at same place) appeared as the most important factor in purchasing decisions followed by marketing mix (explained the maximum variance in nearby availability, locally produced, overall quality and advertising) and taste-flavour (taste and flavour).

Table 3: Factor Loadings for Various Purchasing Decision Criteria

(Fruits and Vegetables)

	1	2	3	4	5	6
	Store quality	***Marketing mix***	***Taste-flavour***	***New offerings***	***Basic value***	***Food safety***
Good ambience	**0.670**	-0.098	0.103	0.310	0.063	-0.076
Good display of product	**0.700**	0.029	0.021	0.318	0.136	0.027
Clean place of sale	**0.670**	-0.147	0.313	-0.008	-0.029	0.290
Variety of products availability at same place	**0.596**	0.473	-0.089	-0.093	-0.016	0.121
Seasonality	0.468	0.164	-0.190	-0.489	0.227	-0.196
Advertising	-0.051	**0.553**	-0.355	0.275	-0.098	-0.249
Locally produced	-0.070	**0.733**	0.126	0.149	0.098	0.031
Nearby availability	0.135	**0.758**	0.138	0.043	-0.212	-0.033
Overall quality	-0.070	**0.677**	0.180	-0.009	0.155	0.279
Taste	0.092	0.187	**0.826**	0.066	-0.099	-0.065
Flavour	0.345	0.115	**0.629**	0.255	0.189	0.133
Good for health	0.018	0.335	0.354	-0.396	0.131	-0.211
Promotional offers	0.072	0.267	-0.043	**0.687**	0.149	0.026
Produced in other country	0.190	0.031	0.022	**0.652**	-0.044	-0.049
Personally known by shopkeeper	0.294	0.145	0.265	**0.572**	-0.026	-0.252
Freshness	0.048	-0.085	0.109	-0.106	**0.702**	0.107
Value for money	0.165	0.127	-0.326	0.235	**0.697**	0.118
Cleanness	-0.185	0.094	0.401	-0.117	0.407	0.118
Colour	0.434	-0.016	0.395	0.079	0.447	0.047
Shape	0.403	-0.100	0.337	0.014	0.493	-0.437
Free from pesticides	0.194	0.117	0.055	-0.048	0.269	**0.721**
Total variance explained (%)	12.85	11.75	10.35	9.92	9.09	5.57

Extraction Method: Principal Component Analysis with Varimax Rotation

Perception of quality about food products:

People were asked to indicate their perception about the improvement in food quality related parameters, which is presented in Table 4. Most of the respondents do not have very high opinion about improvement in level of these quality parameters (maximum rating 3.32 for the taste and quality of food).

Table 4: Perception about Improvement in Quality Related Parameters for Food

Parameters	Rating
The taste and quality of food	3.32
Reasonableness of food prices with respect to quality	2.92
Food safety	3.20
Health and nutritious food	3.12
Farming method	3.03

Note: 1 indicates "strongly disagree" and 5 indicates as "strongly agree"

Entire production and distribution processes are very important for maintaining the food quality. People were asked to identify the responsibility of different stakeholders at different phases of this system as presented in Table 5. In general the respondents agreed that the consumers have more responsibility than the government in ensuring that food is safe to eat (3.88 on 1-5 scale) and visualised only the limited role of farmers in ensuring food quality and taste (2.67).

Table 5: Perception about Responsibilities of Different Stakeholders for Maintaining Food Quality

Various Responsibilities for Maintaining Food Quality	Rating
Regarding food quality and taste, retailers have a bigger responsibility than farmers	3.33
Consumers have more responsibility than the government in ensuring that food is safe to eat	3.88
Ensuring good nutrition is the responsibility of consumers rather than the food manufactures	2.92
Farmers have larger responsibility than the food manufactures in ensuring food quality and taste	2.67
Thinking about various food related disease, the retailers have a more important duty than food authorities	3.09
Promotion of healthy diets for consumers should be a public responsibility	3.32

Note: 1 indicates "strongly disagree" and 5 indicates as "strongly agree"

To find out the level of confidence about food safety among the people, the respondents were asked to rate certain food products in terms of their level of safety. Fresh fruit and vegetable was found to be the safest food option (rating 4.65). But people perceived the restaurant meals, burgers from a fast food outlet and meat products as relatively unsafe options (Table 6).

Table 6: Perception about Level of Safety for Different Types of Food

Food Items	Rating
Eggs	3.87
Meat products	2.90
Fish products	3.32
Fresh fruits and vegetables	4.65
Fresh tomatoes	4.37
Burgers from a fast food outlet	2.34
Low fat products	3.46
Low calorie products	3.59
Restaurant meals	2.13

Note: 1 indicates "extremely unsafe" and 5 indicates as "extremely safe"

People were asked to identify the seriousness of some of the major food related problems in Indian society. Food related diseases, food poisoning, unreasonable food prices, pesticides and additives were some of the major problems reported by respondents (Table 7).

Table 7: Perception about Major Food Related Problems in Indian Society

	Total
Food related diseases	4.50
Food poisoning	4.29
Genatically modified food	3.17
Animal welfare	3.52
Pesticides	4.08
Additives (Like preservatives, colouring)	4.06
Food allergies	3.75
Unhealthy eating	3.78
Unreasonable food prices	4.24

Note: 1 indicates "not a major problem at all" and 5 indicates as "very serious problem"

Changes in Purchase and Consumption Habits after Regional Shift:

People opinion about changes in different aspects of food buying behaviour were sought on 1-5 scale and the results are presented in Table 9 for the three groups of respondents based on their regional movement. Respondents agreed that there is definitely some change in the way they purchase food items now (mean score 3.38). They strongly feel that they now look for more number of options available (mean score 3.90) for food items. Both husband and wife take joint decisions about type of food items to be purchased (3.79) and children also influence their decision to a great extent (3.47). People prefer going and buying food items from such places where they can get most of the items at one place (3.59) and where the display of the product is better (3.39). This may be one of the reasons for people preferring to go to organized retail shops (3.40).

Despite several changes people, however, somewhat disagreed that their food purchase decision is now heavily dependent on advertisement (2.66). They also disagreed to the statements like price is now not an important criterion compared to earlier period (2.71) or they visit less frequently to local grocery stores to buy food items (2.77).

When we compare the mean scores of different items for the three categories of respondents, it appears that there is no significant difference for most of the items (at level of significance as 0.05). However, for couple of items like 'buying food items for more number of days than earlier' and 'visiting less frequently to local grocery stores' the mean score is significantly different for people who moved to a different region compared to people who did not move. People, who have not moved to a different region, more strongly disagree with the statement that they have reduced the frequency of visit to local grocery stores (2.61). This may be due to their old relationship with the local retailer. However, when people move to different regions, they are less likely to remain dependent on the local retailer. People who have not moved also more strongly agree that they now buy food items for more number of days compared to earlier (3.24).

Table 8: Changes in Food Buying Behaviour for Different Categories of Respondents

Dimensions of Food Buying Behaviour	Category of Respondents based on Regional Movement			Total	F	Sig.
	Not moved	Moved during the last 5 yrs	Moved during the last 5-10 yrs			
There is definitely some changes in the way we purchase food items now	3.35	3.33	3.50	3.38	0.622	0.537
We now use more ready-to-eat food items than earlier	3.30	2.93	3.23	3.20	2.663	0.071
We now buy most food items from organised retails of shops/shopping malls	3.42	3.25	3.50	3.40	1.167	0.313
We now visit less frequently to local grocery stores to buy food items	2.61	3.09	2.85	2.77	7.110	0.001
I look for more number of food products options than earlier	3.86	3.94	3.96	3.90	0.353	0.703
I want to buy my products at the place where the display is better	3.40	3.36	3.41	3.39	0.064	0.938
I want to buy my food products where I may get all the items at one place	3.56	3.64	3.60	3.59	0.193	0.825
I now buy food items for more number of days than earlier	3.24	2.86	3.04	3.11	4.003	0.019
Now our purchase decisions for food products are heavily dependent on advertisements	2.74	2.61	2.53	2.66	1.382	0.253

Price is not an important criteria for buying food items now compared to earlier period	2.77	2.64	2.65	2.71	0.576	0.563
Now-a-days both husband and wife are taking decisions about the type of food items to be purchased	3.84	3.71	3.74	3.79	0.792	0.454
Children influence the food buying decisions to a great extent	3.53	3.29	3.50	3.47	2.256	0.106

Note: 1 indicates "strongly disagree" and 5 indicates as "strongly agree"

Changes in various aspects of food consumption behaviour were measured (on 1-5 scale, where 1 indicates strongly-disagree and 5 indicates strongly-agree), which are presented in Table 9 for different groups of people based on their regional shift. Looking at total number of responses, it is clear that people strongly agreed that shifting to a new city affects their food habit (mean score 3.44). They now prefer more healthy foods (4.25) and have started eating new dishes (3.75) compared to earlier. They also agree that they take their dinner together in the family (3.64), learn cooking and eating new food items after relocation (3.47). They also agreed the influence of children on the type of food items that they eat. Respondents disagreed with statements like, they have started eating out at restaurants more frequently (2.61) and they stopped eating some of their traditional food items after shifting to a region (2.65).

Most of the changes are common to all the three categories of respondents as their mean scores are not significantly different (at level of significance as 0.05). However, people who have shifted to new location indicated less preference for organic food and also for eating out at restaurants compared to people who have not moved to a new region. This may be because a higher proportion of people who are moving out from Bihar and U.P. to Delhi belong to lower income group.

Table 9: Changes in Various Dimensions of Food Consumption Behaviour for Different Categories of Respondents

Dimensions of Food Consumption Habits	Category of Respondents based on Regional Movement			Total	F	Sig.
	Not moved	Moved during the last 5 yrs	Moved during the last 5-10 yrs			
Shifting a new city thus effect the food habit	3.45	3.41	3.44	3.44	0.048	0.953
We now eat out at restaurants more number of times than earlier	2.79	2.42	2.39	2.61	4.573	0.011
After shifting to a new city/ region we learn to cook and eat new food items	3.42	3.49	3.54	3.47	0.329	0.720

We have started eating new dishes which we were not eating earlier	3.76	3.75	3.73	3.75	0.014	0.986
People stop eating some of the traditional food items after shifting a new city/ region	2.67	2.78	2.50	2.65	1.560	0.212
The type of food items that we eat mostly decided by children's preference	3.34	3.32	3.49	3.37	1.095	0.336
We look for more healthy food than earlier	4.18	4.32	4.34	4.25	1.171	0.311
Even though the organic food is slightly costlier, we prefer such food items	3.23	2.96	2.94	3.10	4.212	0.016
All the members of the family take dinner together	3.64	3.39	3.85	3.64	4.569	0.011
The time when people take lunch or dinner changes after shifting to a new place	2.90	2.99	2.91	2.92	0.151	0.860

Note: 1 indicates "strongly disagree" and 5 indicates as "strongly agree"

Conclusion

The present study explored the consumer behavior for food products in India from different perspectives. Cleanliness of the product, free from pesticides, freshness, good for health, and clean place of sale are some of the most important attributes, which are rated very highly by people in India while buying food products. Value for money, overall quality, taste, availability of variety of products at same place, seasonality for the product, flavour, good display of products, nearby availability and good ambience are some other important parameters. Promotional offer does not have much impact on the sale of food products and people did not rate food products from other country very highly for purchase decision.

People rate various parameters differently for different product groups. For highly perishable items, freshness, cleanliness and good for health are the most important parameters but for products like food grains-pulses, cleanliness and free from pesticides are the most important criteria. Based on factor analysis, it appeared that store quality, marketing mix and taste-flavour explained the maximum variance in the purchase decision for fruit and vegetables.

Although quality of food products is one of the most important parameters for food product purchase decision, people do not see much improvement in the quality related parameters for food items during the last ten years. People believe that they have to take much more responsibility than the government and farmers in ensuring that food is safe to eat. Although there has been increasing trend of eating out in restaurants and fast-food outlets in major Indian cities, people still consider such restaurant and fast-food meals and meat products as somewhat unsafe.

People accepted the fact that their food habits get affected with the shifting to a new region but many basic buying and consumption behaviour do not change. Some of the changes in buying and consumption behaviour of relocated people, which were observed after their settlement to a new region, were not significantly different from the level of changes in behaviour of non-moving people. However, compared to the last 10 years, people have started preferring more healthy foods and are willing to try out new dishes. They tend to learn cooking and eating new food items after relocation without discontinuing their traditional food items. There is also influence of children on the type of food items that they eat.

In the light of increasing number of organised retail outlets there have been several studies, which suggest that the local retail shops will continue to survive due to their personal relationship with the local buyers. In the present study also, it was found that people continued to visit local grocery stores despite the fact that they are going more number of times to organized shopping malls as well. But, people who have relocated to a different region are visiting less frequently to the local grocery stores as they might be missing the personal touch with the local shopkeepers.

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