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# An Investigation of Consumer Buying Behavior for Food Products: An Empirical Study of Rural and Urban Areas of Haryana

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# An Investigation of Consumer Buying Behavior for Food Products: An Empirical Study of Rural and Urban Areas of Haryana

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**Abstract-** The present study determines the factors that led to the purchase of processed, packaged, ready to use and branded food products. The food consumption pattern in India is rapidly changing from unprocessed unbranded low quality food products to processed, ready to use, packaged and branded food products. The study was carried out in the four cities of Haryana A sample of 500 respondents was taken for research study and according to the chosen methodological research approach, the quantity data were analyzed by using methods through SPSS software. The study revealed the major factors that influence consumer to purchase such kind of food items; these were quality, brand, health consciousness and other external factors.

## I. INTRODUCTION

Consumption expenditure is increasing due to increase in urbanization, breaking up of the traditional joint family system, desire for quality food, lack of time which translates in to an increased need for convenience. A vast majority of Indian population depends on agriculture for its income and employment. To measure the performance of any economy, it is necessary to see the trend and pattern of macroeconomic variable such as national income, consumption, saving, investment and employment.

Per capita income, the standard of living, the level of consumption etc are some of the important determinants of the economic status of the society. The standard of living of a household can be understood from the consumption pattern, and the quality of consumption budget clearly indicates the level of welfare of the household. Consumption clearly contributes to human development when it enlarges the capabilities and enriches the lives of people without adversely affecting the well-being of others.

India's faster economic growth over 1990s has raised per capita income (expenditure) and has significantly impacted its food consumption patterns by causing a change in the structure of food consumption patterns observed earlier during pre-reforms period. This raises the relevance of looking at the composition of India's food consumption basket. In our life, food is a very integral part whether it is prepared at home or

anywhere else. It is not wrong to say that the world market of processed food has undergone a drastic change shifting from unprocessed low quality food to processed high quality food which shows the changes in food habits, lifestyles, status and other market forces (Rai, 2007).

There has been a great revolution which has been witnessed by Indian society in information technology and bio technology. Now similar revolution is being observed in food technology (Paul, 2007). The processed food market has changed due to the changes in socio economic conditions, where individuals decides on whether, what, where, how and from whom to purchase the processed food. In farming also the food processing has become very important to encourage forward and backward linkage.

### a) *Factors Responsible For The Rapid Growth in the Demand For Processed Food*

Following are the factors that are responsible for the rapid growth in the demand of processed food.

- a) The foremost factor responsible for the growth in processed food is the changing lifestyle and growth in disposable income due to a rise in double income families and the proportion of women in workplace.
- b) The demand for processed food has also risen due to the decreasing prices of processed food, assessing a much larger market of the processed food.
- c) One important factor responsible for the increased demand for processed and convenience food such as ready to eat, ready to cook, ready to serve etc was due to the busy schedules and unavailability of time on working days.
- d) Other factors those are responsible for greater demand of value added milk based products is due to the rising households incomes, increasing urbanization and the rapid growth of the private sector and dairy processing industries.

It was also observed that growth in consumption of processed food today may be due to an increase on the private good attributes such as health, tastes and quality. The demand for processed food appears to be primarily sustained by two things: first private good attributes such as food safety attributes,

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tastes attributes, freshness attributes and public attributes such as environmental and animal welfare attributes but appear to have less importance for purchasing of the processed food.

The present study is an attempt to meet the following objectives:

- a) To study the present consumer behavior in buying the food products in Rural and urban areas of Haryana
- b) To study the consumer motives for their choices of food and to explore the changes in consumer behavior in the rural and urban areas of Haryana.

## II. LITERATURE REVIEW

E. Carrillo et al. (2011), in his study investigated the consumer factor underlying the food choices and their attributes towards healthy eating. A questionnaire was formulated which was divided into two parts. The first part of the questionnaire was based on FOOD CHOCIES where factor analyses and other techniques was used which pointed that sensory appeal, price and conveyance are the most important factor of their food choices in Spain. While the second part of the questionnaire revealed about the consumption frequency of different kind of the products and accepted that dairy products are the one which is consumed the maximum.

Mann (1963) studied the structure and pattern of food consumption in eastern Nigeria. The study revealed that

- a) Total annual expenditure per family kept a parallel trend upward with an increase in family members.
- b) The expenditure on food alone varied between 57.7% in lower family size group to 66.6% in the higher size group to total annual expenditure.
- c) The home supply of food was greater in the larger sized families, and,
- d) The quantity of food consumed per head was less in families with large numbers.

Pande(1963) reported that 77% of the total household expenditure in respect of all classes combined was taken up by food alone during 1957-63 in rural areas of Uttar Pradesh within the food group cereals alone accounted for about 93% of the total consumption expenditure in the state .The average percentage expenditure on milk and milk products for the state over 5 yrs came to 9 %, clothing and footwear accounted for about 7% of the total expenditure for the state there was no significant trend was found.

## III. DATA AND METHODOLOGY

The study aimed at studying the consumer behavior & perception regarding the food products in rural and urban Haryana. Two zones were taken from

Haryana according to their administrative block. Thereafter, two districts were chosen in which one was from the high density areas and other from low density area from each zone.

Zone I: Ambala and Kaithal

Zone II: Panipat and Jhajjar

Again from these districts two villages were selected randomly for the conduct of the study.

Ambala: Aiyema and Kaleron

Kaithal: Dumara and Nawalgarh

Panipat: Babarpur and Pehladpur Khalita

Jhajjar: Rampur and Dawla

The major consideration for choosing these cities were increasing working population of couples, increasing demand for Food products and variable strata of population as basis of living standard. Different income groups of domestic consumers were chosen to get the information. For this study total samples of 500 consumers were selected on the basis of random sampling i.e. 125 from each district including rural and urban areas. Random sampling technique was used to conduct this study.

The collected data were analyzed with the help of SPSS and One-sample t test, ANOVA, Chi-square test, Regression etc.

### a) Reliability Test: Cronbach's Alpha

It is the extent to which a list of scales items which would produce consistent results if the data collected were repeatedly accessed (Malhotra, Birks 2007). Cronbach Alpha coefficient calculation is the most common practice indicator of internal consistency. (Pallant, 2007)

An ideal coefficient value is 0.7 (Hair et al, 2010) and any value below this will result in unsatisfactory internal consistency reliability. In this research the cronbach alpha value of 45 scale items is 0.871 which state that the buying motivation scales had a good satisfactory internal consistency and can be deemed reliable statistically.

### b) Data Factorability

In order to investigate the suitability of factorization of the data exploratory factor analysis method was used which was Bartlett's test of sphericity and Kaiser Meyer Olkin measures of sampling adequacy.

*KMO and Bartlett's Test<sup>a</sup>*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.727
Bartlett's Test of Sphericity	Approx. Chi-Square
	66
	Sig.
	.000

a. Only cases for which ZONE = ZONE 1 are used in the analysis phase.

*KMO and Bartlett's Test<sup>a</sup>*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.751
Bartlett's Test of Sphericity	Approx. Chi-Square
	2303.156
	Df
	66
	Sig.
	.000

a. Only cases for which ZONE = ZONE 2 are used in the analysis phase.

For the two zones KMO and Bartlett's test was calculated. It states that if the value of Bartlett's is  $p < 0.05$  it is considered as significant for the factor analysis to be considered appropriate. (Tabachnick and Fidell 2007, Malhotra, 2007). Since as displayed in figure below, the significance value Bartlett's test of sphericity in this research is  $p = 0.00$ , exploratory factor analysis is appropriate, depending upon the outcome of KMO sampling adequacy.

To test the sampling adequacy, Kaiser Mayer Olkin MSA was calculated which was found to be 0.751. It is indicated that the sample is good enough for sampling. Since the KMO sampling adequacy of this research data is higher at 0.760 and the significance of Bartlett's Test of sphericity is appropriate is the result provide adequate evidence to support the appropriate use of Exploratory factor Analysis on the consumer motivation scale items.

For generating and reviewing the standards of the data, Principal Component Analysis (PCA) was employed for extracting the data which determines the extracted data, underlying all the factors and the relationship between the number of variables. In order to extract the factors from the data, components that have an eigen value of 1 or more have to be identified from the total variance explained extracted using Principal component analysis. (Pallant, 2007)

c) *Component Matrix*

It is the output of Exploratory factor Analysis process that lists the loading of each of the scale items. This component matrix is subsequently rotated using varimax rotation to assist interpretation of its results. (Malhotra, 2007)

Component Matrix <sup>a,b</sup>

	Component		
	1	2	3
ORGANIZED RETAIL/SHOPPING MALLS	.799	-.050	-.369
ADVERTISEMENT	.787	.257	.167
RETAILERS ADVICE	.327	.039	.734
NUTRITIVE VALUE	.846	.081	.008
SCHEMES AND OFFERS	.311	.637	.298
TASTE AND PREFERENCE OF THE FAMILY	.502	.509	-.144
FROZEN FOOD	.541	-.405	-.571
MINIMUM PRICE	-.394	.751	-.302
QUALITY BASIS	.401	-.621	.447
CLEANLINESS AND ITS STORAGE	.718	.486	.146
JUNK FOOD FROM BRANDED PLACE	.774	-.332	-.262
JUNK FOOD FROM ORDINARY STALL	-.034	.740	-.125

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

b. Only cases for which ZONE = ZONE 1 are used in the analysis phase.

Component Matrixa,

	Component		
	1	2	3
ORGANIZED RETAIL/SHOPPING MALLS	.781	-.064	.344
ADVERTISEMENT	.832	.165	-.131
RETAILERS ADVICE	.493	.048	-.643
NUTRITIVE VALUE	.896	-.024	.060
SCHEMES AND OFFERS	.469	.505	-.432
TASTE AND PREFERENCE OF THE FAMILY	.711	.427	.192
FROZEN FOOD	.416	-.596	.501
MINIMUM PRICE	-.218	.863	.260
QUALITY BASIS	.196	-.771	-.413
CLEANLINESS AND ITS STORAGE	.865	.240	-.191
JUNK FOOD FROM BRANDED PLACE	.749	-.329	.354
JUNK FOOD FROM ORDINARY STALL	-.005	.841	.154

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

b. Only cases for which ZONE = ZONE 2 are used in the analysis phase.

After reviewing both the zones for the purchase and consumption of food items from different shopping motives using the Principal Component Analysis extraction method 3 components were extracted from Zone I. Consumer from Zone I basically believe in checking the cleanliness and the storage area where the product was stored. The second factor was increased consumption of junk food from branded places such as Mc donalds and KFC. People are now becoming more and more familiar to going to such places. It has decreased the consumption of food items at our home.

Finally the third factor was due to urbanization and development of shopping malls and other organized retail shops, the consumer are more involve in buying the packaged, processed food items

Zone II also extracted 3 components before buying or purchasing motives of the consumer. Advertisement was one of the important factors that were extracted. The consumer from the same Zone also believed that before the buying the food product they look after the nutritive value of the food items and finally the factor extracted was cleanliness and its storage.

#### IV. RESULTS AND FINDINGS

Exploratory factor analysis was conducted and the names allocated to each factor are a result of the interpretation of its consumption of Processed Food factor scale items and are the following:-

##### a) Influence of the external factor

The foremost factor responsible for consumption of processed food related were considered to be the external influence variables - Easy Availability, Influenced Advertisements, Nice Packaging Design, Friends Recommendation, Very Good Promotional Offers, Retailers Influence and Availability of wide range flavours etc.

##### b) More awareness of health

More health awareness has been identified as the factor of this research data with the second highest percentage of the Total Variance Explained. This second factor has been interpreted as more health awareness due to its inclusion of scale items identified and adapted from academic literature surrounding consumption of Processed. It also included the following health awareness variables - Doctors recommendation, Health consciousness, and Consumption of these products is a modern trend.

##### c) Increased quality consciousness

Increased quality consciousness has been identified as the factor of this research data with the third highest percentage of the Total Variance Explained. This third factor has been interpreted as increased quality consciousness due to its inclusion of scale items identified and adapted from academic literature surrounding consumption of Processed Food increased quality consciousness. The factors related to the following increased quality consciousness variables were Better Quantity and Long shelf life of the products.

##### d) Taste and Nutrition

Taste and Nutrition has been identified as the factor of this research data with the fourth highest percentage of the Total Variance Explained. The scale items that included in it were related to the following Taste and Nutrition variables - These products are nutritious and these products are tastier.

##### e) Change in Lifestyle

Change in Lifestyle has been identified as the factor of this research data with the fifth highest percentage of the Total Variance Explained. The scale items related to the following Change in Lifestyle variables were Increase income, Choice of children and these products are easy to store.

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